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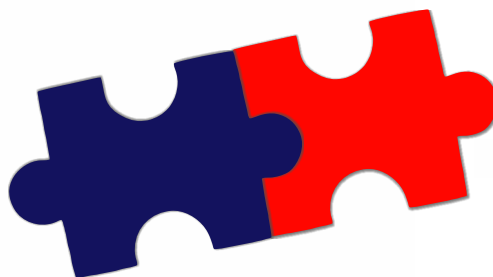


International Conference on European Integration 2016

ICEI 2016

Proceedings
of the 3rd International Conference
on European Integration 2016

May 19 – 20, 2016
Ostrava, Czech Republic



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Faculty of Economics

Department of European Integration

**Proceedings of the 3rd International Conference
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The conference is organized by:
VŠB - Technical University of Ostrava
Faculty of Economics
Department of European Integration



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Foreword

Ladies and gentlemen, dear readers,

I feel deeply honoured to have been invited to address you, once again, at the opening of an increasingly influential International Conference on European Integration (ICEI) in Ostrava. In these testing times for the European Union, a reasoned voice of the academic community is perhaps more important than ever. Unbiased, facts-based scientific analysis, regardless of its conclusion, should be given more time and space in the spotlight. I therefore welcome the third edition of this Conference. It will hopefully contribute to critical, but rational discussion about the direction the EU is taking. It can also debunk at least some myths about the EU circulating among the media and the general public and offer suggestions for the future of the Union.

In many ways, 2016 and the years that follow will be crucial for the Union. Challenges are numerous: the refugee and migration crisis, fight against terrorism, armed conflicts in close neighbourhood or the "Brexit" issue and sluggish economic recovery in many Member States, just to name a few. Many across Europe seem tempted to abandon the idea of peace, freedom and prosperity through greater unity and cooperation. Basic principles of European integration we take for granted, such as the free movement of people, are now being tested.

Yet "no man is an island entire of itself, every man is a piece of the continent", in the words of the great English poet John Donne. I believe the solution to current problems, grave as they might be, lies in cooperation and upholding the common values and principles we have come to cherish so much. Jean-Claude Juncker, the current Commission President, seems to share this opinion, and his list of ten priorities can function as a solid basis for a stronger European Union.

Dialogue with public and stakeholders is essential if the Union is to reflect the wishes of its citizens. In this context, I am looking forward to the outputs of this conference and I will consider them in great detail.

Wishing you an inspiring experience.



Jan Michal

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

Foreword

Ladies and gentlemen, dear readers,

The third year of the International Conference on European Integration 2016 (ICEI 2016) is held at a time when the European integration process is undergoing an endurance test. It does not concern so much the crisis of the European Union, but rather the inability of the Member States and their politicians to use the framework that has been painstakingly created for the past decades for finding mutually acceptable solutions to the substantially different national interests. The conflict between an ever closer Union on the one hand, and a multi-speed Union on the other hand, requires courage to see the future of Europe in a long term perspective, not only from the point of view of short-term interests, which are motivated by the political cycle in the individual countries. As Robert Schuman said: "In this way, there will be realised simply and speedily that fusion of interest which is indispensable to the establishment of a common economic system; it may be the leaven from which may grow a wider and deeper community between countries long opposed to one another by sanguinary divisions. "

We believe that the conference will create a suitable environment for the objective evaluation of the current development and for finding solutions to apparently unsolvable problems, which the European integration process has been facing for 56 years since the publication of Schuman's Declaration.

Wishing you an inspiring experience.

Boris Navrátil

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

Lenka Fojtíková

*Conference Guarantee
Faculty of Economics
VŠB - TU Ostrava*

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Consequences of Corporate Social Responsibility Approach in Voluntary European and Global “Responsible” Initiatives

Pavel Adámek

Silesian University in Opava, School of Business Administration in Karvina
Department of Business Economics and Management
Univerzitní nám. 1934/3
Karviná, Czech Republic
e-mail: adamek@opf.slu.cz

Abstract

This paper examines expanding the significance of socially responsible activities of companies operating in the Czech Republic through both domestically developed standards and international frameworks, which arises because of the deepening of European integration, the interest of enterprises, European economy and society. These tendencies develop and broaden the applicability of initiatives in a globalized context. This paper aims to identify differences (in consideration of large, small and medium-sized enterprises) in the use of standardization of corporate social activities in the relation of regional, domestic and international operations. A significant effect we can observe in the proliferation and application of CSR principles through international enterprises, which contribute to increased exploitation of access of responsible behaviour in other organizations both for-profit, and non-profit. We indicate a possible future development of voluntary CSR frameworks with local competence and within European and global approaches.

Keywords: Corporate Social Responsibility, Frameworks, Global Standards, Initiatives

JEL Classification: F64, M14, M19

1. Introduction

Corporate social responsibility (CSR) refers to companies taking responsibility for their impact on society (European Commission, 2011). Recently, governments have started paying close attention to how business can contribute to society through CSR. The European Union (EU) has been one of the most active entities concerned with the promotion of corporate social responsibility measures. Today, the approaches to CSR are supported by the EU and are developed initiatives and strategic documents, which recognizes the concept of CSR as a tool for achieving for all organizations more responsible approach. It can point out that Europe is one of the leaders in area of CSR promotion in international perspective. The European Commission (EC) believes that CSR is important for the sustainability, competitiveness, and innovation of EU enterprises and the EU economy. It brings benefits for risk management, cost savings, access to capital, customer relationships, and human resource management.

The evolution of CSR from voluntary business strategy to a matter of European public policy is particularly significant to a wide variety of stakeholders inside and outside of Europe, including European societies, members of the supply chain, customers outside of the EU, and both European and international businesses operating in the European Union. The current requirements prior to actual CSR integration in the strategic management of organizations and therefore, we could determine the primary areas for future deepening integration of CSR: the

Commission should be an important actor in the field of CSR (engaging into policy field and creation the strategic approach of CSR and agenda for action). Consequently, the main challenges for an EU policy on CSR and the importance of CSR for the future of EU economy could be focused on issues of improving transparency (reporting, sustainable responsible investment etc.), international issues (multilateral work, third country diplomacy, global level playing field) as well as awareness raising activities. The Commission's CSR strategy is built upon widely recognized international CSR principles and guidelines (European Commission, 2014). In the context of the contribution we are focused on these principles, which they were expanded to include other frameworks that are applicable in the Czech Republic.

The aim of the paper is to define the current approach to CSR by pervasive integration into European organizations and also to identify which standards, guidelines and frameworks are used by Czech firms (micro, small, medium sized and large enterprises). The reminder of the paper is organized as follows. First, an overview of the relevant literature on CSR is provided. This lays the foundation for the next section which introduces the context of corporate social responsibility and European integration with impact on policy approach. Second, an overview of the conceptual framework for integrating CSR with core business processes is presented. In the next section is a methodology part and research findings, there are illustrative examples provided to demonstrate how the frameworks are used by Czech enterprises. The paper concludes with a brief summary and implications for future research.

2. Corporate Social Responsibility and European Integration of the Regulatory Policies

At the beginning of this section will be defined by basic characteristics and importance of CSR, and then works out the definition of European integration in the area of CSR, including international and local standards applicable in the Czech Republic. There is a large number of the definition used for CSR, we are inspired by the European Commission (2001, 2002, 2006), which defined the CSR as 'a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis'. The main idea behind CSR is also known as the triple bottom line principle, implying that businesses (should) not only serve as economic, but also social and environmental ends (Elkington 1994).

Today, Europe is regarded as a leader in CSR and CSR policies, in which one should not overlook the fact that the only European country that has a noteworthy history in CSR is the UK (Steurer, 2009). With the transition of the Commission in 2004, however, the EU CSR policy changed from a pro-active to passive approach that re-emphasises businesses self-regulation (European Commission, 2006). At the Member State level, several Western European countries have become quite active in promoting and shaping CSR in recent years.

2.1 Corporate Social Responsibility: An Underpinning Concept

Corporate Social Responsibility: the integration by companies, on a voluntary basis, of social and environmental concerns, which reflects perceptibly on their internal operations and relations with stakeholders. Two important notions govern this definition: 1) voluntary: going beyond compliance; and 2) perceptible: CSR must result in marked changes in the company's activities (Kitzmueller and Shimshack, 2012). Companies now use various terms when reporting on their CSR activities, including sustainability; corporate responsibility; sustainable development; corporate citizenship; people, planet, profit; or environmental and social report. The considerable emphasis placed nowadays on the societal role of business is in accordance

with the spreading belief that measures of company success must go beyond profit and should relate to the needs of stakeholders and society (Natale and Sora, 2009). According to Carroll (2000) CSR is becoming the defining business issue of our time, affecting corporate profits and credibility, as well as personal security and sustainability of the global economy. Carroll (1999) explained that the evolution of the CSR construct began in the 1950s; expanded in the 1960s and further proliferated in the 1970s. During the 1980s and onwards, relatively fewer new definitions were proposed, more research that is empirical was conducted, and alternative themes were explored. CSR is generally interpreted to mean the incorporation of issues such as human rights, labour rights, environmental protection, consumer protection and fighting corruption in corporate practices (Nijhof et al., 2005).

CSR has benefited from its close association with the sustainability movement and is generally focused on a business's contribution to sustainability (Kleine and Hauff, 2009). Accordingly, sustainable development is a guiding model at the level of society, corporate sustainability is a sustainable development model at corporate level, and CSR is a management approach for business contribution to sustainable development (Asif et al., 2013). Steurer et al. (2005) noted that sustainable development, corporate sustainability, and CSR are closely related concepts focusing on stakeholder relations management but at different levels of action. Accordingly, sustainable development is a guiding model at the level of society, corporate sustainability is a sustainable development model at corporate level, and CSR is a management approach for business contribution to sustainable development. Based on Kleine and Hauff (2009), Steurer et al. (2005), Holme and Watts (2000) for the purpose of this paper we have defined CSR as an approach by an organization for voluntarily addressing multiple and dynamic bottom line issues through the development of an organization-wide infrastructure. Six core characteristics are evident: voluntary, managing externalities, multiple stakeholder orientation, social and economic alignment, practices and values and beyond philanthropy (Crane et al., 2013). A broader-based audit of CSR can evaluate corporate governance systems, policies, and outcomes in relation to their contribution to business effectiveness, as well as how well they meet stakeholder expectations of customer care, employee involvement, appropriate relationships with government, and sustainability (Mason and Simmons, 2014).

2.2 European Integration in the Area of CSR

The European Union has been the continent that first became a convert to the CSR movement. Although innumerable abuses took place along its history, in Europe there have been traditionally more CSR consistent values, norms and perceptions than in other areas of the world; European corporations have tended to hold stronger and broader approaches to stakeholder relations; and that network is being established to help many companies share and diffuse relevant information about CSR (Mullerat, 2013).

In spite of the interest in CSR in the EU among businesses and governments, a clear divide of opposite positions has existed. Essentially, the EC took a position of rejecting regulation and putting the emphasis on voluntary measures for business, while the European Parliament, together with NGOs and trade unions, has been demanding mandatory regulation and reporting of corporations' social and environmental impacts and transparency. However, CSR, as viewed by the EC, remained a voluntary initiative for European business to practice that goes beyond what is required by law. The Commission has played a pioneering role in the development of public policy to promote CSR ever since it is 2001 Green Paper and the establishment of the European Multistakeholder Forum on CSR. In 2006, the Commission published a new policy whose centrepiece was strong support for a business-lead initiative called the European Alliance for CSR (European Commission, 2006).

The 2011 Commission Communication invited Member States to “develop or update by mid-2012 their own plans or national lists of priority actions to promote CSR in support of the Europe 2020 strategy, with reference to recognised CSR principles and guidelines and in cooperation with enterprises and other stakeholders...”. In this context, the Commission also undertook to “create with Member States in 2012 a Peer Review mechanism for national CSR policies” (Williamson, Stampe-Knippel and Weber, 2014). To assess the progress on the development of national action plans on CSR, the Commission also sent out a questionnaire to the Member States. From the 25 received replies, 24 Member States answered that they have or will develop a national CSR action plan including the Czech Republic. This call on EU enterprises to strive to comply with and act in accordance with internationally recognised CSR guidelines and principles that are presented in the next part.

2.3 Internationally Recognised Principles and Guidelines

The needs of current and future generations cannot be met unless there is respect for natural systems and international standards protecting core social and environmental values. In this context, it is increasingly recognized that the role of the business sector is critical. The terms might be interchangeable, but there are many types and to say that a company has adopted a standard says little, in itself, about the performance, policies, or strategies of that company (Blowfield and Murray, 2014, p. 208). Paine et al. (2005) have made tried to make sense of standards by identifying eight principles that cover the statements, commitments, and requirements found in business codes. These codes (fiduciary, property, reliability, transparency, dignity, fairness, citizenship and responsible principles) go beyond much of what is included in corporate responsibility today.

For companies seeking a formal approach to CSR, especially large companies, authoritative guidance is provided by internationally recognised principles and guidelines. In particular, the recently updated OECD Guidelines for Multinational Enterprises, the ten principles of the United Nations Global Compact, the ISO 26000 Guidance Standard on Social Responsibility, the ILO Tri-partite Declaration of Principles Concerning Multinational Enterprises and Social Policy, and the United Nations Guiding Principles on Business and Human Rights. This core set of internationally recognised principles and guidelines represents an evolving and recently strengthened global framework for CSR. European integration of these frameworks fully follows the CSR promotion. The list could be supplemented by other frameworks with global impact (AA 1000 AccountAbility/Assurance Standard; Social Audit Network; ETHIBEL; EFQM; SA 8000 – Social Accountability International; ISO 8000, ISO 9000, ISO 14000; IASE 3000; Corporate Responsibility Index; Corporate Giving Standard; Corporate Community Involvement Index; Dow Jones Sustainability Index; FTSE4GOOD) and involved for local condition of the Czech Republic (IQNet SR 10) and has implemented an award for CSR and quality management.

The differences between separate standards are focused on the stakeholders or it depends on the methodology. There is the importance to highlight the London Benchmarking Group (LBG), which is implemented in the Czech Republic as “Standard odpovědná firma” (SOF). These is using for data verification into list “TOP Firemní Filantrop” in Czech and Slovak Republic, also for Giving List in Great Britain and reporting about all CSR activities either.

A set of Principles for Better Self and Co-Regulation was published in early 2013, and a ‘Community of Practice’ was set up (as an online platform) to facilitate the exchange of knowledge and good practice in this area. For evaluation of CSR the KОРP method in the Czech Republic was developed. In the year 2011, the Quality Council of the Ministry of

Industry and Trade of the Czech Republic made the national programme for the evaluation agreement of the management system of CSR. The above mentioned methods instruments are introduced shortly, for purpose of this paper was to primary to identify existing frameworks. Next part of the paper represents the sum of the research findings.

3. Methodology

The current research investigates to define approach in CSR pervasive integration into European enterprises and identify which standards; guidelines are implemented in Czech micro, small, medium-sized and large enterprises, whether they are developing a proactive approach and incorporate these in their strategic plans. The research methodology is consistent with descriptive e.g. stakeholder theory, which seeks to outline participants' views of what the business organization is doing vis-a-vis its stakeholders through using guidelines, frameworks usable for CSR performance evaluation. From the perspective of strengthening competitiveness and growth within the global impacts of business activity, we believe that even the Czech companies widely used these standards. Therefore, research hypothesis was derived "*Is there a correlation between company size and the use of appropriate standards in CSR issues?*"

The primary data were collected using a self-administered paper and pencil questionnaire used a rating method. Respondents (managers of selected companies) assessed the approach of the firm by an appropriate standard, which is connected with any pillar of the concept of CSR (namely, economic, environmental and social pillar). The research is focused on SMEs and large Czech companies, which confirmed to participate in this research. Because it is a preliminary study, so we wanted to achieve the same number of companies: in total has been included in the research of 200 companies (of which 50 micro, 50 small, 50 medium-sized and large enterprises 50). The instrument was validated through the assessment of the percentage/quantitative distribution of test results. The questionnaires were distributed, thoroughly explained, self-administrated, recovered and systematized between September and November 2015. The software program Excel performed calculations.

4. Research Findings

The result in Table 1 convey the results between different categories of SMEs and large enterprises. The results are quite shocking when we thought that Czech companies use certain standards in the field of CSR, so that they can inform its stakeholders about its activities and thus strengthen their competitiveness and positive impact on society. The results suggest the opposite; only in large companies, we have seen higher levels of use of CSR standards.

Microenterprises barely use any standardization and even ultimately ignore the concept of CSR (they are not aware of CSR, but use only selected approaches largely in compliance with the law). Their activities are only going for certification (ISO 9000 and ISO 14000 series), which according to the replies the main reason to have this certification is to obtain customer who require the level of certification. Based on detailed analysis, the main motivation factors for SMEs was discovered, except the customers' requirement, other important stimulus is participation in public tenders for grant opportunity. This motive was also common for large companies, which understand the certification e.g. in terms of quality as standard.

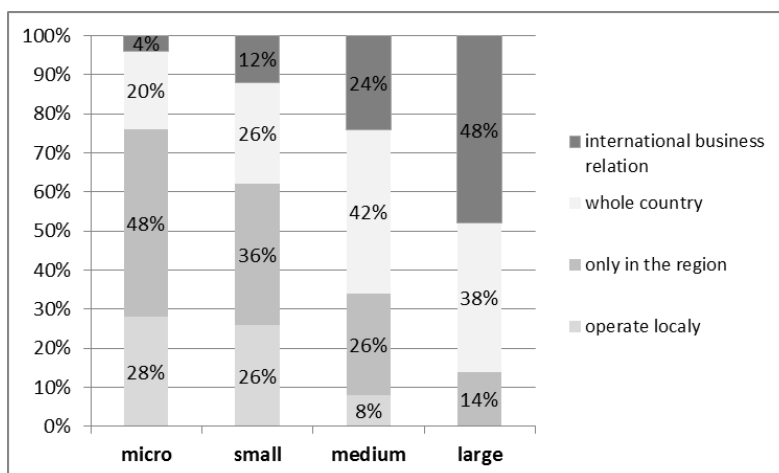
Table 1: Guidelines, Frameworks and Standards Incorporated into Business Activities Identified by Enterprises

Type of implemented guidelines, frameworks	micro	small	medium	large	Total number (according the type of standard)
ISO 14000 series	2	6	15	23	46
EMAS	0	0	0	1	1
ISO 9000 series	8	17	21	37	83
ISO 26000	0	0	1	5	6
OHSAS 18001	0	4	6	18	28
OECD Guidelines	0	0	0	2	2
ILO Tri-partite Declaration	0	0	0	1	1
UN Guiding Principles	0	0	0	3	3
London Benchmarking Group	0	0	0	4	4
GRI	0	0	3	4	7
IQNet SR 10	0	1	2	3	6
CSR award participation	0	0	1	5	6
IFC Colour Certificate	0	0	0	3	3
total numbers of guidelines (according the type of enterprise)	10	28	49	109	

Source: own research

ISO certification is a dominant framework in large companies (see Table 1), which in absolute numbers by 37 companies (out of 50) use the ISO 9000 series and 23 enterprises use the ISO 14000 series. Large companies use other international guidelines very rarely, namely e.g. GRI and LBG in only 4 companies and OECD Guidelines in two companies surveyed. It should be noted that were the enterprises operating in a global market environment with a high impact on the environment and society, because these companies have voluntarily engage in these standards for the purpose of long-term sustainability, not only business.

Figure 1: The Operating Area of the Enterprise in Terms of their Business Activities



Source: own research

Voluntary standards in the form of recommendations in ISO 26000 are only used in 6 cases. In the Czech Republic, the standard is not very widespread, because of the very low publicity. Vague approach for the upcoming season gives to speculate if this standard has become one of the conditions for obtaining grants, so you can expect a large increase in its implementation. For the purposes of Czech, accreditation arose frameworks that is used for the purpose of certification and was identified in six companies. Taking into account the areas of operation for selected groups of enterprises was found that the more the enterprises is active in the international environment, the more use of international and local standards in the issues of CSR. These was connectivity to the size of the enterprise with increasing number of deployed voluntary standards. The area of influence and connection with the use of standardization revealed that micro enterprises mainly operate locally (28%) or only in the region (48%) and almost not included international or local CSR standards.

5. Conclusion

Over the past few decades, various international guidelines have been developed by international organisations. The guidelines are designed to support governments, businesses and other organisations to make progress towards establishing effective CSR practices and to set commonly-recognised standards. The guidelines are based on research, stakeholder and expert input, and evidence from best practice and consultation with national governments. Some countries have specifically set out how their National Action Plan and other policies and strategies are aligned to the goals of these internationally recognised guidelines and standards.

Countries where there is an established tradition of CSR may be monitoring the continued application of these recommendations, using them as a benchmark for good practice which is then used for settling disputes or targeting specific support to high risk sectors. The Czech Republic is in the stage of raising awareness or disseminating good practices in relation to these international standards. Results showed that the use of standardization approaches were found to a greater extent only in large enterprises. Conversely, SME sector is very specific, and there were found only the ISO series standard. In regard to the hypothesis, we have discovered that there is relationship between size of the company and the use of appropriate standards in CSR, the stated hypothesis was confirmed. In the preliminary study we have identified some research limitations, specifically in area of local action of respondents, the sample size is based on the confirmation of cooperation within research (it's not a random selection) and the number of the units of analysis in our study is dictated by the type of research problem. Also we used the simple analytical methods which are basis for subsequent research of dependencies between selected factors of CSR according to the size of the company.

Overall, we can say that the main standards of the European Commission's view are almost never used in the Czech Republic and examples we identified only in large multinational enterprises. Therefore, it is necessary to focus on more awareness of CSR in the SME sector, because SMEs provide two out of three private sector jobs and contribute to more than half of the total value added created by businesses in the EU. Therefore, the impact that a shift to more sustainable and socially responsible SME business practices could have on Europe's society, economy and environment is potentially significant.

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Implementation of Good Governance Concept in the European Union Member Countries

Eva Ardielli

VŠB - Technical University of Ostrava
Faculty of Economics, Department of Public Economics
Sokolská třída 33
Ostrava, Czech Republic
e-mail: eva.ardielli@vsb.cz

Abstract

Modernization of public administration has been greatly driven by the development of Good Governance concept on the European continent for the past two decades. This concept stresses the quality and properly functioning public administration with an integrated element of subsidiarity. Good Governance has been incorporated over time into the development strategies of international organizations as the United Nations or the World Bank and it is significantly supported by their activities at the national level. The European Union also strongly supports the concept of Good Governance and promotes the modernization of public administration in member states because Good Governance is considered as a key aspect when ensuring the country's long-term competitiveness and well-being. The paper focuses on the evaluation of the development of Good Governance indicators in the European Union. The research is made based on assessment of Good Governance indicators (Worldwide Governance Indicators) monitored by the World Bank.

Keywords: European Union, Good Governance, Public Administration

JEL Classification: H00, H11, F62

1. Introduction

In the field of public affairs administration there is currently significantly promoted the concept of Good Governance. This concept is not legislatively defined at the national or international level. Documents dealing with this issue are usually defining Good Governance through its individual components; known as principles of Good Governance, see Potěšil (2008). Generally, Good Governance is the designation for high-quality and properly functioning public administration with an integrated element of subsidiarity, allowing for the participation of the citizens and respecting democratic values and the rule of contemporary modern state. The success of Good Governance concept implementation indices the quality of public administration functioning and overall maturity of public administration in individual countries, as specified by Kooiman (2003) or Zanger (2000). As reported by Klimovský (2010), the applying of the Good Governance concept is also promoted by international, multinational and national subjects such the World Bank (WB), United Nations (UN), International Monetary Fund (IMF), Organisation for Economic Co-Operation and Development (OECD), European Union (EU) or Council of Europe (CE). With regard to the fact that the proper performance of administrative practice stands in the focus of interest of many multinational and international organizations, the concept of Good Governance is described in a number of important documents with international scope. Despite the fact that

these acts in form of recommendations and resolutions are not legally binding, the countries have at least a political commitment to act in accordance with them.

The crucial role in shaping the concept of Good Governance has been played by the CE. Comprehensive look at the issue of Good Governance is available in the “CE Recommendation on good administration” from 2007, see Council of Europe (2007). This act aims to define the basic right to good administration and to facilitate its effective implementation in practice. Good Governance is defined here through principles of Good Governance: Principle of lawfulness, equality, impartiality, proportionality, legal certainty, principle of taking action within a reasonable time limit, participation, respect for privacy and transparency. As stated by Demmke et al. (2006) the concept of Good Governance is not only one of the contemporary current trends of public administration modernization in EU but it is also an important subject of a number of research studies that pay attention e.g. to the public administration reform in EU member countries (Ladi and Tsarouhas, 2014) or the value of Good Governance (Arturo and Cantale, 2012).

Due to the importance of the Good Governance concept worldwide, this paper aims to evaluate the level of Good Governance implementation in the EU, based on indicators of Good Governance and to verify whether the level of governance in the EU is increasing during the time. Benefit of evaluating the quality of public administration is that the quantification of governance and their individual dimensions may lead to improved understanding of the concept, towards its greater relevance to practice. More importantly, however, is that the measured results influence recommendations of political analysts in addressing public policy issues.

1.1 Approaches to Evaluating of Good Governance

The current public administration is interpreted in the broad sense in the context of theoretical works and referred to as Governance. Good Governance is an ideal state government, which is as a whole difficult to achieve, but it determines the quality of governance in individual countries, see Agere (2000). Although this is an area with a relatively short history, to the modern measuring of governance has been dedicated a large number of projects on which basis was created wide portfolio of governance indicators.

The beginnings of the application of the governance indicators are in the 80s of the 20th century, when the qualitative case studies were published emphasizing the importance of governance for socio-economic development, see North (1991). The main sponsor of these research projects were organizations such as USAID, IMF, WB, UN or EU. Due to the important interdependence between the governance, human rights and democracy, and the fact that human rights and democracy are considered as key aspects of governance, many approaches to measuring Good Governance use the indicators of the aforementioned areas. However, over time the use of indicators was extended to empirical research, see European Commission (2014). The first impulse of empirical research in the area of Good Governance was an effort to find the relationship between political and legal institutions and economic growth. For this purpose, were used indicators measuring human rights and freedoms, e.g. Array of Freedom House, on which was inferred level of law (Rule of Law), as stated by Grier and Tullock (1989) or indicators assessing the degree of political stability, on the basis of which was exerted protection and enforcement of property rights, which are also regarded as an important aspect of Good Governance, see Alesina and Perotti (1996). Conjunction of standard rating scales and objective statistical data allowed the emergence of specific approach aggregating these indicators into indices measuring the state of some aspect of governance, as

stated by Potůček et al. (2007). Examples are two indexes comparing economic freedom: “Index of Economic Freedom” and “Economic Freedom of the World Index”. Indicators of Good Governance were established due to the inadequacy of indicators created for other purpose than for measuring of Good Governance. Approaches to evaluating of individual aspects of the governance focused on expert assessment panels that enabled comparisons among countries using a variety of indicators. The pioneers of this type of projects became private consulting firms already in the late 70s and 80s of the 20th century. In academic research, the data for assessment of governance began to be used in recent years, e.g. Clague et al. (1999). Parallel to these commercial activities, as documented by Potůček et al. (2007), gradually began to be promoted non-profit and academic projects of expert measurement of governance. The most famous is the “Corruption Perception Index of Transparency International”. Other projects dealing with the evaluation of governance are e.g. Studies of the World Bank “World Business Environment Survey”, an investigation of the University of the United Nations’ “World Governance Survey” or the “Transformation Index” by Bertelsmann Foundation and “Global Governance Initiative” of the World Economic Forum, see Court et al. (2002). Very important contribution to the development of Good Governance indicators is a project of the World Bank “Institute Aggregate Governance Indicators”, see UNPACS (2014). Benefit of indicators of Good Governance lies primarily in the fact that they highlighted the key role of Good Governance for successful socio-economic development. Relationship between quality of governance and economic development gradually gained unquestioned nature.

1.2 European Commission Initiatives in the Area of Good Governance

The EU strongly supports the concept of Good Governance and supports the increase of quality of public administration. Good Governance is considered as the key aspect in ensuring a country's long-term competitiveness and well-being. Therefore, the quality improving of public administration has been an important funding objective of the European structural investments in several member states, see European Commission (2014). According to Lacina (2010), the application of Good Governance in European public administration systems is affected mainly due to effects of severe economic and financial factors, the application of the principles of strategic planning and the formulation of ideas about the goals of reform and ways of their implementation, and to some extent also due to efforts to develop the European Administrative Space.

The EU is actively engaged in the modernization of public administration not only of own institutional structure but also in EU member countries. Since the beginning of 2000 it is possible to record at European level a comprehensive attempt about the “Reform of European governance”. As stated in European Commission (2014), the aim of this reform is, inter alia, to ensure the efficient, clearer and more open government, especially in areas that are entrusted to the EU. The basic document formulating the principles of Good Governance is the “White Paper on European Governance” from 2001, see European Commission (2001). The basic principles of European Good Governance are openness, participation, accountability, efficiency and solidarity. The European Commission has implemented “modern administration”, which is defined as management based on the principles of EU, see Europa (2015). In recent years, the Commission and its staff engaged in the task of redesigning the administrative systems and procedures, management of financial and human resources and way of planning their activities. This led to the most radical internal modernization since the establishment of the European Commission in 1958, see European Commission (2010). Among the essential elements that contribute to the modernization of the administration of the

Commission were included: efficiency, transparency, ethics and conduct, equal opportunities, electronic Commission, environmentally friendly Commission and multilingualism, see European Commission (2014).

2. Data and Methodology

The analysis of Good Governance is based on processing and evaluation of data collected by the World Bank, see Kaufmann, Kray a Mastruzzi (2006). These data are soft data (evaluation of the public, entrepreneurs or experts), which are based on the outputs of project “Governance Matters” measuring the quality of governance. The World Bank has been collecting data about governance since 1996 and currently they are monitored annually. It processes indicators of governance for 215 economies of the world. Good Governance is monitored on the basis of six aggregate indicators, so called WGI (Worldwide governance indicators). The data source for comparing is the database of the World Bank, see UNPACS (2014). This data were chosen because they characterize the public administration in terms of quality and because of geographic coverage and long-term monitoring that enable international comparisons over time. The advantage is that the data are obtained and processed with the same method all the time and they are comparable to each other.

The evaluation of the state of Good Governance implementation is performed in all EU countries (EU-28) and the results are compared with other two important grouping of countries - the OECD and the CE. In the research there are processed data from 1996 to 2013 for the 28 EU countries, 47 countries of CE and 34 countries of OECD. There are evaluated six characteristics of governance, so-called aggregate indicators of Good Governance: Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. The detailed results of individual aggregate indicators and their development are processed for the countries EU-28. Each of the aggregate indicators becomes normalized values in the interval from -2.5 (worst result) to 2.5 (best result). The investigation of the state of public administration in EU countries was determined on the basis of the above mentioned aggregate indicators as the arithmetical average, see (1).

$$\bar{x} = \frac{1}{n}(x_1 + x_2 + \dots + x_n) = \frac{1}{n} \sum_{i=1}^n x_i \quad (1)$$

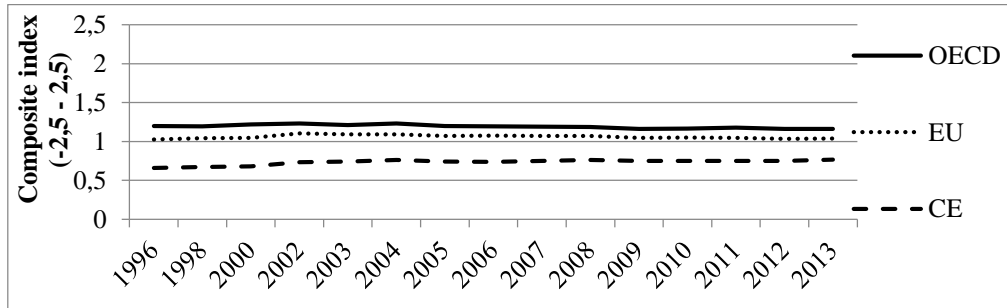
Where \bar{x} is the composite index of Good Governance, n is the number of aggregate indicators and x_i are the results of individual aggregate indicators. Evaluation of Good Governance is done with the use of comparative and graphical methods. There are also used the methods of hierarchical clustering.

3. Problem Solution

The empirical part of the paper is focused on comparison of Good Governance level in member countries of selected international organizations (EU, OECD, CE) and evaluation of Good Governance level in EU. The comparison of the Good Governance level of international organizations is conducted both for individual indicators of Good Governance, and the overall “composite index of Good Governance”, which was processed by own calculation. The reported period covers the time series from 1996 to 2013. Fig. 1 documents the development of Good Governance in the EU, OECD and CE countries from 1996 to 2013 by the composite index of Good Governance. The highest level of public administration was reported in OECD countries. However, in the long term there is a slight reduction in level of administration. In 1996, the calculated value of the composite index of Good Governance was 1.20, in 2013 it

was 1.16. On the contrary, EU countries showed a slight increase in the value of the composite index of Good Governance from 1.02 in 1996 to 1.04 in 2013. The comparison shows that the lowest level of government has been recorded in the countries of the Council of Europe. However, these countries reported the highest growth of government level during the monitored period – from 0.66 in 1996 to 0.76 in 2013.

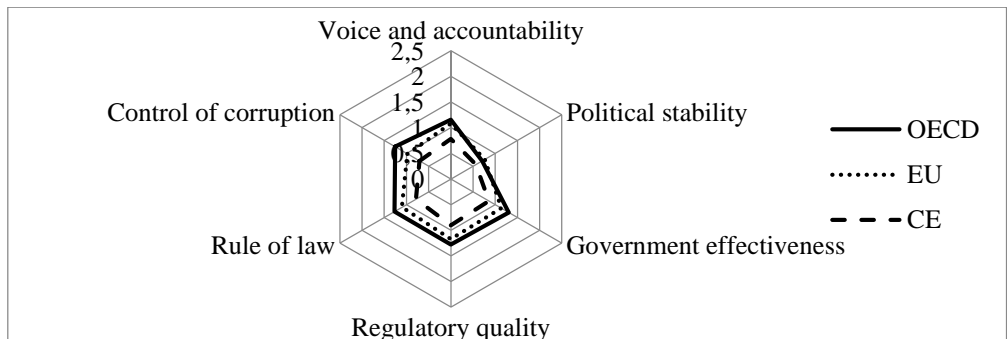
Figure 1: Comparison of the Public Administration Level in EU, OECD and CE



Source: Own calculations based upon data from World Bank (2014)

On Fig. 2, there are compared the individual aggregate indicators of Good Governance in 2013. The figure shows that the EU and OECD countries achieve comparable values for indicators of “voice and accountability” and “political stability”. In other indicators, the EU lags behind OECD countries. CE countries are lagging behind in all monitored indicators.

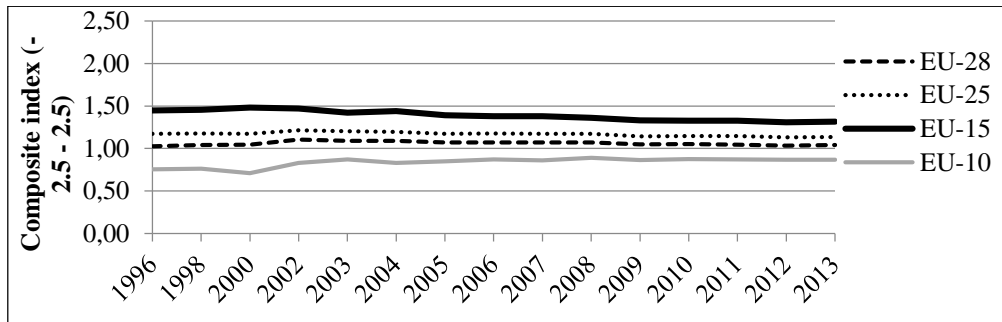
Figure 2: Comparison of Individual Aggregate Indicators in EU, OECD and CE



Source: Own calculations based upon data from World Bank (2014)

Fig. 3 documents the development of the composite index of Good Governance in the country groups of EU (EU-28, EU-25, EU-15, EU-10) from 1996 to 2013. Based on the comparison of the composite index in particular groups of EU countries is possible to trace two tendencies. While in the EU-10 countries is evident the trend of gradual improvement of the level of public administration, at the EU-15 countries the trend is reversed. This trend is also reflected in the values of EU-25 and EU-28.

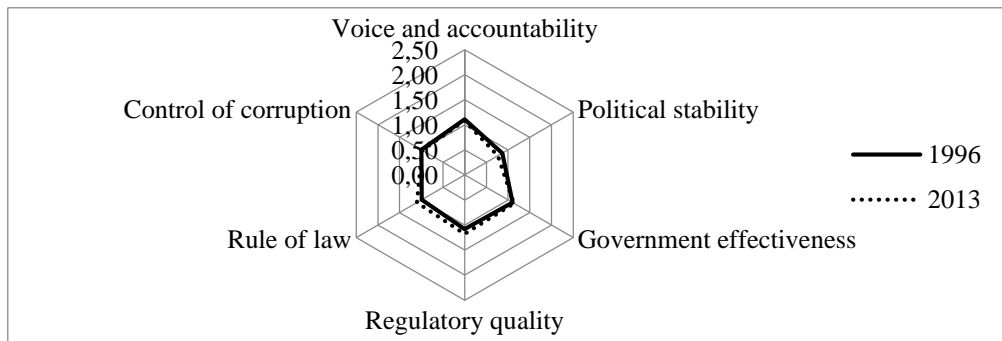
Figure 3: Development of Good Governance Composite Index in EU Countries



Source: Own calculations based upon data from World Bank (2014)

In Fig. 4 there are compared the individual aggregate indicators in EU-28 in the year 1996 and 2013. While the indicators “rule of law” and the “regulatory quality” increased during the period, the indicator “political stability” declined in EU countries. Almost unchanging values were found in indicators “control of corruption”, “voice and accountability” and “government effectiveness”.

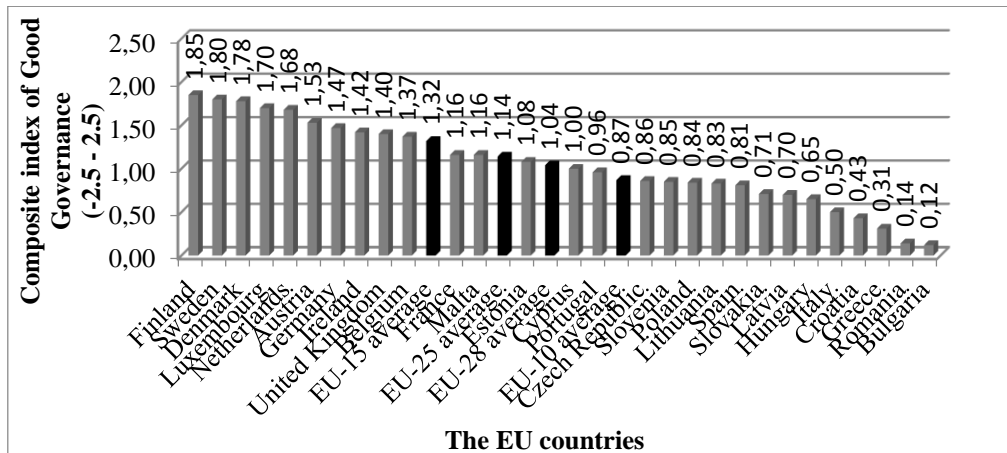
Figure 4: Development of Individual Aggregate Indicators in EU Countries (EU-28)



Source: Own calculations based upon data from World Bank (2014)

Fig. 5 summarizes the state of public administration maturity in the EU in the year 2013. There are also included the results of selected EU country groups (the EU-15, EU-25, EU-28 and EU-10 countries). The obtained results show that the top ranked countries in EU are the Nordic countries: Finland, Sweden and Denmark. On the contrary, the worst score was reached by Greece, Romania and Bulgaria.

Fig. 5 State of Public Administration Maturity in the EU Countries (2013)



Source: Own calculations based upon data from World Bank (2014)

Based on the achieved results, it is possible to divide EU countries using hierarchical clustering - Ward's method into 3 groups according to the level of Good Governance. In the first group are countries with high level of public administration, and therefore may have an inspirational character for other EU member countries. The second group contains countries with average level of Good Governance, and in the third group are substandard countries with insufficient level of public administration. The results are documented in Tab. 1.

Table 1: Evaluation of the Level of Public Administration in EU Countries (2013)

Group	Countries
Above-average	Finland, Sweden, Denmark, Luxembourg, the Netherlands, Austria, Germany, Ireland, Great Britain, Belgium
Average	France, Malta, Estonia, Cyprus, Portugal, Czech Republic, Slovakia, Poland, Lithuania, Spain, Slovakia, Latvia, Hungary
Below-average	Italy, Croatia, Greece, Romania, Bulgaria

Source: Own calculations based upon data from World Bank (2014)

4. Conclusion

Well functioning and reliable public administration is an essential factor of economic growth. The aim of this paper was to assess the level of public administrations from the perspective of Good Governance concept in EU countries. Based on comparison of the composite index of Good Governance in the member countries of selected international organizations is possible to conclude that the highest level of public administration is achieved on average in OECD countries. OECD countries are followed by the EU countries, according to the reported values and the lowest level of public administration was detected in the CE countries. However, based on the use of graphical methods, in terms of long-term trend is possible to state that the level of public administration in EU countries is increasing.

The detailed analysis was made up in EU countries with detail on the individual aggregate indicators of Good Governance. Based on a comparison of indicators, it was found that the level of public administration in the EU-28 as a whole improves slightly in the long-term

development. It is primarily due to the introduction of regulations and practices that lead to the reduction of administrative burden on businesses and the increasing level of law in EU countries. The assessment shows that the composite indexes of Good Governance in EU countries are only positive values in the interval from 0.12 to 1.85. Negative values of composite index of Good Governance are absent in the EU countries, what is reflecting the maturity of public administrations in EU countries. On the other hand, there were observed no values very close to the maximum of 2.5. It follows that the concept of Good Governance should be understood as a kind of ideal state of public administration, which individual countries are seeking for by long-term reforms and interventions.

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Changes in Level of Socio-Economic Development of EU Member Countries in the 2004-2013 Period – Taxonomic Analysis

Wojciech Bąba

Cracow University of Economics
Faculty of Economics and International Relations
Department of European Economic Integration
Ustronie 503, Rakowicka 27
Cracow, Poland
babaw@uek.krakow.pl

Abstract

The main goal of the article will be the analysis of changes in socio-economic development level of 27 member countries of the European Union in the 2004-2013-time period, utilizing multidimensional taxonomic methods. The core of this analysis will be the comparison of clusters composed of EU member countries in two sub-periods: 2004-2006 and 2011-2013, performed by measuring Euclidean distances between pairs of countries and grouping similar countries into clusters, using Ward's method of agglomerative hierarchical clustering. The analysis will be based on ten variables describing level of socio-economic development on national level (for example: GDP per capita, employment rate, R&D expenditure as percentage of GDP, at-risk-of-poverty rate). The main source of empirical data will be the Eurostat database.

Keywords: Agglomerative Hierarchical Clustering, European Union, Socio-economic Development Level

JEL Classification: C38, F15, I00, O19

1. Introduction

The main goal of this article is the analysis of changes in level of socio-economic development in member countries of European Union in the 2004-2013-time period, using taxonomic methods: measuring Euclidean distances between objects (countries) and grouping similar objects into clusters, using Ward's method of agglomerative clustering. Such analysis will allow to evaluate similarity in levels of socio-economic development in EU member countries and to identify character of this similarity's changes in the analysed time period. These changes can manifest themselves as changes in cluster composition or lengths of bindings between countries or their clusters. An increase of the above-described similarity will be treated as an indicator of a decrease in difference among EU member countries, when it comes to socio-economic development levels, and vice versa. The EU's need of supporting socio-economic development of its member countries and the necessity of decreasing differences between member states in this area, were mentioned both in theory (Klonowska-Matynia and Sasin, 2015), (Piontek, 2010), (Ray, 2000), (Schwarz 2014), and EU's documents, e.g. in the Europe 2020 Strategy (European Commission, 2010), (European Commission [online], 2016).

Objective scope of the article covers 27 member countries of the European Union. 28th member country – Croatia – was omitted in the analysis due to two reasons. First, this country joined EU in 2013, so it wasn't a EU member country during the analysed period (see below).

Second, for the time period covered in analysis, the majority of variable values for this country weren't available in the Eurostat database.

Temporal scope of the article covers two sub-periods: 2004-2006 (sub-period A) and 2011-2013 (sub-period B), which came from an intention of analyzing changes in socio-economic development levels in EU member countries in the 2004-2013 period. First sub-period was chosen as the "initial" sub-period, showing situation shortly after the Eastern Enlargement of the EU. Second sub-period was chosen as the "final" sub-period, characterising EU's situation almost ten years after the enlargement. Calculations of variable values used in the multidimensional analysis were based on arithmetical means of yearly variable values in each sub-period. Temporal completeness of the data was achieved by substituting missing or unreliable variable values with values from previous / next year.

Subjective scope of the article covers ten variables, used to describe level of socio-economic development on a country level. The procedure of variable selection and preparation has been described in next section. Credibility and comparability of the data were achieved by using only one source of data (Eurostat database) for all variables.

2. Selection and Preparation of Diagnostic Variables

A preliminary variable selection was done based on the analysis of literature, utilizing substantial criteria (Boeri, 2002), (Esping-Andersen, 1990), (Rosati, 2009), (Sapir, 2005), (Skidelsky, 1997), (Tendera-Właszczuk, 2016), (Wilkinson, Pickett, 2009), (Zeliaś, 2004). It was decided that all variables should be treated as equally important (they should have identical weights in analysis). A list of variables, describing level of socio-economic development in EU-27 member countries, which was used in the analysis, has been presented in Table 1.

Table 1: List of Variables Used in the Analysis of Socio-Economic Development Levels in EU-27 Member Countries

	Variable	Eurostat Code	Character
x1	Real GDP per capita (Euro per inhabitant)	nama_aux_gph	stimulant
x2	Services ¹ as percentage of GDP (%)	nama_nace10_c	stimulant
x3	Employment rate in age group 16-64 years (%)	lfsi_emp_a	stimulant
x4	Employment in agriculture, forestry and fishing as percentage of total employment (%)	nama_nace10_e	destimulant
x5	People with tertiary education (ISCED 5-8) as percentage of total population aged 25-69 years (%)	edat_lfs_9903	stimulant
x6	Infant mortality rate (per 1000 live births)	demo_minfind	destimulant
x7	Total R&D expenditure as percentage of GDP (%)	rd_e_gerdtot	stimulant
x8	At-risk-of-poverty rate ² (%)	ilc_li02	destimulant
x9	Severe material deprivation rate (%)	ilc_mddd11	destimulant
x10	Crude rate of total population change (per 1000 of inhabitants)	demo_r_gind3	stimulant

¹NACE activities G-Q; ²Cut-off point: 60% of median equivalised income after social transfers
Source: Author

Values of diagnostic variables and their selected statistical characteristics have been presented in Tables 2 and 3.

Table 2: Variable Values for Sub-Period A (Arithmetic Means of Yearly Values 2004-2006*)

	Variable values for sub-period A									
	x1	x2	x3	x4	x5	x6	x7	x8	x9	x10
AT	29966,67	69,57	77,50	5,50	17,33	4,10	2,31	12,73	3,63	5,70
BE	29033,33	60,53	60,80	1,77	29,53	3,87	1,80	14,60	5,87	5,97
BG	3000,00	72,53	56,20	21,20	20,97	10,57	0,46	21,73	46,90	-5,27
CY	18433,33	67,93	69,00	4,90	28,23	3,73	0,37	15,73	12,70	15,77
CZ	10233,33	60,67	64,77	3,83	12,67	3,47	1,18	9,97	9,60	1,90
DE	27266,67	80,47	65,90	1,70	23,77	3,93	2,44	13,30	4,83	-0,90
DK	38400,00	61,23	76,33	2,87	32,50	4,10	2,40	11,47	3,07	3,03
EE	8366,67	56,87	65,43	5,17	32,30	5,40	0,96	18,93	9,60	-5,73
EL	17600,00	70,57	59,77	11,93	19,77	3,87	0,56	20,00	12,80	3,20
ES	21033,33	71,37	63,30	4,73	26,60	3,70	1,10	20,17	4,33	17,03
FI	30166,67	65,50	68,43	5,13	33,37	3,03	3,33	11,77	3,63	3,63
FR	27366,67	60,90	63,67	3,33	24,03	3,87	2,06	13,23	5,47	7,17
HU	8800,00	69,73	57,03	8,37	16,63	6,17	0,93	13,90	21,23	-1,67
IE	39100,00	69,07	67,53	5,73	28,47	4,10	1,20	19,70	4,90	24,80
IT	24633,33	50,93	57,87	4,13	11,50	3,77	1,06	19,20	6,53	4,20
LT	6333,33	65,03	62,70	13,87	24,57	7,47	0,76	19,87	24,83	-14,93
LU	64966,67	60,60	63,23	1,57	23,70	3,00	1,64	13,50	1,23	15,20
LV	5833,33	64,03	63,00	11,70	19,70	8,13	0,53	21,37	31,53	-10,07
MT	12200,00	71,27	53,83	3,40	11,10	4,93	0,53	14,53	4,57	4,77
NL	31633,33	56,47	73,53	2,97	29,07	4,57	1,80	10,20	2,17	2,07
PL	6466,67	63,30	53,00	16,97	16,27	6,40	0,56	18,97	27,90	-0,53
PT	14666,67	62,03	67,50	11,47	12,17	3,53	0,81	19,43	9,43	1,90
RO	3800,00	71,17	58,03	31,77	10,53	15,23	0,41	23,53	33,87	-6,13
SE	33166,67	67,70	72,57	2,20	28,50	2,77	3,43	11,03	2,47	5,07
SI	14433,33	61,63	65,97	9,70	19,63	3,73	1,44	11,77	5,10	2,33
SK	7166,67	73,73	58,03	4,43	13,40	6,87	0,49	11,83	18,00	0,07
UK	30966,67	72,40	71,67	1,20	29,80	5,00	1,63	18,87	4,67	7,07
\bar{x}	20927,16	65,82	64,32	7,46	22,08	5,16	1,34	15,98	11,88	3,17
σ	14299,59	6,45	6,53	7,01	7,32	2,70	0,87	4,10	11,74	8,38
c_v	0,683	0,098	0,102	0,939	0,331	0,523	0,648	0,257	0,988	2,641

*Except: x8 and x9: 2005-2007 for CY, CZ, DE, HU, LT, LV, MT, NL, PL, SI, SK, UK (missing data); 2007-2009 for BG, RO (missing / unreliable data)

Source: Author's calculations based on Eurostat data: Eurostat (2016), *Database* [online], [cit.2016-02-01], Available: <http://ec.europa.eu/eurostat/data/database>.

Table 3: Variable Values for Sub-Period B (Arithmetic Means of Yearly Values 2011-2013*)

	Variable values for sub-period B									
	x1	x2	x3	x4	x5	x6	x7	x8	x9	x10
AT	32166,67	67,33	79,43	4,60	19,43	3,30	2,77	14,43	4,07	5,20
BE	29633,33	63,20	61,83	1,30	33,97	3,57	2,22	15,23	5,70	6,10
BG	3733,33	75,43	58,90	19,23	23,70	7,87	0,61	21,47	43,57	-5,63
CY	17300,00	69,87	64,63	4,00	37,23	2,73	0,46	14,93	14,27	7,20
CZ	11466,67	61,50	66,63	3,27	18,67	2,60	1,75	9,33	6,43	0,80
DE	30133,33	85,00	73,07	1,57	27,80	3,40	2,84	16,00	5,20	2,17
DK	37300,00	62,10	72,73	2,43	33,33	3,47	3,02	12,80	3,07	4,00
EE	9466,67	57,87	66,97	4,43	36,93	2,73	2,08	17,87	8,57	-3,47
EL	15650,00	70,63	51,57	12,23	24,97	3,33	0,72	22,53	18,33	-5,43
ES	20300,00	71,37	56,20	4,20	31,33	2,97	1,28	20,60	5,50	-1,10
FI	30833,33	66,83	69,10	4,63	38,63	2,20	3,46	12,90	2,87	4,67
FR	27666,67	60,90	63,97	2,80	29,73	3,53	2,22	13,93	5,20	4,40
HU	8900,00	73,33	56,73	7,13	21,43	4,93	1,29	14,03	25,20	-2,77
IE	36366,67	71,17	59,40	4,97	38,27	3,50	1,56	15,00	9,17	2,50
IT	22900,00	47,60	56,30	3,80	15,03	2,90	1,25	19,37	12,70	7,87
LT	8100,00	64,23	61,97	8,57	33,07	4,13	0,92	19,47	18,27	-12,13
LU	63066,67	63,60	65,37	1,10	37,67	3,57	1,24	14,87	1,43	23,67
LV	6766,67	64,67	62,93	7,80	28,33	5,77	0,65	19,20	26,87	-11,97
MT	13600,00	78,40	59,27	3,07	16,50	6,17	0,80	15,47	8,43	8,23
NL	32733,33	58,30	74,07	2,57	31,83	3,70	1,95	10,50	2,43	3,47
PL	8500,00	68,20	59,67	12,50	23,73	4,63	0,84	17,37	12,80	-0,33
PT	14433,33	67,83	61,93	10,70	17,40	3,13	1,40	18,20	9,27	-4,60
RO	4700,00	75,47	59,87	30,17	14,50	9,20	0,45	22,40	29,27	-4,17
SE	35366,67	70,23	73,93	2,30	34,83	2,47	3,27	14,30	1,30	8,03
SI	15066,67	67,77	63,93	8,33	25,87	2,47	2,53	13,87	6,47	1,77
SK	9366,67	75,90	59,63	3,23	18,70	5,40	0,77	13,00	10,43	1,43
UK	30466,67	75,13	69,90	1,27	37,17	4,03	1,65	16,03	7,07	6,73
\bar{x}	21332,72	67,92	64,07	6,38	27,78	3,99	1,63	16,11	11,25	1,73
σ	13728,32	7,59	6,63	6,37	7,99	1,66	0,90	3,42	10,01	7,16
c_v	0,644	0,112	0,103	0,999	0,288	0,416	0,555	0,212	0,890	4,145

*Except: x1: 2011-2012 for EL (missing data); x7: 2011-2012 for IE (missing data)

Source: same as in Table 2.

First stage of data preparation was to verify level of variable variation, using coefficient of variation. Value 0,1 of the coefficient was chosen as the critical value (variables with level of variation lower than this value should be removed from analysis). In case of almost all variables, their variation level was above the critical value, with an exception of variable x2, with variation level slightly below the critical value in sub-period A (0,098). Due to the fact,

that this value was very close to the critical value and also because in sub-period B the value of coefficient was higher than the critical value (0,112), decision was made not to remove variable x_2 from further analysis. It's worth mentioning that also in case of variable x_3 level of variation was close to the critical value (0,102 / 0,103).

Second stage of data preparation was to verify level of variable correlation, using the method of inverted correlation matrix, with the critical value of 10. For all variables used in the analysis, their level of correlation with other variables was lower than the critical value.

Third and last¹ stage of data preparation was normalization of variable values using method of regular standardisation (based on the usage of arithmetic mean and standard deviation).

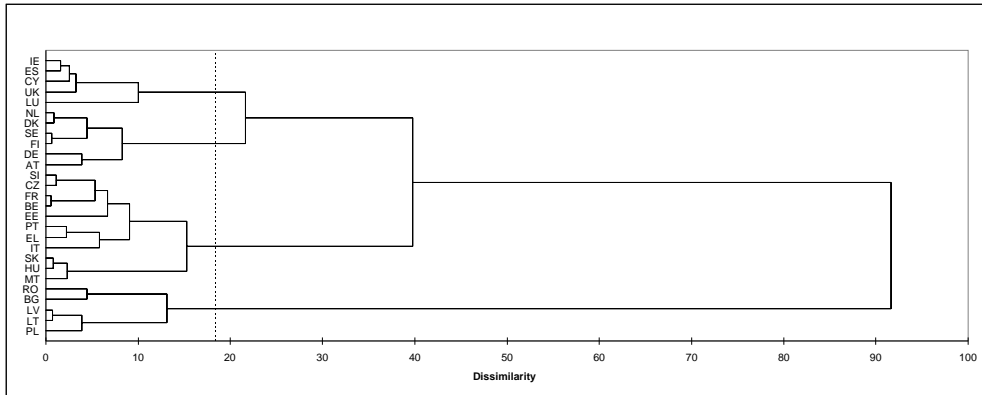
3. Level of Socio-Economic Development in 27 Countries of the European Union in the 2004-2013 Period – Cluster Analysis

The basis for the cluster analysis of 27 EU countries in both sub-periods was the measurement of Euclidean distances between pairs of countries. After that, countries were grouped into clusters of countries sharing similar level of socio-economic development, using Ward's method of agglomerative hierarchical clustering. This procedure was performed using XLSTAT program. The choice of optimal number of clusters was made utilizing automatic truncation of XLSTAT program, which takes into consideration: number of objects, character of connections between objects and lengths of bonds (Addinsoft [online], 2016). Other methods of choosing optimal number of clusters (e.g., Hellwig's method) were omitted, due to the fact that their usage led to high number of diverging objects (Jabłoński, Robaszek, 2000), (Tendera-Właszczuk, 2009). The results of grouping 27 member countries of the EU in both sub-periods of the analysis were presented in Figures 1 and 2.

Clustering performed for the sub-period A (2004-2006) showed high diversity of socio-economic development levels in EU countries. Among 27 analysed countries, four clusters were identified. Highest level of similarity characterized six countries: Austria, Denmark, Finland, Germany, Netherlands and Sweden. All these countries could be described as "rich" countries of EU's "north". Second cluster was composed of five countries: Cyprus, Ireland, Luxembourg, Spain and United Kingdom. These were generally countries with economies based on foreign investments and important role of the financial sector (except Spain). Third cluster consisted of five countries: Bulgaria, Latvia, Lithuania, Poland and Romania. All these were new member countries, with lowest level of economic development (measured e.g., by GDP per capita) in the entire EU. Fourth, most numerous, but also most internally dissimilar cluster, was composed of eleven countries: Belgium, Czech Republic, Estonia, France, Greece, Hungary, Italia, Malta, Portugal, Slovakia and Slovenia. This cluster consisted of "richer" new EU member countries, almost all countries of EU's "south" plus Belgium and France.

¹ E.g., stimulation of destimulants was not performed, due to the character of further analysis (grouping of countries, without ranking them).

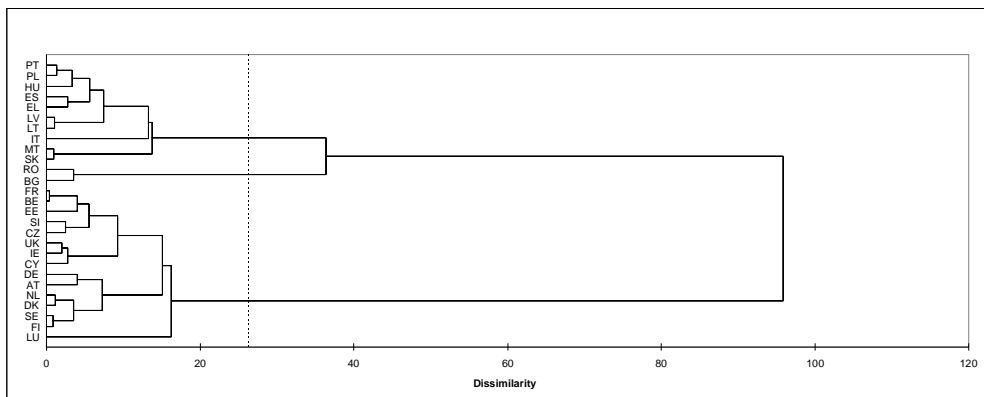
Figure 1: Ward’s Method Dendrogram for 27 EU Member Countries, Sub-Period A



Source: Author’s calculations, based on data from Table 2.

Second clustering, performed for the sub-period B (2011-2013) also showed high diversity of socio-economic development levels in member countries of the EU. Among analyzed countries, three clusters were identified. Highest level of similarity in socio-economic development levels characterized two countries: Bulgaria and Romania. These two countries formed a “diverging object” of a kind, significantly different from two other clusters. Second cluster consisted of ten countries: Greece, Hungary, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Spain and Slovakia. This cluster was composed of Central-Eastern and Southern European countries, with average level of economic development lower than in countries from last, third cluster. This cluster consisted of fifteen countries: Austria, Belgium, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Ireland, Luxembourg, Netherlands, Slovenia, Sweden and United Kingdom. Most of these were “rich” countries of North-Western Europe. There were only four new EU member countries in this cluster. Overall, among 27 EU countries, three groups of countries could’ve been identified, each of them with different average level of socio-economic development: **1)** two low-developed countries of Eastern Balkans (Bulgaria and Romania), **2)** ten middle-developed countries of Central-Eastern and Southern Europe and **3)** fifteen high-developed countries of (mostly) North-Western Europe.

Figure 2: Ward’s Method Dendrogram for 27 EU Member Countries, Sub-Period B



Source: Author’s calculations, based on data from Table 3.

When comparing clusterings done for both periods, two conclusions can be formulated.

First, it isn't possible to unambiguously state, if during the 2004-2013 period differences in levels of socio-economic development in the EU countries were decreasing or increasing. A decrease in number of clusters (from 4 to 3) could be used as an argument supporting the first claim (decrease in difference). On the other hand, an increase in level of dissimilarity, required to create one cluster from all analyzed countries (from 92 to 96), could support the second claim (increase in difference).

Second, there is no doubt that big (relative²) changes in levels of socio-economic development in EU member countries occurred during the analyzed period. Some countries improved their position within the EU: Latvia, Lithuania and Poland left the common cluster they shared with Bulgaria and Romania, Czech Republic, Estonia and Slovenia ended up in one cluster with countries of North-Western Europe. But in case of some countries, their position within the EU worsened: Greece, Italy, Portugal and Spain created a common cluster together with "poorer" new member countries. Most likely, two different phenomena overlapped here: an increase in levels of socio-economic development in new member countries (caused i.a. by the utilization of European Funds) and a decrease in these levels in countries of Southern Europe (the outcome of financial and economic crisis in these countries).

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 Nord and West.

4. Conclusion

Main goal of this article was the analysis of changes in levels of socio-economic development in member countries of the European Union in 2004-2013 time period, using Ward's method of agglomerative hierarchical clustering.

Clustering performed for first sub-period (2004-2006) identified four clusters:

- 6 richer countries of EU's "north" (AT, DE, DK, FI, NL, SE),
- 5 countries with important role of financial sector (CY, ES, IE, LU, UK),
- 5 poorer new member countries (BG, LT, LV, PL, RO),
- 11 other countries (BE, CZ, EE, EL, FR, HU, IT, MT, PT, SI, SK).

Clustering performed for second sub-period (2011-2013) identified three clusters:

- 2 low-developed countries of Eastern Balkans (BG, RO),
- 10 middle-developed countries of Central-Eastern and Southern Europe (EL, ES, HU, IT, LT, LV, MT, PL, PT, SK),
- 15 high-developed countries of Northern and Western Europe (AT, BE, CY, CZ, DE, DK, EE, FI, IE, FR, LU, NL, SE, SI, UK).

Comparing both clusterings, distinctive changes in (relative) levels of socio-economic development in EU countries can be identified. During analyzed period, some countries improved their position within the EU (CZ, EE, LT, LV, PL, SI), while others (EL, ES, IT, PT) – worsened. When it comes to identifying the character of changes in differences among

² Changes in countries' positions were most likely the outcome of absolute changes in variable values, but due to variable standardisation, this can't be unambiguously stated.

EU's member countries (decrease / increase in difference), the analysis doesn't allow to formulate unambiguous conclusions.

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The Aftermath of the Crisis on Banking Systems of New EU Member States: Does the Entry Mode Matter?

Daniel Badulescu, Radu Morușan

University of Oradea

Faculty of Economic Sciences, Doctoral School of Economics

C.P. nr. 114, Oficiul Postal 1, str. Universitatii nr. 1

Oradea, Romania

e-mail: dbadulescu@uoradea.ro, raalmoru@yahoo.com

Abstract

The role of foreign banks in emerging markets, especially in the new EU member states, is a highly debated topic in the literature of the last decades. The advantages on the medium- and short-term are counterbalanced by a consistent number of disadvantages. At the same time, long-term consequences and the effects of the recent crisis on foreign banks' behaviour are still controversial. Several studies have explored the relation between the mode of entry (i.e. by acquiring a local bank, or greenfield) and the subsequent behaviour of the new entities on the local banking markets. The present paper intends to enrich these approaches by studying, in a comparative pre- vs. post-crisis view, the evolution of the main foreign-owned bank groups in the region, broken down by mode of entry. Our findings, in line with similar previous researches, allow us to formulate critical interpretations on the importance of the entry mode on various markets in the corporate strategy of large international banking groups.

Keywords: *EU Member States, Foreign Bank Entry, Post-crisis*

JEL Classification: *G21, F36, G34, G01, L10*

1. Introduction

The topic of foreign banks' strategies entering on emerging markets is a highly debated topic, starting with the motivation, costs, expectation targeted market development, legislation and plans from hosting authorities regarding the participation of foreign capital in national banking system. It appears that, at least on the Central and Eastern European (CEE) markets in the last two decades, they have evolved relatively similar regarding those entries. Reorganization favoured, initially, the greenfield-type entries. Subsequently, the processes of privatisation and reorganization have created opportunities for foreign banks to acquire local banks, leading to the second wave of entries, significantly changing the profile of the banking systems in each country. In addition, acquisitions and mergers between these "new" foreign banks and the effects of the recent crisis have complicated furthermore the picture of CEE banks. This paper is aiming at investigating the actions undertaken by foreign banks in CEE, before and after the crisis, in terms of entry, by investigating the evolution of the most important banks in six representative countries of the region. The paper is organized as follows: in the next (second) part we briefly review the literature on bank capital entry modes, strategies and effects; in the third part we present the research methodology, questions, and discuss the results; and finally we conclude about the stage of banking market in ECE countries.

2. Motives, Performance and Effects of the Foreign Banks' Entry on the Emerging markets. A Literature Eeview

The literature mentions a number of motives for banks to enter the foreign markets, e.g. managerial decisions, empire-building tendencies of banks, profit-maximization, the need to acquire new customers on new markets or to keep (and multiply) the relationship with existing customers on the new markets etc. (Konopielko, 1999; Petrou, 2009).

The first step taken into entering a new market is, surprisingly, the lack of physical presence in the target market, by establishing cross-border lending relationships. For an effective expansion we refer, therefore, to the two main forms of entry on a foreign market: (1) greenfield investment or *de novo* bank, i.e. the establishment of an institution from scratch, in the host country, in most cases, under the name of parent company; and (2) acquisition of a bank, or obtaining a control position in a local institution.

The benefits of entering a market through greenfield investments consist of capitalizing reputation and international expertise of the foreign bank, especially in less developed or less stable economies. In some cases, *de novo* entry offers to foreign banks the opportunity to address additional market segments, avoiding incompatible customers with banking group strategy and expectations. The advantages of purchasing a local bank fall into another type of strategy. Foreign banks are preferred for new, tech products and services with a global platform, intensive in capital, for the experience and skills necessary for sophisticated products. From this point of view, the acquired banks, preserving foreign banks benefits, have ability to better exploit the advantages specific to domestic banks, compared with greenfield types (Degryse, Havrylchyyk, Jurzyk and Kozak, 2008).

Understanding the influence of entry mode on the performances of foreign banks begins with the distinct way according to which these banks acquire information (Claeys and Hainz, 2006) and the effect that difference has on the client portfolio, or so-called "competition effect" and "portfolio composition effect". In a first stage, domestic banks have a more complete picture on portfolio companies, which creates an advantage over new entrant banks. The advantage is significantly diminished if the foreign bank entry is made through purchasing a local bank, in which case the screening abilities and information analysis of the foreign bank exploits the portfolio of the acquired local bank (Bonin, Hasan and Wachtel, 2005; De Haas and Van Lelyveld, 2006). Havrylchyyk and Jurzyk (2010, p.3) admit that "foreign banks are more efficient and profitable than domestic institutions, and they experience faster and more stable loan growth". However, not all foreign banks reveal superior performance over domestic institutions, but only the greenfield bank group (Vo Thi and Vencappa, 2008, pp.23-24). Moreover, these performances "cannot be entirely attributed to benefits of foreign ownership but rather raise suspicion that they merely reflect a different borrower mix, with a higher share of large and transparent clients at the expense of small and medium enterprises" (Havrylchyyk and Jurzyk, 2010, pp. 3-4).

The second set of effects comes from the interest rates area. Over more than a decade, on the CEE markets, foreign banks could lend at much lower interest rate than local banks. In addition, large national domestic banks or recently privatised, able to compete with recently implanted foreign banks, were involved in long reorganizing processes, with portfolios burdened by inherited nonperforming loans. It was added also the desire of large, international customers to work with international banks, equipped with modern customer services. Privatised or not, large domestic banks administered consistent mixed client portfolios with mediocre yields, while foreign banks, *de novo* in particular, developed a selected portfolio.

According to De Haas (2014), the (economic) impact of banks entry on emerging markets can be examined from three points of view: *dimension*, *efficiency* and *stability*. In quantitative terms, the geographical proximity, the processes of institutional convergence (EU), resumption of traditional ties made the banking capital flows from Western to Central and Eastern Europe to be consistent, continuous and associated to sound economic expansion strategies. As a result of this process, at present, the share of foreign capital in banking in most CEE countries is impressive, between 70 and 80% (Raiffeisen Research, 2015). In terms of efficiency, foreign banks brought on emerging markets superior lending technologies and risk management, marketing. Gradually, transfer of expertise, organization, technology and qualified personnel had taken place in domestic banks as well, reducing rent extraction phenomena and monopolistic behaviour. Despite all these benefits, there are critical opinions stating that foreign banks efficiency comes from cherry-picking behaviours, leaving the less interesting clients, as small and medium-size enterprises (SMEs) to domestic banks (Badulescu, Simut and Badulescu, 2014).

All these positive arguments about the foreign banks entry on the emerging markets may be undermined (at least partially) by the volatility of the banking capital and economic instability that could be brought on these markets (Morgan, Rime and Strahan, 2004). There are evidences questioning the scale of these destabilizing phenomena, pointing out that foreign banks have a stabilizing effect on aggregate lending during local crises. Especially in the case of CEE markets, De Haas and Van Lelyveld (2006) and De Haas (2014) found that the banks acquired by foreign capital, unlike independent local banks, have additional access to the resources of parent banks, being able to overcome difficult moments and even capitalize the opportunities given by a temporary shortage in the credit supply from local banks. From this study's point of view, entry mode counts: greenfield banks seem to be (by subsidiaries - foreign legal entities component) more likely to transmit negative shocks from international markets to host markets compared to foreign banks acquiring important domestic banks.

3. Research Methodology, Sample Description and Results

The goal of our research is to investigate foreign banks' actions in CEE, before and after the recent crisis, in terms of entry mode, whether foreign banks which have entered the CEE in the form of greenfield investments have lost or gained in market shares, assets or even business quality, compared to foreign banks which have entered via acquisition of local banks, or to other competitors in the market. Note that the CEE region is quite diverse and heterogeneous, with most of the countries being still emerging economies in terms of economic and institutional development, while some of them have been exceeded this stage. Thus, we have selected seven of the most important foreign banks in CEE countries, and their evolution has been analysed over approx. 10 years (2004-2014) according to three relevant indicators: market share by assets, total assets and cost/income ratio. The main banking groups studied hereby were: Erste Bank (Hungary, Romania, Czech Republic, Croatia), Unicredit (Hungary, Romania, Czech Republic, Croatia, Bulgaria, Poland), Raiffeisen Bank (Hungary, Romania, Czech Republic, Croatia, Bulgaria), Societe Generale (Romania, Czech Republic, Croatia, Bulgaria), which is a representative selection according to Raiffeisen Bank reports (2004, 2008, 2014).

Analysing the data for Poland (see Table 1), we note that the largest market share in assets belongs to PKO Bank Polski (a state-owned bank), with a relatively constant market share, ranging from 15.2% in 2004 to 15.9% in 2014. Next we find banks which have entered through acquisitions: Bank Pekao - part of the Unicredit Group (Italy), Bank Zachodni WBK - part of Santander Group (Spain), mBank (part of the Commerzbank group, Germany) and ING Bank.

Table 1: Main Banks in Poland, in Terms of Market Share, Assets and Cost/Income Ratio (2004, 2008, 2014)

Bank (type of capital / entry mode)	Market-share (%)			Total assets (Mil. euros)			Cost/income ratio (%)		
	2004	2008	2014	2004	2008	2014	2004	2008	2014
PKO Bank Polski (state-owned)	15.2	15	15.9	21,072	32,268	58,349	64.4	45.8	47.1
Bank Pekao (foreign acquisition)	10.9	14	10.9	14,562	31,622	39,327	55.1	45.5	44.6
Bank Zachodni WBK (foreign acquisition)	4.6	6	7.9	6,763	13,862	31,556	63.2	51.6	47.2
mBank (foreign acquisition)	5.7	9	7.7	8,020	19,798	27,681	69.3	55.1	44.9
ING (foreign acquisition)	5.9	8	6.5	8,573	16,684	23,429	62.6	70.5	54.5
Millenium (foreign acquisition)	3.7	5	4	5,011	11,292	14,251	69.9	64.5	50.2
Raiffeisen Bank (greenfield)	1.9	3	3.5	2,756	7,077	13,760	59	52.1	51

Source: Raiffeisen Bank, *Annual Reports for 2004, 2008, 2014*

Last on the list is the only greenfield top bank, Raiffeisen Polbank, the one with a consistent growth on market share, nearly doubled in 2014 compared to 2004. In the ranking of total assets, there are no changes comparing to market shares, although the majority of banks are doubling the assets during the 10 years analysed. The consolidation of the state-owned bank and the fact that the only greenfield bank in the top displays an excellent evolution, by increasing its assets by 5 times. Regarding the cost/income ratio, the best positioning (in the entire period) belongs to the Bank Pekao (Unicredit Group), with a rate of 44.6% in 2014, followed by mBank and the state-owned PKO Bank. Although, overall, the banks manage to improve their cost/income ratio, the best results do not belong in an overwhelming percentage to foreign banks, but to the state-owned bank also.

Table 2: Main Banks in Hungary, in Terms of Market Share, Assets and Cost/Income Ratio (2004, 2008, 2014)

Bank (type of capital / entry mode)	Market-share (%)			Total assets (Mil. euros)			Cost/income ratio (%)		
	2004	2008	2014	2004	2008	2014	2004	2008	2014
OTP Bank (state-owned)	24.2	18	22	12,381	35,424	34,841	47.9	49.6	49.8
K&H Bank (foreign acquisition)	9.6	9	7.6	7,049	12,018	7,918	69.7	79.5	56.3
CIB Bank (foreign acquisition)	7.1	9	7.3	4,886	11,477	5,506	56.2	47.9	60
Unicredit (foreign acquisition)	5.4	5	7	4,043	6,654	7,100	47.6	51.4	49.3
Raiffeisen (greenfield)	6.5	8	6.7	4,293	10,053	6,629	N.a.	N.a.	38.7
Erste Bank (foreign acquisition)	6.6	8	5.9	4,524	9,958	6,155	72.1	58.8	39.4
MKB (foreign acquisition)	8.7	8	5.5	6,628	10,897	6,175	55.9	56	73.8

Source: Raiffeisen Bank, *Annual Reports for 2004, 2008, 2014*

The data analysis of the banking system in Hungary (see Table 2) shows that the largest market share in assets belongs to OTP Bank, a bank with domestic capital, with a market share going from 24.2% in 2004 to 22% in 2014. In the second place, at a considerable distance, there is K&H Bank (KBC, Belgium), with a market share of 7.6% in 2014, but decreasing during the entire period, followed by CIB Bank (Intesa Group, Italy), K&H Bank and Unicredit (the latter growing steadily over the past 10 years). Raiffeisen Hungary (a greenfield bank) has a shaky ascent of the market share. In the ranking of total assets, OTP Bank leads way ahead, yet we encounter significant decrease with CIB Bank, and Raiffeisen Bank and Erste Bank also under the conditions their operations on the Hungarian market have suffered. Referring to cost/income ratio, the situation of the most important banks in Hungary is somehow different. Raiffeisen Bank and Erste Bank have reported very good rates which, despite the announced losses and decreased market share, have adjusted their costs policies. The market leader OTP Bank has kept its cost/income ratio relatively constant.

Table 3: Main Banks in Czech Republic, in Terms of Market Share, Assets and Cost/Income Ratio (2004, 2008, 2014)

Bank (type of capital /entry mode)	Market-share (%)			Total assets (Mil. euros)			Cost/income ratio (%)		
	2004	2008	2014	2004	2008	2014	2004	2008	2014
CSOB (foreign acquisition)	23.2	17	18.4	20,159	30,616	32,134	59.9	46.6	47.6
Ceska Sporitelna (foreign acquisition)	22	18	15.9	19,097	31,099	36,487	58.4	45.8	44.3
Komerčníbanka (foreign acquisition)	17.4	15	15.7	14,715	25,958	35,399	51.9	43.0	42.5
Unicredit (foreign acquisition)	5.4	7	9.1	7,066	10,348	18,887	49.4	61.4	54.5
GE Money (foreign acquisition)	2.2	2	2.6	1,962	3,511	5,351	68.8	45.2	42.5
Raiffeisen (greenfield)	2.4	4	2.4	2,075	6,749	8,393	64.4	61.2	58.9
JT Banka (state-owned)	<1	<1	2.3	406	1,437	4,968	N.a.	53.1	57.8

Source: Raiffeisen Bank, *Annual Reports for 2004, 2008, 2014*

Unlike Hungary and Poland, the Czech banking system (Table 3) is dominated by foreign banks entering the market through acquisition: CSOB, member of KBC, Belgium (with market shares ranging between 22% and 18%), followed by two banks with significant market shares (around 15-16%): Ceska Sporitelna (Erste Group, Austria) and Komerčníbanka (Societe Generale, France). Unicredit Czech Republic has a growing market share compared to year 2004. Further away follows a group of three banks with a different story, GE Money (part of GE Capital Group USA), Raiffeisen Czech Republic (greenfield), JT Banka (state-owned). In the ranking of total assets, there are some changes in the first 3 ranked and Unicredit maintains its 4th place, increasing assets extent compared to year 2008. Next are Raiffeisen Bank, then GE Money and JT Banka. The banks with the best value of cost/income ratio are KB and GE Money (42.5% at the end of 2014), both continuously improving this rate over the analysed period. An improvement course can be observed from one period to another with Raiffeisen Bank (greenfield). Perhaps more than in the case of the previous two countries, the performances of greenfield Czech banks are not spectacular or singular compared to other banks in the market.

Table 4: Main Banks in Croatia, in Terms of Market Share, Assets and Cost/Income Ratio (2004, 2008, 2014)

Bank (type of capital / entry mode)	Market-share (%)			Total assets (Mil. euros)			Cost/income ratio (%)		
	2004	2008	2014	2004	2008	2014	2004	2008	2014
Zagrebačka Banka (foreign acquisition)	25.1	24	25.4	8,391	13,562	15,678	61.5	56.9	49.9
Privredna Banka Zagreb (foreign acquisition)	18.7	17	17.1	5,710	9,285	9,490	54.1	49.7	46.2
Erste & Steiermärkische Bank (foreign acquisition)	11.3	12	14.1	3,519	5,947	9,105	66.5	41.1	38.3
Raiffeisen Bank (greenfield)	10.6	11	7.8	3,333	5,680	4,684	77	63.2	59.1
Splitska Banka (foreign acquisition)	4.4	7	7.1	2,845	3,750	3,752	59	52.2	59.8
Hypo Alpe Adria Bank (greenfield)	9.9	10	7	2,226	3,610	3,706	53.7	66.3	66.3
Hrvatska Postanska Banka (state-owned)	2.4	4	4.3	650	1,918	2,267	48.1	75.6	60.3

Source: Raiffeisen Bank, *Annual Reports for 2004, 2008, 2014*

As in the case of Czech Republic, the ranking of the Croatian banking system (Table 4) can be divided into four levels. The most important bank is Zagrebačka Banka (part of Unicredit Group, Italia), with a market share of more than a quarter of the total banking system. It is followed by a group of two banks, entering via acquisition, Privredna Banka (Intesa, Italy), respectively, Erste & Steiermärkische (part of Erste Group, Austria). The third group of banks consists of three banks with market shares between 7 and 8%, two of them entering the market as greenfield - Raiffeisen Bank and HypoAlpe-Adria-Bank, respectively Splitska Banka (part of Group Societe Generale, France). In the ranking of total assets, the only notable facts in 2014 compared to 2008 are the doubled assets at Erste and their significant decrease at Raiffeisen. Erste Bank was better positioned (below 40%) regarding the cost/income ratio, remarkable if compared to the values reported 10 years ago (67%). We may note that greenfield banks action like other banks present in top, yet the high cost/income (therefore

bad) ratio is quite a surprise, especially for such *de novo* banks, where cost control is usually more effective than in state-owned banks or (recently) purchased by international groups.

Table 5: Main Banks in Bulgaria, in Terms of Market Share, Assets and Cost/Income Ratio (2004, 2008, 2014)

Bank (type of capital / entry mode)	Market-share (%)			Total assets (Mil. euros)			Cost/income ratio (%)		
	2004	2008	2014	2004	2008	2014	2004	2008	2014
UniCredit Bulbank (foreign acquisition)	14.5	16	17.4	1,497	5,651	7,615	42.4	42.4	38.2
DSK Bank (foreign acquisition)	13.1	12	11.7	1,652	4,026	5,183	56.9	49.1	38.2
First Investment Bank (state-owned)	6.6	6	10.2	872	2,191	4,175	64.7	73.1	47
United Bulgarian Bank (foreign acquisition)	8.8	11	7.7	120	3,967	3,463	56.5	37.9	43.2
Eurobank (foreign acquisition)	4.7	8	7.2	573	2,785	4,371	70.8	45.6	46.5
Raiffeisen bank (greenfield)	8	10	7	1,029	3,531	3,068	45.2	50.9	53.2
SG Expressbank (foreign acquisition)	3.1	4	5.4	555	1,357	2,507	50.2	58.8	49.9

Source: Raiffeisen Bank, *Annual Reports for 2004, 2008, 2014*

Regarding the market share by assets in the Bulgarian banking system (Table 5), the first position belongs to Unicredit Bulbank (Unicredit, Italy) with a market share that has raised the entire analysed period. It is followed by DSK Bank (OTP, Hungary), with a decreasing market share. On the third place we find First Investment Bank (a state-owned bank), followed by United Bulgarian Bank (member of NBG Greece), Eurobank (Eurobank, Greece) and Raiffeisen Bank (a greenfield entry), all three on a recessive course compared to the 2008 period. The last in this ranking is SG Expressbank (Societe Generale, France) with an increasing market share from one period to another. In terms of total assets, in 2014 the top two places remain unchanged, even if declining compared to year 2008. The only greenfield bank, i.e. Raiffeisen Bank has declining assets volume compared to the year 2008, given that the main competitors increase their assets extent. In terms of cost/income ratio, the banks present in this ranking have good results, just below 40%. The only bank with an over 50% ratio is the only greenfield bank, Raiffeisenbank (53.3% in 2014). To draw a conclusion, the only greenfield bank represented in this top has a relatively small market share and a lack of efficiency.

Table 6: Main Banks in Romania, in Terms of Market Share, Assets and Cost/Income Ratio (2004, 2008, 2014)

Bank (type of capital / entry mode)	Market-share (%)			Total assets (Mil. euros)			Cost/income ratio (%)		
	2004	2008	2014	2004	2008	2014	2004	2008	2014
BCR (foreign acquisition)	26.2	20.3	16.2	6,438	17,334	13,749	53.7	41.4	43.5
BRD (foreign acquisition)	13.1	15.7	12.4	2,983	12,777	10,287	67.6	68.6	50.2
Banca Transilvania (private owned)	2.9	5.4	9.8	675	4,303	7,953	86.0	81.6	41.9
Raiffeisen Bank (foreign acquisition)	9.1	6	7.9	2,088	4,860	6,423	84.6	55.6	55.5
Unicredit (foreign acquisition)	1.4	5.5	7.9	165	4,379	7,221	63.3	48.2	50.6
CEC Bank (state-owned)	5.8	4.3	7.7	1,300	3,400	6,243	88.5	59.0	55.2
Alpha Bank (greenfield)	3.2	5.5	4.6	733	4,381	3,779	48.9	73.1	51.1

Source: Raiffeisen Bank, *Annual Reports for 2004, 2008, 2014*

In the Romanian banking system (see Table 6), in terms of market share (assets) we find in the leading position the Romanian Commercial Bank (BCR), part of Erste Group Austria, in a decreasing trend from one period to another. The first runner-up is Romanian Development Bank (BRD), part of Societe Generale France, with a fluctuating market share. The third position belongs to Banca Transilvania (foreign capital) with a sustained growth in market share, followed by Raiffeisen Bank (initially a greenfield bank) with a fluctuant trend in market share. Previously entering the market through a small acquisition, Unicredit continued the purchase of two medium sized banks during 2004-2008, and reached 8% in 2014. The only state-owned bank in this top, i.e. CEC Bank, doubled its market share in 2014 compared to 2008. Alpha Bank (part of Alpha Bank Group, Greece), a greenfield bank, displays a decreasing market share compared to 2008. In terms of total assets, there are not significant changes and the cost/income ratio confirmed the evolution of Banca Transilvania (41.9% in 2014), followed by BCR, which, during 2013-2014, underwent an extensive process of internal reorganization. The rest stands between 50 and 55%, with a general tendency of improvement. Moreover, in the Romanian banking system, the banks which have entered the market by acquiring local banks reside in the leading places, but their position is not as comfortable as in the previous period. It's worth mentioning: a private bank's performances, the improvement of the state-owned bank and the relatively modest evolution of the only greenfield bank present in this top - Alpha Bank Romania.

4. Conclusion

The banking systems of the CEE countries display both common features and national specific features in terms of foreign banks actions and entry mode. We notice, therefore, a clear

domination of the foreign banks entered via acquisitions, both in number and assets. However, their evolutions on each national banking market are uneven, probably due to inside actions or strategic repositioning, imposed by parent banks. *De novo* entry banks do not act in a specific manner, and their presence in the top 7 is, often, in defensive. It is likely that these greenfield banks to have been better represented (in terms of market share, efficiency, know-how) in the previous period (i.e. 1995-2004). After 2004, the importance of greenfield banks has gradually diminished and the recently privatized banks have started to exploit their double nature: an international foreign bank, and a good presence and knowledge of the local market. It could be a confirmation of the theories according to which the banks entered via acquisition present a more stabilizing and positive role comparing to the greenfield type (especially the foreign subsidiaries). Our analysis is, however, limited to capturing the transformations that have taken place in these greenfield banks during 1990-2014, when some of the greenfield banks were purchased and incorporated into the strategies of the new groups. Our findings do not necessarily indicate a diminishing of the importance of greenfield banks, but rather a sign of the consolidation of banking markets and systems in the region. On consolidated, competitive, well-regulated and supervised markets, which surpassed the crisis, it is unlikely that certain banks could actually distinguish in terms of market share or singular positive evolution.

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World Oil Market - New Challenges and Increasing Risks in the Context of Resulting Consequences for the Competitiveness of the EU

Peter Baláž, Lukáš Harvánek, Michaela Královičová

University of Economics in Bratislava

Faculty of Commerce, Department of International Business

Dolnozemská cesta 1

Bratislava, Slovakia

e-mail: balaz@euba.sk, l.harvanek89@gmail.com, mk.kralovicova@gmail.com

Abstract

Macroeconomic consequences of the global financial crisis have affected all territorial and commodity segments of the global economy. The resulting stagnation of the economic growth has translated in a fall of commodity prices. It had been initially assumed that cheap inputs will increase the international competitiveness of their biggest consumers, in particular that of EU member states. However, the present situation on the oil market, which is a result of the synergic effect of variety of factors, with the most crucial being the enhanced extraction of shale gas and oil shale, a decline in economic growth in China, the lifting of sanctions against Iran and a polarizing political conflict between Ukraine and Russia, along with the reluctance of OPEC to flexibly respond to the changing conditions, puts this prism into a question. The aim of this paper is to critically assess the most important factors affecting the development of global oil market, identify the role of Chinese economy in this process and point out the available adaptation options that can support the competitiveness of the EU.

Keywords: *China's Economy, Competitiveness, European Economy, Oil market, Shale Gas*

JEL Classification: *B30, F1, F10, F 100*

1. Introduction

Over the last decade, the global economy has undergone major changes with their intensity being constantly multiplied, and the resulting consequences creating even a stronger pressure on the individual segments of the global economy. The global financial crisis that erupted in 2007 and has become a major catalyst for subsequent developments, showed a considerable "resistance" to adaptation measures of individual countries. Additionally, its high "contagiousness and toxicity" have also confirmed the dominance of globalization as such, and thus how seriously it can impact the global economy, both in the positive as well as the negative way. The crisis has also demonstrated that one of the key indicators or an accompanying phenomenon was the development of the commodity markets, particularly on the crude oil market. Every significant change of the price of crude oil automatically causes changes that lead to altering of the prices of other energy commodities and thus results in the chances of the prices of all the goods sold on the international markets. Therefore, the rising prices of crude oil automatically lead to increases in prices of industrial goods and these developments are subsequently being reflected in the lower worldwide competitiveness of industrial products. On the other hand, the increase of oil prices is usually a manifestation of the growth in demand and the latter is generally just a projection of an ongoing economic

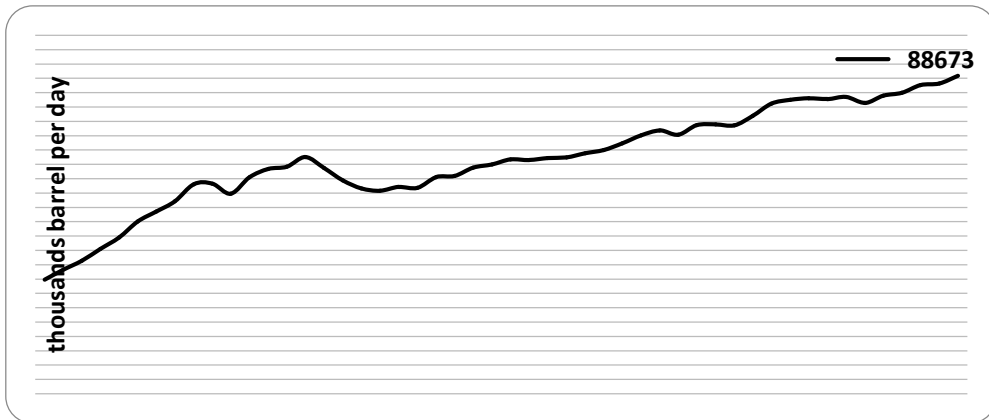
progress. Ultimately, such an algorithm has a decisive influence not only on the overall climate within the global economy and the particular economies of individual countries, but also on the rate of the GDP growth and the development of other macroeconomic indicators. Interdependence between oil prices and other energy carriers (i.e. decoupling) is relatively high, however, there is still a significant degree of complementarity within them. For over two decades, the oil market was under the influence of the alternative concept of limited world's supplies of crude oil, so called "*Hubbert's peak oil theory*"³, with the theory advocating the future economic dominance of OPEC and non-OPEC countries, therefore being seen as a threat for net importers of crude oil. Only the onset of various renewable energy sources and industrial 'mastering' of the production of oil and natural gas from the shale, have helped countries that are dependent on oil imports, to create a feasible mix of alternative sources and thereby reduce their dependence on their business partners. Ultimately, it has been shown that following 2008, the global economy has experienced a lower economic growth rate and hence a potentially lower demand for crude oil. It has to be pointed out that the major role in this development has to be ascribed also to the sources of alternative energy, which have helped to stabilize the situation on the global markets. On top of that, it has been also confirmed that the world is not yet sufficiently technologically advanced enough, to have a long-term effective substitute for crude oil, especially when it comes to the production of plastics, pharmaceuticals or fuels used for transportation.

The last decade demonstrated that the rapid growth of oil prices was with a certain delay accompanied by the increases in the prices of coal and natural gas. However, once the oil prices exceeded the threshold of 120 USD/bbl., the majority of investors has shifted the attention to the investments within energy carriers with a higher effectiveness and various types of renewable sources of energy. Subsequently, the price of crude oil almost reached the threshold of 150 USD/bbl. due to numerous speculations on the stock markets and unrealistic expectations of investors. However, its subsequent decrease and the breakdown of 2016, in which the price fell under 30 USD/bbl., has revealed, the significance of crude oil prices and the importance of their role on the functioning of the global economy. For a short amount of time, it had seemed that the low oil prices would be beneficial mainly for the largest consumers and importers of crude oil, however, later developments have suggested that this assumption was correct only to a limited extent. Particularly, when it came to the import-intensive developed market economies located in the euro area, this assumption was relevant for only a short period of time. At present, all the trades in commodities, thus in crude oil as well, are settled in the US dollar. Therefore, the development on global markets is extremely sensitive to changes in the exchange rate of US dollar and even a small fluctuation can result in significant consequences that have long lasting implications on all economic sectors. Thus the rapid decline of the Euro against the US dollar, have largely eliminated the benefits that stemmed from low oil prices. Furthermore, decline of the Euro has also resulted in the member states of the EU being forced to spend much more resources for the items imported from the

³ According to assumptions of M. K. Hubbert, that had been accepted for a long time - mainly in the pre-2000 period, and had been reflected also in the work of numerous distinguished experts, the decisive break in the oil production was supposed to come before the year 2010, with all the proven reserves being exhausted by 2045. It had been therefore expected that global oil prices would be strongly affected by this fact and according to Goldman Sachs their height was expected to reach as high as to up to 300 USD/bbl in 2025-2030. Provided that the ceteris paribus rule is being adhered to, such high prices would have a decisive impact on the economic growth of both, the net exporters and importers of crude oil. (Ed).

dollar zone. On top of that, the process of more efficient adaptation to a new situation on the world energy market have been extensively obstructed by the subsidy policy applied to energy sector in vast majority of countries of this community. When analyzing the new position of countries for which the revenues from oil exports represent a major source of their national revenues – the OPEC countries in particular, it has been confirmed that their profits are reduced by the low oil price with the profitability levels being close to their production costs. Ultimately, their purchasing power has not increased along with the decrease of oil prices, with the production costs being reduced only “mathematically”. Subsequent development tendencies have also influenced the demand for final goods, however, only to a very slight degree.

Figure 1: Long-Run Development of Oil Production



Source: Processed according to data from BP Statistical Review of World Energy. 2015.

Gradually, it has become clear that the low oil prices have had a positive territorial impact, although also due to other particular reasons, exclusively for the countries of Southeast Asia, which made a great use of their own comparative advantages, and for the US, which replaced the enormous amounts of oil imports by its own production of shale oil and fundamentally restructured its energy base, mainly in the sector of electricity production. Certain indications suggest that long-term low prices of crude oil may bear considerable economic, but also geopolitical risks, especially for countries in which, the bulk of the national income comes from exports of this energy carrier. However, the present strategic importance of this raw material cannot be questioned. Nevertheless, the emergence of the new resources combined with the improved extraction processes have contributed to higher efficiency of the whole sector, with the processing being virtually waste-free now. Taken into consideration that supplies of crude oil are finite, supplemented by the fact that they still remain an essential input material used for the production in many sectors, it can be inferred that their possession can be one of the major factors determining the future survival of various countries. Development after 2014 has been marked by the falling oil prices, with historic minimums being recorded even despite the fact that the volume of extraction as well as exports remained constant or even growing. This situation is a result of various factors, with the most significant ones being: the efforts of majority of countries to reduce their oil consumption, the ongoing attempts of OPEC countries to maintain their market share, the decrease in the US demand for oil that is a result of the US being able to satisfy yet higher and higher share of its oil consumption by shale oil of its own production, and continually increasing importance of alternative as well as renewable sources of energy in energy mix of vast majority of world's largest consumers of

energy. Analyses have confirmed that the most important decisive factors when it comes to the sale of crude oil on the spot market are the price and related terms of delivery. Of an increasing significance to the development on the oil market, had been also the Chinese consumption and the demand, which had been constantly growing up until the beginning of 2016. However, since the beginning of 2016, in relation to the completion of structural economic reforms in China, combined with the decline in the economic growth, the extent to which the whole global economy and the EU in particular, depend on the current development of the Chinese economy has become even more apparent. Thus it can be concluded that the huge volatility of the Chinese demand poses a significant risk on the rest of the countries within the global economy. Additionally, the situation in 2016 has also proved that the world economy is still under the influence of the global financial crisis, with current operability being maintained only via artificial macroeconomic interventions, such as energy subsidies, quantitative easing, among the others. Therefore, any objective predictions that would determine the future development of the oil market and its subsequent influence on the global economy cannot be formulated. The adoption of the European Energy Security Strategy in 2015, although appears to be the right decision for the future development of this grouping, but it comes too late, and support from the national governments of the individual member states is yet slow and unconvincing. The authors are therefore trying to point out the major factors that determine the future economic success of particular countries, while giving equal importance to internal as well as external factors, and subsequently to highlight the most significant risks stemming from the potential inability of particular EU members to adapt to these new developments.

2. Problem Formulation, Methodology and Literature

The formulation of a research problem stems from the aim of this research article, which is: to assess the mutual dependencies between the development of the global economy and the development of the oil market and subsequently to identify the most important factors, which currently influence the prices of oil. On this basis, authors aim to highlight the already existing as well as potential dependencies between the development on the international markets and the competitiveness of the particular member countries of the EU. The authors have identified the impact of the expansion of the Chinese economy on the strength and the competitiveness of the EU as a whole. However, the authors of this research article note that the views of experts on trends on the global oil market and its consequences for the competitiveness of national economies differ. Even though that the majority of authors confirms that there is a direct linkage between both variables, with its intensity being determined by the development of various external factors and the ability to successfully adapt to the new situation on the energy market (M. Asif, P. Baláž, L. Kilian, P. Krugman, M.S. Obadi, J.H. Yuhan), there are significant differences when it comes to the evaluation of individual impacts and arguments by which they explain their findings. Regarding the EU, there are various authors that highlight the dependencies and linkage of the development of oil market and the competitiveness of particular member countries of the EU (L. Fojtíková, O. Machek, L. Melecký, M. Vošta, T. Heryán). The majority of authors expresses a similar opinion with regard to the high dependence between both variables and the subsequent consequences, which are posing a threat to the market positions of the EU member countries, but also highlights the risks of delayed reforms of the EU energy market (L. Pavelka, V. Ružeková, M. T. Workie and others.).

3. Problem Solution

Authors want to acknowledge that the low oil prices are not an opportunity for the further development of the global economy and the related economic growth, but a significant threat. The algorithm of the importance of oil to the international competitiveness of the period or in 2014 is influenced mainly by the following trends:

- Oil prices fell sharply. With the prices of other fuels moving in tandem in many parts of the world. Countries including India and Indonesia took the advantage of the oil price decline and moved ahead. Iran, one of the world's largest hydrocarbon resource-holders, has returned to oil markets. Renewables contributed almost half of the world's new power generation capacity in 2014 and expanded to more than a quarter of global consumption.
- Non-OECD countries account for the increase in global energy use, reducing cumulative consumption of OECD countries from the peak reached in 2007. Declines are led by the EU (-15% over the period to 2040), Japan (-12%) and the U.S. (-3%).
- China is the world's second biggest producer and consumer of energy resources. It is the biggest global coal importer (53 % of global exports) and the 2nd biggest crude oil importer (4.5 mil. bbl. /daily). Its influence on the development in international markets is growing.
- Position of China as the world's largest importer of coal has the main influence on its world prices and on the prices of oil and gas, as well. Its supplies were paid by the final goods that were finalized in China, with the major comparative advantages being fully utilized, mainly the low labor costs. A decrease in its imports (13 % in 2014) caused the decrease its world prices to under \$ 50 from about \$ 220/metric tons. Quantification of adverse consequences for its exporters have far-reaching negative, direct and indirect consequences on the situation on international markets and global demand.
- According to EIA, the oil production in China will remain stable during the upcoming years, however, provided that the Chinese economy would maintain its current levels of economic growth and domestic consumption (according to the World Bank, the GDP per capita of China was 8 466 USD in 2015). Furthermore, the significant increase of China's imports can be also expected.

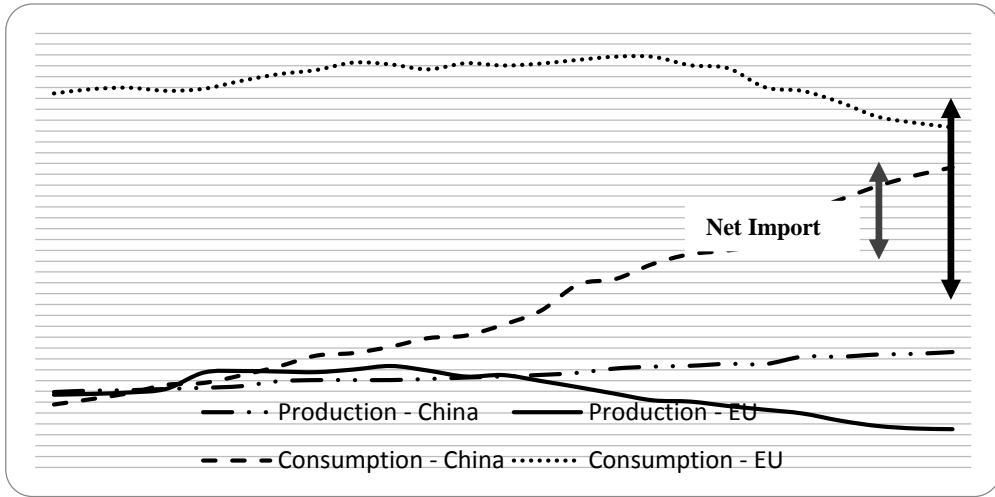
Table 1: **Situation on the Oil Market with the Regard to Major Consumers of this Commodity (31.12. 2014)**

	Proven reserves (mld. bbl)	Share (world)	R/P	Production (thousand. bbl)	Share (world)	Consumption (thousand. bbl)	Share (world)
China	18,5	1.1 %	11.9	4246	5.0%	11056	12.4%
India	5.7	0.3%	17.5	895	1%	3846	4.3%
USA	48.9	2.9%	12.4	11644	12.3%	19035	19.9%
CIS	N/A	N/A	N/A	N/A	N/A	2371	2.6%
EU	5.8	0.3%	11.2	1411	1.6%	12527	14.1
Russia	103.2	6.1%	26.1	10838	12.9%	3196	3.5%
World	1700.1	100%	52.5	88673	100%	3347.6	100%

* CIS: Commonwealth of Independent States

Source: Processed according to the data from BP Statistical Review of World Energy. 2015.

Figure 2: Comparison of Oil Production and Consumption of China and the EU (1990–2014 in Mil. Bbl.*)



*bpd (barrel per day)

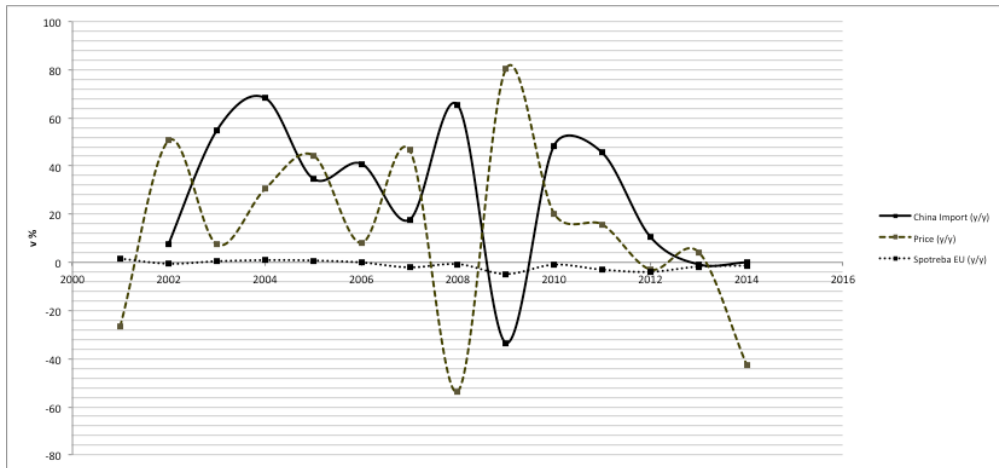
net import of China \longleftrightarrow net import of the EU \longleftrightarrow

Source: EIA. 2015. *China Energy*. In <http://www.eia.gov/countries/cab.cfm?f ips=CH>

Given the assumption that China with its 1.3 billion people would reach the level of GDP per capita of, for instance, of the EU's average (32,642 USD), its GDP would have to increase fourfold, therefore reaching a double level of the current GDP of the US. There is, nevertheless, a significant probability that this assumption would be a reality, thus resulting to an increase in the energy demand of China, which would be caused by the decreased demand of general population for goods of standard consumption and the subsequent elevated demand for the durable goods as well. Nevertheless, the energy as such is needed for the production of new energy. Thus, the more energy China consumes, the more additional energy she needs for its production.

Figure 3 confirms the hypothesis of oscillation between oil imports to China and global oil prices, when the comparison is made on annual basis of selected indicators. While the consumption of the EU has been growing slightly up until 2005 at around 1%, following 2006, the decline within the range of 0.03% to 3.94% has been recorded. Imports to China had experienced significant growth up until 2008, with the level in 2001 being only 7.4%, then reaching over 68.2% in 2004 and being 65.3% in the period following 2008. In 2009, a significant fall of 33% occurred, while the global price of crude oil increased by 80.3%. On the contrary, it fell by 53.5% in 2008, which was a significant shift as price of this commodity had previously copied the development of Chinese imports. Following 2009 up until 2012, Chinese imports were growing significantly once again, and so did oil prices in 2010. From 2012 to 2014, the growth rate slowed, with even decreasing in 2013 (-0.8%) and then a year later, in 2014 growing only by 0.03%. The price of oil in 2012 depreciated by 2.9%, again and was followed by the decrease in Chinese imports in 2013. Moreover, global oil price increased by 4.2% in 2013 and then, in 2014 fell by 42.6%.

Figure 3: Development of Crude Oil Prices, its Consumption by the EU and Imports to China (2001-2014, Annual Change)



Source: Processed by authors based on data from BP Statistical Review of World Energy 2015 and UNCTAD Stat 2016

4. Conclusion

The European Union, and its member countries in particular, underestimate risks arising from the current developments and the subsequent consequences on the international energy markets. Although in case of developments in energy prices, especially the oil, there is no reason to worry, provided, that so needed fundamental economic reforms would be successfully carried out. At present, the slow internal convergence combined with the low ability to subordinate national economic interests to unitary ambitions, but also the decreasing influence of the EU on the world energy market, are extremely beneficial not only for China but also for numerous Asian countries. Moreover, the EU presently lacks a purposeful promotion of common long-term strategies which can be built on existing comparative advantages. Nevertheless, it has to be pointed out that provided that the EU member countries would fail to reform their policies and adapt to these new situation, it would lead into a definitive loss of competitiveness the whole region. Development of the global economy in the next decade, in terms of risks arising from positions in oil, can be only predicted with a high degree of abstraction. The algorithm assessing the impact of the availability of crude oil and its price is constantly expanding, with its volatility being extremely high. Thus the subsequent impacts on the competitiveness of the whole grouping, and its particular economic subjects, is currently incalculable and poses one of the major risks for the entire world economy and its stability.

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Co-opetition of Enterprises in Terms of the European Competition Policy

Agnieszka Barcik

University of Bielsko-Biala

Management Department

Willowa 2

Bielsko-Biala, Poland

e-mail: abarcik@ath.bielsko.pl

Abstract

Dynamic processes taking place in recent years, in a highly globalized world economy confront European businesses with more new challenges. The co-opetition phenomenon is a response to growing competitive pressure in global markets. The complexity of the co-opetition activities as well as their increasing universality within the internal market of the European Union make it essential to take into account the legal aspects. However there are very few studies exploring the phenomenon of co-opetition in the context of the principles and limits arising from the regulation of European competition policy. The aim of the study is to analyze the phenomenon of co-opetition taking the form of restrictive agreements as an example of cartel. In this context, the paper is also an attempt to determine the boundary between freedom in shaping the co-opetitive relationship and the constraints imposed by the European antitrust regulations.

Keywords: Co-opetition, Competition, Cartel Agreements, European Competition Policy

JEL Classification: D40, D43, K21, L12

1. Introduction

The construction, expansion and improvement of the internal market of the European Union is accompanied by a dynamic development of competition policy from the very beginning of its existence. The creation of a system ensuring the competition between enterprises has been and is still one of the basic tasks set out in the Treaty on the Functioning of the European Union: TFEU (Treaty on the Functioning of the European Union, 2010). The rules set out in title VII, chapter 1 of the TFEU defining the principles of European competition policy aim to create optimal conditions conducive to economic development of Member States and the effective management of enterprises in the conditions of undistorted competition within the EU market. Competition between European businesses forces an innovative approach not only in the sphere of production or service but also in the area of mutual cooperation between competing undertakings (Mynarzova and Kana, 2014). From the above reasons more and more European companies decide to enter into co-opetition agreements. Co-opetition agreement is complex since its scope includes two parallel streams of relations: competition and cooperation. Due to the fact that co-opetition agreements can take a variety of forms of cooperation, the very essence of the co-opetition relationships is a subject to assessment from the point of view of European competition policy which includes developing cooperation by the competing companies, especially if this cooperation concerns the companies operating at the same level of trade and covers agreements on prices, market division or controlling

production or sales. Among the agreements concluded by the competing companies special attention should be paid to cartel agreement which, due to its impact on the functioning of the EU internal market is generally among the most serious violations of competition rules.

The aim of the study is to analyze and assess the co-opetition phenomenon taking the form of cartel agreements with regard to freedom of co-opetition on one hand and antitrust regulations on the other hand. The aim defined this way is however a subject to significant limitations of research which result mainly from the fact that such agreements are in practice always assumed as illegal, hence their character is secret. Businesses participating in the cartel, mainly for image reasons are not eager to reveal the details of their relationships. Accordingly, the only effective method of analysis which enables the satisfactory description of the phenomenon, aims, objectives, and motivations of co-opetition is the case study. With regard to the cartel agreements the case studies consist of decisions of the European antitrust authorities i.e. the decisions of the European Commission and the judgments of the Court of Justice of the EU. While performing the aim of the research critical analysis of literature and applicable regulations have also been used.

2. The Phenomenon of Co-opetition Between Enterprises

As mentioned above the co-opetition is one of the most complex forms of economic cooperation of enterprises. The co-opetition is one of four possible relations existing between competing companies. In addition to it the competition, the cooperation and the coexistence are pointed out. Each of these types of relationships is characterized by the frequency, strength and form of relationships, level of confidence, the resources and market position (Table 1).

Table 1: Types of Connections between Competitors

Types of connections between competitors	Frequency of connections	Strength of connections	Form of connections	Level of confidence	Resources	Market position
Coexistence	Small	Weak or lack of it	Informal	High	Sufficient	Weak
Cooperation	Large	Significant	Formal or Informal	High	Insufficient	Weak
Competition	Large	Weak	Informal	Low	Sufficient	Strong
Co-opetition	Large	Significant	Formal and/or Informal	Medium	Insufficient	Strong

Source: M. Bengtson, S. Hinttu and S. Kock (2003), *Relationship of Cooperation and Competition between Competitors*, 19th Annual IMP Conference, 4-6th September 2003 Lugano, Switzerland

But co-opetition distinguishes simultaneously the occurrence of opposing streams of relationships: cooperative stream, which is based on mutual trust between the partners and the competitive stream, the essence of which is competition and conflict. It is clear that in the context of a co-opetition relationship the two streams interact with each other but at the same time maintain a margin of independence and the different dynamics of development (Cygler, 2013). Paradoxically, while building co-operation relationships the competing entities by cooperating with each other (e.g. exchanging knowledge, experience, etc.) are based on one

hand on the conflicting interests (as competing entities) and on the other hand on common interests (as cooperating entities). It is their interest, when building co-opetition relationships, to delimit the areas where the two streams appear. They can do this through formal arrangements, mainly contract or in a less formalized way. The area of cooperation includes generally the activities of complimentary character related to the available resources both tangible and intangible. It is often the cooperation in the field of R & D, logistics, operations or production (Cygler, 2013). It is based on two pillars: the sharing of knowledge and the combination of shared competence. As an example of the co-opetition in the telecommunications market the cooperation between Ericsson, Nokia and Motorola can be pointed out. In this example the cooperation between above mentioned companies is focused on improving the infrastructure of the Chinese telecommunications industry, through joint negotiations with the government to gain greater market share and consequently to build telecommunications networks together. On the other hand, these companies simultaneously compete in order to achieve the highest profits.

Within the co-opetition relationship the associations of economic and non-economic nature appear. Particular attention is paid to the fact that co-opetition involves in practice the relationship between direct competitors offering similar groups of products and / or targeted at the same customers, taking into account the criterion of demand and geographical criterion (Bengtsson and Kock, 2000). But co-opetition arrangement however has the impact on functioning of other entities too and not only the competitors. It also affects to greater or lesser extent other organizations performing in the entire business ecosystem and comprises the suppliers, distributors, subcontractors, manufacturers of comparable products or services, technology providers and many other organizations - creating a network of interconnections (Moore, 1997).

3. Co-opetition of Enterprises in the Form of a Cartel Agreement and the Rules of European Competition Policy

Although the concept of co-opetition has not been explicitly defined on the basis of European competition law, however Art. 101 paragraph 1 of TFEU concerns the essence of the co-opetition phenomenon which is the agreement covering the three forms of co-operation in the category of agreements: agreements between undertakings, decisions by associations of undertakings and concerted practices. Such a wide range of agreement concept gives antitrust organs large possibilities for interpretation. In its judgment in Case T-7/89 Hercules Chemicals EU, The Court of First Instance accepted that the agreement covers all forms, both conventional, formal, and informal, they can take the form of collaboration between companies. The condition is that this cooperation is to coordinate the behavior of companies and is based on their common intention to have the joint impact on the market in an established way (Judgment of the Court of First Instance, Case T-7/89, 1991). Various forms of activities that occur in co-opetition relation can thus be regarded as an agreement. In this context it is also stressed that the initial consultations between co-opetitors concerning the restriction of competition, without further formal or informal finalization can be the subject of control from the antitrust authorities as an agreement (Materna, 2013).

On the basis of the above regulations the agreements aimed at maximizing profits are analyzed, which are held by the companies which compete against each other (i.e. horizontal agreements) and which are concluded between undertakings operating at different levels of trade (i.e. vertical agreements). The basis for the legal assessment in this regard is the prohibition on anti-competitive agreements which have as their object or effect the prevention of competition

(Jánošíková and Březinová, 2001). The alternative nature of the premise: “object or effect” entails the need to examine in the first instance the agreement in the economic context in which it is to be used. The Court of Justice in its judgment in Case C-551/03 General Motors pointed out that if the purpose of an anti-competitive agreement is evident, taking into account its actual effects is not absolutely necessary to recognize an agreement as prohibited. However, when the analysis of the agreement does not reveal a sufficient degree of harm to the competition, the antitrust authorities should proceed to examine the effects of the agreement (Judgment of the Court, Case C-551/03, 2006).

The cartel agreements are among the most harmful practices affecting the rules of effective competition. Current statistics on the activities of the European Commission show its consistent position in combating cartels operating in the EU market. The number of decisions issued and the amount of penalties imposed in anti – cartel proceedings has been steadily increasing. In total, in the years 2012-2016 (statistics as of January 27th, 2016), the Commission issued 133 decisions in which imposed penalties of 5 950 486 000 Euro in total (European Commission, 2016). This is due to the fact that the cartels, even if they do not include all companies from the industry, have similar effects on the market as a monopoly and mainly they cause a similar degree of allocative and productive inefficiencies. In addition, cartels do not bring any benefit to the consumers which could offset the anti-competitive effects. The study (mainly based on the analysis of the documentation of cases pending in the EU and national competition authorities) shows that cartels operating in the EU market are the multi – entity structures with a long-term horizon duration, enabled to operate in secret even for decades (Levenstein and Suslow, 2006). Due to the efficient organization and the management of the agreement, especially in the field of information management, they effectively limit internal factors of destabilization. Modern cartels avoid price wars and retaliatory measures against companies breaking adopted rules. They prefer maintaining internal balance instead mainly through coordinated management in the form of monitoring of compliance with the economic parameters, efficient mechanism for coordination of behavior of its members and communication as well as the use of the compensation system as means of protection against cheating. For example an efficient management system was typical for the cartel of manufacturers of flexible polyurethane foam (the companies Vita, Carpenter, Recticel and Eurofoam) operating in the EU market which was eventually combated in 2014. The main objective of the cartel was to move on the price increases of raw materials for the production of chemicals to customers and to avoid aggressive price competition between the four producers. The Commission found that the board of directors and managers of high-level participants in the cartel contacted with each other during the so-called green meetings (including informal meetings during the golf game). Meetings were held regularly at least once a quarter (in some periods more often), in various locations around the world. The success of such a long existence of the cartel was mainly based on mutual trust and close cooperation of the participants in all spheres covered by the agreement (European Commission, Case AT.39801, 2014).

Cartel agreements that the co-operators decide to enter into may take the form of a variety of practices. The antitrust authorities recognize as particularly harmful the cartel agreements consisting of: fixing directly or indirectly purchase or selling prices or any other trading conditions, limiting or controlling production, markets, technical development or investment, sharing markets or sources of supply, applying to trading partners uneven conditions for equivalent transactions, thereby placing them at a competitive disadvantage, making the conclusion of contracts a subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with

the subject of such contracts (Barcik, 2015). However this prohibition can be declared inapplicable in the case of any agreement which contributes to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not impose on the undertakings restrictions which are not indispensable to the attainment of these objectives and afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question (Smuda, 2014).

4. Case Study – “Optical Disk Drives” Cartel

One of the latest proceedings carried out by the Commission was the one on the cartel of manufacturers of optical drives. Eight leading industry entrepreneurs were associated in co – ompetitive, four-year relationship which took the form of cartel. On the one hand the entrepreneurs competed against each other on the sales market but on the other hand they reached the agreement on price fixing during the tenders. The European Commission has fined eight optical disc drive suppliers (Philips Liteon, the joint venture Philips Liteon & Digital Solutions, Hitachi-LG Data Storage, Toshiba Samsung Storage Technology, Sony, Sony Optiarc and Quanta Storage) a total of 116 million Euros for having coordinated their actions in relation to procurement tenders organized by two computer manufacturers, in breach of EU antitrust rules. The Commission's investigation revealed that the participating companies in the cartel communicated to each other their intentions regarding to bidding strategies, shared the results of procurement tenders and exchanged other commercially sensitive information concerning optical disc drivers used in laptops and desktops. They also organized a network of parallel bilateral contacts that pursued a single plan to avoid aggressive competition in procurement tenders organized by Dell and HP. Although the cartel contacts took place outside of the European Union, they were implemented on a worldwide basis. Of the companies involved in the cartel, only Philips has its headquarters in European Union. The other seven are headquartered in Asia. The duration of each company's involvement in the cartel varied and ranged from less than a year to over four years. The companies were aware that their behavior was illegal and tried to conceal their contacts and to evade detection of their arrangements. For example, they avoided naming the competitors concerned in their internal correspondence but used abbreviations or generic names. The cartel members also avoided leaving traces of anticompetitive arrangements by preferring face-to-face meetings and ensured that the competitors' discussions were not revealed to customers. Some of them met in places where they could not be easily spotted, including in parking lots or cinemas. Under the Commission's 2006 Leniency Notice, Philips, Lite-On and Their joint venture Philips & Lite-On Digital Solutions received full immunity from fines as they were the first to reveal the existence of the cartel (European Commission, Case AT.39639, 2015).

5. Conclusion

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. This fact undoubtedly and significantly affects the growth of interest in co-opetition as a form of economic cooperation in the EU internal market. In order to meet the need to increase the competitiveness of European enterprises, European competition policy rules allow as principle the freedom of entrepreneurs for the development of mutual cooperation in the form of co-opetition relationship. However, the legislative prohibition of agreements restricting competition established in TFEU puts a clear line between accepted co-opetition which is

beneficial for the economy and forbidden co-opetition taking the form of the violations of competition policy, namely the cartels. The decision of the Commission on Optical Disk Drives confirms the consistent position of the EU case law in this matter.

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EU-Ukraine Trade Relations

Dáša Bebiaková

University of Economics in Bratislava
Faculty of Commerce, Department International Trade
Dolnozemská cesta 1, 852 35
Bratislava, Slovakia
dasa.bebiakova@gmail.com

Abstract

EU is trying to improve the interrelationship with Ukraine since 1994. Ukraine and the EU started to negotiate on an Association agreement in 2009. However, it was not enough to make closer ties between EU and Ukraine. The goals of the article are to describe all aspects of development, affecting the deepening of the integration process and thus the trade between Ukraine and the EU. Key results article is that the EU offered Ukraine to become part of the Association Agreement in the context of deep and comprehensive free trade area (DCFTA). Based on these facts DCFTA was the main core of negotiation process between EU and Ukraine. Human rights issue was one of the most important conditions in ratification of this trade agreement. Ukraine tried to prepare the DCFTA according to the conditions of modernizing and adjusting economy and trade based on European standards. The process of ratification of Association Agreement was rejected by Victor Yanukovich in 2013. Subsequently thousands of people protested in Maiden movement and it caused the start of civil war and Russian annexation of Crimea. Based on these events EU deferred the implementation of the DCFTA from September 2014 to January 2016.

Keywords: Association Agreement, Deep and Comprehensive Free Trade Agreement European Union, Ukraine

JEL Classification: F 49, F 53, F 63

1. Introduction

The dissolution of the Soviet Union and its splitting into fifteen different independent republics has led to a new political situation in Eurasia, which gave new contours to foreign politics in the West. European Union tried to improve the relationship with countries, which gained the independence from Russian influence. Among these independent republics Ukraine was a very appealing country for Europe and Asia, in spite of Russian influence because of its 52 million population and natural resources. However, after the collapse of the Soviet Union, EU, and Russia began to exert their influence on Ukraine in regards to their enlargement policy. The change in government regime should be in accordance with economy, tourism, transportation, and trade. While Russia wanted to regain the influence over Ukraine, EU intention were to finalize the DCFTA agreement with Ukraine. Since 2013, the conflict of interests led Ukraine into a desperate situation. It led to a desperate situation in Ukraine since 2013. (Kašáková, 2012; p. 11).

The EU started to develop relations with Ukraine and other republics under an agreement on partnership and cooperation in 1994. This agreement was not sufficient for closer relations between EU and Ukraine. Orange revolution brought new matters about democratization in

2004. European Union tried to utilize revolution for closer relationship and cooperation with Ukraine based on the initiative of European neighbourhood politics. It meant steps liberal West and cooperation between Ukraine and international organizations was initiated in 2008 by World Trade Organization (WTO). (Ružeková, 2013; p. 966-969).

In 2009, the European Union established the Eastern partnership with six neighbouring countries creating the European neighbourhood politics (ENP), which became a milestone in the relation with Russia and led to the emergence of new relations between them. EU began to develop a relationship with the members of the European Eastern Partnership through negotiations of the Association Agreement (AA) and Agreement on a Deep and Comprehensive Free Trade Area (DCFTA), which once adopted into force should ensure visa waiver and readmission agreement. (Özgür, 2012; p. 4).

Moreover, other countries of the Eastern partnership were in negotiations with EU, but Ukraine showed the biggest interest towards negotiations with EU and therefore ended up progressing more than others. Negotiation of DCFTA was the most important objective for Ukraine and despite the fact that European Union had conditions in ratifying DCFTA concerning human rights, Ukraine started the adjustments and modernizations of their economy and trade in accordance with European standards. During the final negotiations in 2012 and 2013 both parties came to the consensus accepting DCFTA in Vilnius Summit in 2013. (Loo, 2012; p.189-190).

All of these visions and plans were destroyed by Victor Yanukovych's rejection of DCFTA and caused protests in Maiden movement of thousands of Ukrainian people. Based on that a Civil War erupted and Russians managed the annexation of Crimea. This development of events caused critical situation and the military conflict in Ukraine. The situation resulted in postponement of implementation the DCFTA from September 2014 to January 2016. It is surely assumed that cooperation with EU and signing DCFTA is the only way out for Ukraine future advancement and security. (Delcour, 2015; p. 320).

1.1 Foreign Trade of Ukraine and Integration Changes

The EU's relations with Ukraine (as well as other states of the commonwealth of Independent States) are based on of the mode of cooperation and partnership. This system is based on a Partnership and Cooperation agreement (PCA) signed by the European Community (EC) and its Member States on the one hand and Ukraine on the other one. This agreement does not constitute association or focuses on Ukraine's accession to the EU. It is important to note that it does not deepen the integration of Ukraine within the EU, but it creates a framework for cooperation and coordination of policies. PCA agreement covered various areas as well as political dialogue, trade of goods, trade of investments, the establishment, operation of companies, cross-border provision of services, current payments, movement of capital, economic cooperation, industrial cooperation, scientific, technical cooperation, energy sector, transport, cooperation in the field of democracy, human rights, the energy sector, transport, cooperation in the area of democracy, cooperation in the field of the control of illegal immigration, and illegal activities. As a legal basis for PCA agreement were used several articles of the Treaty establishing the EC. (Loo, et al, 2012; p. 426-427).

PCA represents a partnership based on strengthening political and economic freedoms and it also focuses on the support of the independence and sovereignty of Ukraine and the creation of a regular political dialogue. It also aims to promote the efforts of the state through the consolidation of democracy and the development of transition of Ukraine to a market economy.

The process of integration of Ukraine has been restricted due to lack of domestic strategy and also external interventions. The issue of the Ukrainian economic-political orientation has received much attention within the context of the failed integration through the Eastern partnership at the summit in 2013. Ukrainian access through deeper integration with the EU was one of the causes of the subsequent military conflict between Russia and Ukraine. (Spiliopoulos, 2013; p.258-259)

Currently, Ukraine aims to overcome the impacts of the conflict and the implementation of the AA/DCFTA, which consists of placement trade, commodity, territorial restructuring, improving competitiveness, and trade integration through the new commodity and territorial specialisation of Ukrainian foreign trade. Trade integration and the formation of new patterns of specialization are badly influenced by economic and business relationship with Russia, with serious economic implications, not only in the short term, but probably also in the medium and long term. Disturbed economic relations with Russia, which include bilateral trade, investment, and travel embargo as well as disputes in the energy prices and other disagreements have resulted in considerable economic consequences for both parties. The EU and western institutions such as International Monetary Fund (IMF), World Bank, and European Bank for reconstruction and Development (EBRD) are trying to help reforming the Ukrainian economy and to assist Ukraine in the change of trade specialisation and the restructuring of their economy and the ability to get the influx of new foreign investment. It will require a certain degree of macroeconomic stability, improving the investment climate, and particularly the termination of the military Crimea conflict. This is a fundamental prerequisite for economic stabilization and possible growth of investments, which represents an urgent task for all parties involved. (Dragneva and Wolczuk, 2014; p. 215-216).

2. Problem of Formulation and Methodology

The article describes the trade relationship between EU and Ukraine. The analysis includes the trade relationship of products in the period of 2004-2014. The integration of Ukraine into the EU on the basis of the agreement on partnership and cooperation agreement of 1998 or the Eastern partnership of 2009 and through the AA/DCFTA from 2014 recorded changes in the business relations with the 28 member countries of the EU in the period under review. The analysis of trade relations of Ukraine and the EU as well as the volume and structure of foreign trade are expressed through the usage of mathematical-statistical methods.

Business analysis reflects the development of foreign trade relations between Ukraine and the EU (export + import) from 2004 to 2014. Another part of the trade analysis is focused on the calculation of the level of trade integration, sometimes also called the rate of economic openness. A lot of authors express the economic openness in different ways than (Balaž, 2002; p. 152-157), (Burda, 2006; p. 24-26), (Táncošová, 2004;p. 245). An example is a statement (Cihelková, 2012; p. 230), the share of economic openness is reflected on the overall sum of export and import and on the overall economic activity, which we define by the share of imports and exports of GDP.

According to Eurostat is the trade integration of products expressed as a percentage of GDP. Practically, it means the diameter of the imported and exported items of products and trade balance and its share of GDP. If the index increases all the time in monitored country, which in our case is the Ukraine, it becomes more integrated into the international economy. On this basis, we express this factor through the share of export and import and their share of GDP:

$$TI_t = \left(\frac{IMPt}{GDPt} \right) * 100 \quad (1)$$

Where TI_t represents the degree of trade integration during a certain period of time t , which is expressed in percentages, IMP_t is the import and GDP_t is gross domestic product at time t expresses the nominal value.

The second pattern may be expressed similarly, but with using exports ($EXPT$). Through this method we compare the part of the trade (export or import), which expresses business integration.

$$TEt = \left(\frac{EXPt}{GDPt} \right) * 100 \quad (2)$$

The data for this analysis were obtained from Eurostat and are in Euro value. Further we are focused on the changes in the sectoral and geographical composition of foreign trade. In the analysis of foreign trade of EU and Ukraine you can see the representation of development of the turnovers of foreign trade between the years 2004-2014. (Eurostat [online], 2016).

Table 1: Trade Flows Export and Import of EU and Ukraine according to the SITC

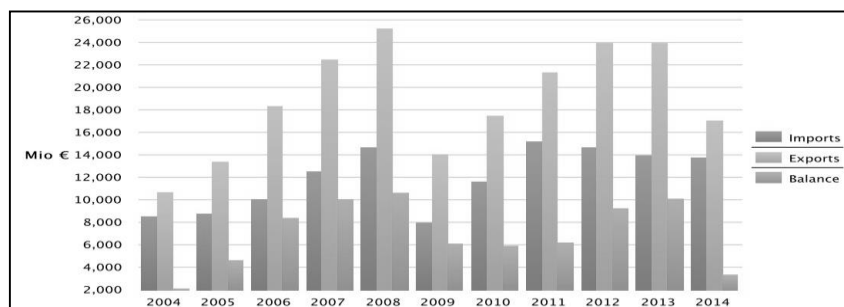
		Import				Export			
		Value	Total	Extra	Growt	Value	Total	Extra-	Grow
	Total	13,706	100,0	0,8	- 1,3	17,007	100,0	1,0	-28,8
0	Food	2,482	18,1	2,7	13,5	1,310	7,7	1,7	-19,5
1	Beverages	18	0,1	0,2	-10,8	187	1,1	0,7	-20,4
2	Crude material	2,598	19,0	4,0	-16,1	417	2,5	1,1	-24,0
3	Mineral fuels	998	7,3	0,2	-10,8	1,870	11,0	1,7	-24,8
4	Animal	616	4,5	7,3	32,7	54	0,3	1,3	-6,10
5	Chemicals n.e.s.	554	4,0	0,3	-0,3	3,681	21,7	1,3	-19,8
6	Manufactured goo	3,845	28,1	2,2	-1,8	2,601	15,3	1,3	-24,0
7	Machinery	1,417	10,3	0,3	2,8	4,932	29,0	0,7	-39,4
8	Miscellaneous	630	4,6	0,3	8,8	1,680	9,9	0,9	-27,9
9	Commodities	33	0,2	0,1	-2,7	83	0,5	0,1	-47,3
	Other	516	3,8	n.a.	n.a.	191	1,1	n.a.	n.a.

Source: own estimated according http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113459.pdf

In the post below we express the calculation of the balance of trade for each commodity group according to the standard international trade classification. Among the main commodity groups of export and import of EU and Ukraine according to the SITC is also expressed the value of export and import of Ukraine and EU including values shown in Table 1.

3. Problem Solution

The EU is the Ukraine's largest trading partner representing more than one of these trades. It is also the main source of Foreign Direct Investment (FDI). Since 1993 till 2015 Ukraine profited from the general system of preferences. In 2013 more than 70 % of Ukrainian exports to the EU benefited from the GSP tariff preferences and represented the technical, mechanical equipment, plant, oils, base metals, chemicals, and textiles. AA/DCFTA aims to strengthen the bilateral trade in goods and services between the EU and Ukraine following by progressive removal of tariffs and the harmonization of rules in the Ukraine, according to the EU, in selected industry sectors and towards the agricultural products. (Ec.europa.eu [online], 2015).

Figure 1: Total Goods: EU Trade Flows and Balance, Annual Data 2004-2014

Source: own estimated according http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113459.p

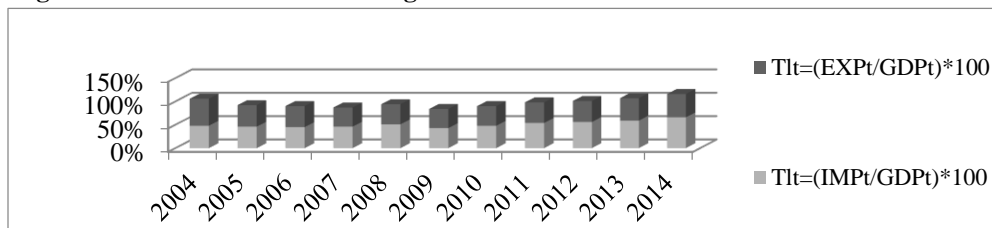
Figure 1 reflects on the development of foreign trade between the EU and Ukraine in years 2004-2014. This data confirms that the trade of the EU and Ukraine (export and import) over the years significantly changed. From the Figure 1 above we can see that the export from the EU to Ukraine in the monitored period was higher than import from Ukraine to the EU. It also shows that the foreign-trade turnover was the lowest in 2004 with the largest slump in the foreign trade between Ukraine and the EU recorded during the years 2009 and 2010 and climaxed in the year 2014.

Table 2: Total Goods: EU Trade Flows and Balance, Annual Data 2004-2014

Perio	Import			Export			Balance	Total trade
	Value	%	%	Value	%	%	Value	Value Mio
2004	8,512		0,8	10,593		1,1	2,081	19,105
2005	8,718	2,4	0,7	13,299	25,6	1,3	4,581	22,018
2006	9,948	14,1	0,7	18,287	37,5	1,6	8,339	28,235
2007	12,484	25,5	0,9	22,431	22,7	1,8	9,947	34,915
2008	14,642	17,3	0,9	25,159	12,2	1,9	10,517	39,801
2009	7,943	-45,8	0,6	13,991	-44,4	1,3	6,048	21,934
2010	11,547	45,4	0,8	17,413	24,5	1,3	5,866	28,959
2011	15,152	31,2	0,9	21,283	22,2	1,4	6,131	36,435
2012	14,643	-3,4	0,8	23,865	12,1	1,4	9,222	38,507
2013	13,882	-5,2	0,8	23,899	0,2	1,4	10,017	37,782
2014	13,706	-1,3	0,8	17,007	-28,8	1,0	3,301	30,713

Source: own estimation according http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113459.p

Changes in the volume of foreign trade include exports and imports and part of the foreign trade turnover along with the sum of total trade for years 2004-2014. The higher changes in trade were expressed by the percentage growth or a drop in the percentage of the assessment of foreign trade in individual years. We can see the details regarding the development of foreign trade in Ukraine and EU, specifically, the development of import and export in Table 2. A higher volume of imports than exports was achieved through the observation of total trade in GDP in the years 2004-2014, where we can see that the development in those years was not alike. For example, the share of imports in GDP was in 2004 higher than the share of exports and in 2014 this trend constantly persists.

Figure 2: The Status of Trade Integration

Source: own processing according to <http://ec.europa.eu/eurostat>

For example, the rate of openness of the Ukrainian economy towards the EU in 2014 was 50 % on the export side and more than 66 % on the import side. The share of imports in GDP was higher than the share of exports from 2004 to the year 2014. We can see the resulting trade openness in Figure 2. The status trade integration was higher in 2014 than in 2004. In both cases, the share of trade integration was higher in 2014 than in 2004. From this perspective, the integration of Ukrainian economy with the EU contributed to achieving a higher level of economic openness, and confirmed a fact, that Ukraine is a small open economy with a dependence on a foreign trade. The diversification of foreign trade of Ukraine is a hard task because Ukraine still belongs to the developing countries. (Gochar, et al, 2013; p. 16-19)

Ukraine has an open emerging economy but the crisis has hit at a difficult time. Ukrainian economy has reacted extremely painfully to the deepening crisis. Ukraine has the 51th largest export economy in the world and 31th most complex economy according to the Economic Complexity Index (ECI). (atlas.media.edu) Ukraine was at the 22th place among the trading partners of the European Union in 2014 making 1.1 % of total volume of the foreign trade of the EU. If we analyse the dynamics of bilateral trade in the period of years 2004-2014, we can see an interesting increase of the share of the EU in the foreign trade with goods and services of Ukraine rising from 29.6 % to 32.1 %. The main trade partners of Ukraine in 2014 were membership countries of the EU such as Germany (17.9 %), Poland (15.1%), Italy (10.7%), Hungary (7.4%), The Netherlands (5.1 %), France (4.7%), Spain (4.5 %), and other countries (34.6%). (Ukraine-eu.mfa.gov, [online]; 2016).

Table 3: Main Trading Partners of Ukraine in 2004 and 2014 in %

The	Country 2004	Percentage share	The	Country 2014	Percentage share
1.	Russia	56,9 %	1.	EU 28	35,2 %
2.	Germany	13,3%	2.	Russia	20,8%
3.	Turkmenistan	8,8 %	3.	China	7,5%
4.	Italy	8,6 %	4.	Belarus	5,2%
5.	Poland	6,4%	5.	Turkey	4,5%
6.	Turkey	6,2%	6.	Egypt	2,7%
7.	Belarus	6,0%	7.	USA	2,4%
8.	USA	2,6 %	8.	India	2,3%
9.	China	4,5 %	9.	Kazakhstan	1,3%
10.	Hungary	2,5%	10.	Saudi Arab	1,1%

Source: own estimation according http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113459.pdf

In Table 3 is we can see the change by the percentage of trading partners of Ukraine for 10 years and, specifically, years 2004 and 2014. These data confirm that Ukraine has started to focus more on foreign trade with the European Union and also with other countries.

4. Conclusion

Ukraine is trying to deepen its position within the geographical and political space in the context of the global civilization development and trying to express their own priorities, national interests, strategy tactics, and also their implementation. Additionally, they are trying to focus through foreign policy on the general trends of global development and pushing their national interests, the growth of their international authority and influence on international events. The outcome of this research expresses the foreign-trade relations between Ukraine and the EU, and the trade integration status of Ukraine. The results also indicate that Ukraine is heading in a positive direction to develop prosperous foreign trade cooperation between them and the EU.

There was also discovered a deficit balance between Ukraine and the EU countries in the framework of international trade, which points to the fact that there is a need to find a balance between the Ukraine foreign trade by increasing the export volume.

It is necessary to develop the support of competitiveness of Ukrainian producers on the basis of the structural reforms of the economy, particularly the export-oriented industries. It is also necessary to implement new comprehensive export strategy of the Ukrainian economy focused on raising the export innovation products with high added value and also to focus on the increase of the grants for the high-tech services. Furthermore, it is also necessary to redirect the import strategy, which will provide comprehensive problem solutions through the modernization of the national economy and active policy of import through substitution of import commodities.

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Center of Main Interest (COMI) Principle in the New EU Regulation on Insolvency Proceedings

Alexander J. Bělohávek
VŠB - Technical University of Ostrava
Faculty of Economics, Department of Law
Sokolská třída 33
Ostrava, Czech Republic
e-mail: office@ablegal.cz

Abstract

Definition according to which the COMI shall be the place where the debtor conducts the administration of its interests on a regular basis and which is ascertainable by third parties is moved from the recitals to the main body of the Regulation (EU) 2015/848 (the Regulation). Under the Regulation the place of the registered office is still presumed to be the debtor's COMI, but now such presumption shall only apply if the registered office has not been moved to another Member State within a 3-months period prior to the request for the opening of insolvency proceedings. Furthermore, the new law adds a recital that clarifies the circumstances in which the presumption that the COMI of a legal entity is located at the place of its registered office can be rebutted. Special provision applies for natural persons. In the case of an individual exercising an independent business or professional activity, the center of main interest shall be that individual's principal place of business; in the case of any other individual the centre of main interests shall be the place of the individual's habitual residence. The habitual residence became in course of the past decade the most important connecting element determining the status of natural persons in terms of the EU law (not only in insolvency proceedings).

Keywords: Center of Main Interest, EU Law, Insolvency, Legal Entity, Natural Person

JEL Classification: G33, K10, K11, K12, K13

1. Introduction

On 29 March 2012, the Commission launched a public consultation, during which the Commission received 134 contributions. The Commission also took into account the outcome of an external study prepared by the universities in Heidelberg and Vienna analysing the application of insolvency regulation. Empirical data obtained on the basis of the outcome of the public consultation and the abovementioned external studies have proven that three-quarters of the respondents agree with the use of the concept of the centre of main interests (COMI) for the determination of international jurisdiction in the main proceedings. But the majority expressed the opinion that the interpretation of the concept of the centre of main interests in case law has contributed to practical problems. Almost half of the respondents adduced evidence proving the abusive transfer of the centre of main interests (Council Regulation (EC) No. 1346/2000, proposal, p. 4).

Regulation (EU) 2015/848 of the European Parliament and of the Council on insolvency proceedings (recast) (hereinafter referred to as "Regulation 2015/848") entered into force on 25 June 2015; as of 26 June 2017, the said Regulation 2015/848 shall replace the current

Council Regulation (EC) No. 1346/2000 on insolvency proceedings (hereinafter referred to as “Regulation 1346/2000”). Consequently, it is desirable to analyse the changes that will occur in cross-border insolvency proceedings, primarily with regard to the concept of the debtor's centre of main interests (COMI) as the crucial concept, and the conflict-of-laws connection drawn by European insolvency law, which also appears in international insolvency proceedings in a number of non-EU countries.

Judicial practice in EU Member States since the adoption of Regulation 1346/2000 with respect to the determination of international jurisdiction in insolvency proceedings can be characterised as being inconsistent. The courts, primarily English courts, as opposed to the courts of other Member States, have significantly differed in their assessment of the centre of main interests. English courts have often proceeded very *aggressively* from the perspective of continental law, and have not hesitated to apply an extensive interpretation in order to declare themselves competent (having jurisdiction) in a number of controversial cases. Considering such practice, one might also tend to believe that one of the main objects of the Regulation – to prevent *forum shopping* – has had the opposite result. The inconsistent application of the rules governing court jurisdiction has so far not only provided sufficient room to the involved parties for the abusive relocation of the centre of main interests, but it also represents the impetus for such action (Čihula, 2006). Nonetheless, examples can also be found in other countries, such as Germany, where the determination of the COMI was rather questionable, and the relevant decisions principally lacked any justification in this regard. In its report of December 2012, the Commission pointed out certain debatable aspects of the current legislation.

As concerns individuals (natural persons), some courts have applied the presumption favouring the debtor's residence, whereas others have applied national laws, which does not comply with the requirement that the concept of the COMI ought to be construed as an autonomous concept of EU law (Břicháček, 2015). The debtor's “centre of main interests” in terms of Article 3(1) of Regulation 1346/2000 is a specific concept of EU law; consequently, its meaning is autonomous and must be interpreted uniformly and independently of any national laws or regulations (*Rastelli Davide e C. Snc v. Jean-Charles Hidoux*, Judgement CJ EU, 2011). Apart from the above said, the Commission has highlighted the practice of *forum shopping* adopted by debtors – debtors have, in certain cases, changed their registered office/place of residence immediately before the expected opening of insolvency proceedings in order to transfer their COMI and, consequently, jurisdiction. The Commission has come to the conclusion that there have been cases of the evidently abusive relocation of the centre of main interests for the sole purpose of obtaining the discharge of residual debts in jurisdictions with laws favourable for the said purpose. This problem has often been referred to as “bankruptcy tourism” (Břicháček, 2015).

2. Concept of Debtor's Centre of Main Interests (COMI)

The COMI determines jurisdiction for the opening of the main insolvency proceedings; the concept encompasses business (trade, entrepreneurial), as well as other professional economic activities (for-profit activities) (Fritz *et al.*, 2001). Consequently, we could generally infer that main interests include not only business, entrepreneurial or professional activities, but also the debtor's (bankrupt's) general business interests. This approach applies to both individuals and legal entities, both entrepreneurs (traders) and persons who do not carry on any business activities, and it is always necessary to determine, from among a group of potentially more suitable places, those places that exhibit the greatest importance for and closest connection to the debtor. But the principal requirement is that the place must be ascertainable by third parties

without exerting any special effort to determine the place. The place must be clearly obvious to third parties.

Regulation 2015/848 confirms the value of the debtor's centre of main interests as the main connecting factor. Such approach is logical, even though the application of the concept still gives rise to problems in practice. The main insolvency proceedings can only be opened in the jurisdiction in which the debtor has their COMI. The COMI represents the focus point of the debtor's economic life, and ensures that the insolvency proceedings are opened in the jurisdiction with which the debtor has an actual and the closest connection. This connecting factor has already gained a certain degree of international recognition – it is also incorporated in the 1997 UNCITRAL Model Law on Cross-Border Insolvency.

In status law, the COMI as a connecting factor is closer to the seat theory (from the perspective of the seat/place of management, the place of control determining the real seat of a legal entity) than the incorporation theory, which is the primary basis of the Czech status law with respect to legal entities. The registered office (in terms of the incorporation theory) merely represents a rebuttable presumption of the existence of the debtor's centre of main interests at the said registered office.

There are several interpretation concepts of the COMI. The opinion prevailing in continental Europe can be described as an opinion on the centre of activities, i.e. that the debtor's centre of main interests is determined by the place where the debtor can be ascertained or reached by third parties. Conversely, the Anglo-Saxon opinion is more cosmopolitan and can be described as an opinion according to which the debtor's centre of main interests is determined by the place of management, i.e. the debtor's centre of main interests (COMI) is located in the place where decisions concerning the management of the enterprise are actually made (Goodfrey). However, such interpretation is substantially more flexible than the seat theory according to, for instance, German law; the latter is closer to the place from which the debtor's activity is influenced, and to some extent, also controlled.

One must principally adopt the premise that the debtor's centre of main interests must meet the fundamental prerequisite, i.e. it must be a place objectively ascertainable by third parties, not only temporary, and the connection between the debtor's activities and the said place must exhibit a sufficient, not only temporary importance.

The concept of Regulation 2015/848 substantially complies with German law and the German approach as the approach and concept of a state whose citizens were the main investors on the European level for a long time, primarily in the 1980s and 1990s. Hence, the said concept of international jurisdiction provides sufficient leeway to open the main insolvency proceedings in Germany even against a company that does not have its registered office in Germany. Such approach is therefore highly protectionist, especially in relation to countries with a concentration of investors and creditors domiciled in the said territory, because the concept of the COMI and the definition of its contents can serve as the basis for an interpretation that argues that the place can be situated in a territory from which the debtor's activities are managed, from which (or through which, as the case may be) the main payment transactions are executed, etc. This very approach demonstrates the highly politically motivated character of Regulation 1346/2000, which has been substantially used by, for instance, German courts and German receivers (though, naturally, this does not apply to Germany only); German courts and receivers have also, from the very beginning, reflected this concept in the laws of national origin relating to insolvency proceedings.

3. Definition of COMI and Rebuttable Presumptions in Regulation 2015/848

The new definition of the debtor's centre of main interests is formally a mere rephrasing of the former definition incorporated in the Preamble, without any intention to change the essence thereof. The COMI is defined as a place from which the debtor regularly manages its interests and which is ascertainable by third parties.

Business companies and/or legal entities are subject to a rebuttable presumption that the debtor's COMI is located at its registered office. However, a company should not be interpreted as limited to a business company; the concept also covers civil-law companies, including associations, which are endowed with legal personality under the individual legal systems, without being classified as legal entities. For instance, a general partnership under German law has its own legal personality, even though it is not considered a legal entity – contrary to certain other legal systems and their rules regulating analogous legal forms. Considering the differences in the perception of the legal personality of such legal concepts, Regulation 2015/848 has adopted relatively broad rules in order to cover as many of such cases as possible.

Regulation 2015/848 has retained the (rebuttable) presumption that the country of the company's statutory registered office is identical to the debtor's COMI. The reasoning behind this approach is logical, because it is a place that is usually, *ipso facto*, ascertainable by third parties, primarily creditors. Consequently, such approach significantly increases the security of the creditors, who may assume, with a sufficient degree of probability, that if the debtor becomes insolvent, the main proceedings will probably be conducted in the said country. The concept of the statutory registered office, or registered office as such, could give rise to certain interpretation problems with respect to the rebuttable presumption under Article 3(1) of Regulation 2015/848. The definition of the registered office is controversial, questionable and in the EU, almost politicised. On the one hand, the incorporation principle has been accepted, more as a political compromise; on the other hand, however, the principle applies exclusively as a rebuttable presumption modified by the main principle, i.e. the principle of the COMI as the connecting factor.

It is necessary to adduce evidence and prove the opposite, i.e. if the party has alleged that the COMI is not identical to the place of its statutory registered office. For example, Belgian courts accepted the opposite as proven and opened the main proceedings despite the fact that the debtor's statutory registered office was not situated in the territory of the Kingdom of Belgium (Henry, 2000) based on the following arguments, which persuaded the courts to do so: (i) the company has and operates its enterprise in Belgium, whereas the company carries on no economic activities in the country of its statutory registered office, (ii) the company was formed under Belgian law and subsequently relocated its statutory registered office to France, but the debtor could not be found in the place of its statutory registered office, no staff could be ascertained, and on top of that, it was difficult to serve documents to the debtor in the place of its statutory registered office, and (iii) the debtor's statutory registered office in the territory of another state could be deemed as purely fictitious for other reasons and on the basis of other circumstances.

Regulation 2015/848 supplements the definition of the rebuttable presumption, namely the presumption only applies if the registered office has not been moved to another Member State within the 3-month period prior to the request for the opening of insolvency proceedings (Article 3(1) of Regulation 2015/848). If the request is lodged within less than 3 months of the relocation, the presumption of the registered office shall not apply and the court will have to

assess the COMI on the basis of a comprehensive analysis of all factors. This temporal limitation is necessary for the proper functioning of the internal market and to avoid incentives for parties to transfer assets or judicial proceedings from one Member State to another, seeking to obtain a more favourable legal position (forum) to the detriment of the general body of creditors (*forum shopping*).

A truly mobile conflict caused by a change of the COMI arises, in most cases, only very rarely. It is either an entirely intentional change of the COMI after the request for opening the proceedings is lodged, or even only a fictitious change, which, however, does not represent any change in actual fact, and consequently, cannot give rise to any consequences, or a situation where the COMI is changed immediately prior to the request, and the change is motivated solely by *forum shopping* and therefore represents an evident evasion of the law. Any influence of any such changes of the COMI on international jurisdiction must be rejected. A true change of the COMI that is not motivated by the search for another, more suitable international jurisdiction, is mostly undertaken by individuals, often people with insignificant assets (Gebauer *et al.*, 2005), where a simple and fast migration allows them to sever close and constant connections to their current domicile. However, even such cases require an examination of whether or not the grounds for the migration inhered exclusively in a desire to change the international jurisdiction to process the insolvency and open the insolvency proceedings.

From the temporal perspective, the key factor is the place of the COMI at the moment of filing the request. Changes of the place after the filing of the insolvency request and before the declaration of insolvency (or at any later moment) are irrelevant. As regards the change of the COMI after the request to open the proceedings, this issue has also been addressed by the ECJ in *Susanne Staubitz – Schreiber* (*Susanne Staubitz-Schreiber*, Judgement ECJ, 2006). The Court ruled that a transfer of jurisdiction from the court originally seized to a court of another Member State would be contrary to the objectives pursued by the Regulation. The legislator's intention was to avoid incentives for the parties to transfer assets or judicial proceedings from one Member State to another, seeking to obtain a more favourable legal position. That objective could not be achieved if the debtor could move its centre of main interests to another Member State between the time at which the request to open insolvency proceedings was lodged and the time at which the judgment opening the proceedings was delivered and thus determine the court having jurisdiction and the applicable law. Such a transfer of jurisdiction would also be contrary to the objective of efficient process, increased effectiveness and more expeditious insolvency proceedings with an international impact, as it would oblige creditors to be in continual pursuit of the debtor, wherever they chose to establish themselves more or less permanently, and would often mean in practice that the proceedings would be protracted (*Susanne Staubitz-Schreiber*, Judgement ECJ, 2006, paragraphs 24-26).

The introduction of the three-month “neutralisation” period attempts to solve certain critical aspects of Regulation 1346/2000, but in the authors' opinion, it is too weak and incoherent. D. Latella argues that whoever has their registered office in an EU Member State may freely choose any other Member State to carry on their business activities, even though they have no material connection to the state, except for a formal act of registration. He opines that the freedom of establishment, guaranteed by primary EU law, also includes the possibility of moving the centre of main interests, and consequently, companies may choose their own national insolvency law by relocating their registered office (Latella).

Insolvency can be assimilated to a serious and deep economic crisis in the individual sense, usually irreversible and irremediable. In such situations, some companies sometimes attempt

to secure a more favourable legal environment by moving their registered offices. Naturally, this is often motivated by illegitimate incentives, primarily if the aim of the change is to cause detriment to the creditors; in such case, the introduction of the *neutralising* three-month test may undoubtedly be of benefit. On the other hand, financial distress, however serious, is a situation of preliminary insolvency, where the debtor can still be saved and the company can be given a *second chance* to survive. Companies may in such cases look for a more comfortable legal framework and their efforts are not necessarily motivated by illegitimate purposes, but rather by legal and economic effectiveness in the restructuring of their debts. The uniform three-month *neutralisation* period does not factor in whether the particular case concerns insolvency (lack of liquidity), or only financial distress. It may neither prevent all cases of the abusive transfers of the registered office due to the shortness of the period, but may slow down *good transfers* (Latella).

The Preamble (Recital 30) of Regulation 2015/848 newly contains an explanation, inspired by the decision in *Interedil (Interedil Srl, in liquidation v Fallimento Interedil Srl and Intesa Gestione Crediti SpA., Judgement CJ EU, 2011)*, that the presumption regarding the COMI should be rebuttable if the company's central administration is located in a Member State other than that of its registered office, and where a comprehensive assessment of all of the relevant factors establishes, in a manner that is ascertainable by third parties, that the company's actual centre of management, and the supervision and management of its interests are located in such other Member State. Factors that ought to be considered primarily include all places where the company pursues its economic activity, and all places where the company owns assets, provided that such places are ascertainable by third parties. Such circumstances must be assessed globally and with due regard for the circumstances of each individual case.

On the other hand, it has to be emphasised that, despite any such rebuttable presumption (in the case of legal entities), and despite the fact that it is usually the creditor (the person filing the request) who can be expected to exert efforts to rebut the presumption, the court is also obliged to examine, of its own motion (*ex officio*), whether or not it has jurisdiction. The reason is that Article 4 of Regulation 2015/848 stipulates that a court seized of a request to open insolvency proceedings shall, of its own motion, examine whether it has international jurisdiction pursuant to the Regulation. The judgment opening insolvency proceedings shall specify the grounds on which the jurisdiction of the court is based, and in particular, whether jurisdiction is based on Article 3(1) (main proceedings) or (2) (secondary proceedings). Article 5 has newly introduced a possibility available to the debtor or any of the debtor's creditors to challenge the decision opening the main proceedings on grounds of international jurisdiction. The decision opening the main insolvency proceedings may also be challenged by other parties or on grounds other than a lack of international jurisdiction of the court, where national law so provides.

These changes should improve the procedural framework for the determination of the jurisdiction to open the proceedings. They should help to make sure that the proceedings are only opened if the respective Member State actually has jurisdiction. A more thorough control of the COMI should also be introduced, and this measure should therefore represent another instrument for preventing *forum shopping*. The possibility of defence pursuant to Article 5 of Regulation 2015/848 should also provide effective means of legal protection to the creditors, which has so far lacked any legal basis in EU law (Břicháček, 2015). However, this provision is specific for its principally and exclusively procedural nature. Despite the fact that the details of the instrument are regulated under national laws, some legal systems will probably need an adjustment of their procedural mechanisms in order to make sure that persons with legal

standing may employ the instrument at all, although the right itself to the protection is exercised as a result of direct application on the basis of Article 5 of Regulation 2015/848.

Regulation 2015/848 shall not apply if the (statutory) registered office is situated in the territory of a Member State, but the state is not the state of the COMI. However, this principle must not enable the debtor to make fictitious transfers of their assets and endeavour to artificially construe the COMI outside the territorial scope of Regulation 2015/848. This is another reason why the court seized of a request to open the insolvency proceedings should have the power and the duty to examine the centre of main interests and its actual location *ex officio*, and if the court discovers that the COMI has been artificially construed outside the territorial scope of Regulation 2015/848, the court should employ any and all legal instruments to undermine the construct. The active, if not actually investigative, role of the court should therefore be enhanced.

On the other hand, if the COMI is not located in any of the Member States, Regulation 2015/848 shall not apply and the determination of international jurisdiction, as well as the effects of any foreign decision in an insolvency case, shall be governed exclusively by private international law rules incorporated in the legislation of the individual states.

Conversely, Regulation 2015/848 must be applied and its scope will cover the case if the COMI is situated in the territory of a Member State, despite the fact that the debtor's statutory registered office is not situated in the territory of the Member States.

4. COMI of Individuals

The Regulation has introduced provisions regulating the centre of main interests of individuals (natural persons). In the case of an individual exercising an independent business or professional activity, the centre of main interests shall be presumed to be that individual's principal place of business; in the case of any other individual, the centre of main interests shall be presumed to be the place of the individual's habitual residence. This solution could have been inspired by *Susanne Staubitz-Schreiber*; the Advocate General in the said case provided the following opinion: [...] *the centre of the main interests of an individual who carries on a business activity is deemed to be their "business address", while for other natural persons, it is deemed to be their habitual residence* [...] (*Susanne Staubitz-Schreiber*, Opinion, paragraph 62).

That presumption shall only apply if the individual's principal place of business has not been moved to another Member State within the 3-month period prior to the request for the opening of insolvency proceedings, or in the case of other individuals (who do not carry on a business activity), if the habitual residence has not been moved to another Member State within the 6-month period prior to the request for the opening of insolvency proceedings. The Preamble to Regulation 2015/848 (Recital 30) has supplemented an explanation regarding individuals not exercising any independent business or professional activity, according to which it should be possible to rebut this presumption, for example where the major part of the debtor's assets is located outside the Member State of the debtor's habitual residence, or where it can be established that the principal reason for moving was to file for insolvency proceedings in the new jurisdiction, and where such filing would materially impair the interests of creditors whose dealings with the debtor took place prior to the relocation.

The concept of habitual residence, which is a brand new concept for European insolvency proceedings, is already incorporated in the Brussels II bis Regulation, and has also been employed by the Hague Conference on Private International Law. EU law has not offered any

legal definition of the concept thus far. The meaning and specific contents of the concept of *habitual residence* differ in various legal cultures. Both the *Hague Conventions* and the Brussels II bis Regulation, as well as a number of other EU procedural and substantive laws, have intentionally refrained from providing any definition thereof. The reason is that the countries of continental Europe have tackled the concept differently. Swiss law, for instance (despite the fact that Switzerland is not a Member State), stipulates that the place of habitual residence is defined as a place where the individual has lived for a longer period of time; this applies even if they have been aware from the very beginning that their residence shall only be temporary. But most other states provide no definition of the place of habitual residence – the states have deferred the interpretation to courts in the context of the individual international treaties and EU law, as applicable (Zavadilová *et al.*, 2010).

For instance, the Judgment in *Korkein hallinto-oikeus* states that the concept of *habitual residence* under Article 8(1) of Regulation 2201/2003 must be interpreted as meaning that it corresponds to the place that reflects some degree of integration by the child in a social and family environment. To that end, in particular the duration, regularity, conditions and reasons for the stay on the territory of a Member State and the family's move to that State, the child's nationality, the place and conditions of attendance at school, linguistic knowledge and the family and social relationships of the child in that State must be taken into consideration. It is for the national court to establish the habitual residence of the child, taking account of all the circumstances specific to each individual case (*Korkein hallinto-oikeus*, Judgement ECJ, 2009). The above and, of course, other aspects, naturally adjusted to the conditions of an economically capable individual, must also be applied to the COMI test with respect to individuals in order to determine their insolvency status. Future case law of the courts of the Member States and of the ECJ will hardly shed any light on the particular contents that the concept of *habitual residence* will assume in the context of cross-border insolvency proceedings; but it may at least delimitate the contents of the test and the significance of the individual criteria.

5. Selected Case Law Concerning Debtor's Centre of Main Interests

The courts of the Member States have endeavoured to provide a more precise interpretation of the COMI ever since the adoption of Regulation 1346/2000. Based on the already existing case law, the debtor's centre of main interests is determined by factoring in such aspects as day-to-day management (Ireland) (*Eurofood IFSC Ltd.*, Judgement High Court of Dublin, 2004; Judgement ECJ, 2006) versus the fact that members of the managing board had the nationality of the state of the forum (Italy) (*Parmalat S.p.A.*, Judgement Tribunale Civile e Penale, 2004; *Eurofood IFSC Ltd. v. Parmalat S.p.A.*, Judgement ECJ, 2006). The Supreme Court of the Netherlands has ruled that the COMI is situated in the state (here the Netherlands) in which more of its significant ownership interests had their seat, through which the debtor implemented its trading interests (*Fortis v. Vennink*, Judgement De Hoge Raad, 2004; Bos, 2015).

The fact that a subsidiary was established in Sweden was held by a Swedish court (similarly to the assessment of the Supreme Court of the Netherlands in the last mentioned case above) to be so important that the Court determined the COMI of the company according to the said factor, despite the fact that the company was incorporated in Great Britain and had a correspondence address in Spain (No. Ö 21-05, Judgement Court of Appeal Skåne and Blekinge, 2005; Wessels, 2006). In connection with the Swedish practice, as well as the aspect that can be potentially assessed as the decisive circumstance for determining the COMI, one may also invoke another Swedish decision, in which the determining factor establishing the

COMI was associated with the place where the source codes to the debtor's computer programme were deposited, despite the fact that the company was incorporated and had its correspondence address in the UK, whereas it only had its branch in Sweden (No. K 17664-04, Judgement Stockholml court, 2005; Wessels, 2006).

We may also highlight the case in which the parent company (of an Austrian subsidiary with its registered office in Innsbruck, Austria) had its registered office in Germany. The court in Munich declared bankruptcy both with respect to the German parent company in terms of the main insolvency proceedings (Hettlage KgaA, Judgement Amtsgericht München, 2004; Mankowski, 2004), and with respect to the Austrian subsidiary; the court ruled that the decisive element was the organisational structure, because the accounting services for the entire Group, IT services, contractual agenda and similar activities had been carried on at and through the German parent company. Nonetheless, the court also had regard to other circumstances, such as the fact that any and all goods sent to Austria were produced and supplied by the parent company, any and all business activities were organised from Germany, members of the business management of the Austrian company were residing in Germany, etc. This is a situation that was typical for Germany in the past, and an approach favouring the jurisdiction of domestic courts, although even German courts have in this regard adopted different decisions – for instance, Amtsgericht Mönchengladbach emphasised in its rulings the debtor's outward actions (Mankowski, 2004), and underlined, in at least one case, the place from which the debtor's advertising campaign was conducted (EMBIC I, Judgement Amtsgericht Mönchengladbach, 2006; Ehlers, 2006). In this regard, it may, for instance, suffice whether and which address was notified by the debtor to their business partners as the main contact (communication address) (*Ci4net.com Inc.* and *Re DBP Holdings Limited*, Judgement High Court of Justice Leeds District, 2004), which may become important, especially if the debtor only has a few business partners; otherwise, it would be necessary to have regard to all, or at least the more important, creditors (at least the more important creditors who have lodged their applications), and the address by no means needs to coincide with the debtor's registered office (Judgement Amtsgericht Düsseldorf, NZI, 2004, p. 450).

For a comparison connected with the location or residence, as applicable, of the statutory body, we may refer to the decision of a London court in *Aim Underwriting Agencies*. This case concerned a company formed in Ireland, but which was fully owned by a British company. The statutory body, as the sole person fully responsible for the operation of the company, had his permanent residence in Great Britain, and London was determined as the COMI; however, the court in this case also had regard to the perception or potential perception, as applicable, of the COMI by creditors. The court also took into account the fact that principally a number of activities were carried on by the parent company in England, as well as the fact that the Irish subsidiary had no employees (*Aim Underwriting Agencies (Ireland) Ltd.*, Judgement High Court of London, Chancery Division, 2004; Hyde *et al.*). Principally analogous criteria were also employed by the same court in a different, even older case, in which the court ruled that a company formed in Spain had its COMI in London, where the company adopted any and all financial and economic decisions (*Enron Directo S.A.*, Judgement High Court of London, Chancery Division, 2002; Hyde *et al.*).

Similarly to the last mentioned case, as well as the *Northsea* case (see below), a Swedish court had regard to the fact that some basic activities of a company formed in Finland were pursued in Sweden, and used this argument in support of its own jurisdiction by holding that the COMI was located in Sweden (No. K 17664-04, Judgement Stockholm court, 2005; Wessels, 2006).

It is clear that the interpretation favouring the determination of the COMI primarily according to the *outward* appearance of the *debtor* shall continue to apply, i.e. even within the regime of Regulation 2015/848.

Nevertheless, even the practice of English courts seemed rather inconsistent for a long time, and English courts in many cases tended to accept the debtor's COMI in the place of its "organisational" management, without too much emphasis on the perception thereof by third parties (creditors) (*Crisscross*, Judgement High Court of Justice in London, 2003). The recent case of *Northsea Base Investment Limited* (*Northsea Base Investment Limited, Baltic Tankers Holding Limited, B. Endeavour Shipping Co Limited, B. Force Shipping Co Limited, B. Faith Shipping Co Limited, B. Merchant Shipping Co Limited*, Judgement High Court of Justice, Chancery Division, 2015) serves as a useful reminder of the potential to rebut the presumption of the registered office. The court in the *Northsea* case held that the COMI of the ship carriers was located in England and Wales, i.e. in the countries to which their operations and management were transferred, not in Cyprus, where the Group was registered. All eight companies were registered in Cyprus, although the operations and management of the companies had been delegated under a service agreement to a shipping company formed in England (*Marine Services Limited Cross*), payment transactions and all communication were carried out through London, and as a subsidiary factor, key contracts were governed by English law, with the place for resolving eventual disputes also located in England. The court in the *Northsea* case concluded that the services, operations and management of the Group were undertaken by Marine Services Limited Cross, as well as the payment transactions and contacts with banks. The court held that *from the point of view of objective evidence, and what could be ascertained by third parties, the involvement of Marine Services Limited Cross in London was critical to the operation of the ship companies*. Conversely, factors such as the fact that meetings of the boards and General Meetings were not held in England, but in Cyprus, were rejected, because such circumstances were important for the internal running of the company, but in most cases could not be perceived as the decisive factor for the creditors, who, moreover, were not and could not be informed of such circumstances. This must be perceived as the difference between factoring in such a circumstance from the perspective of international (European) insolvency law, on the one hand, and fiscal and administrative law, among others, on the other hand; the latter often involves the assessment of the said internal status. This decision repeatedly emphasised the importance of the debtor's COMI as perceived by third parties. Nonetheless, we must naturally point out that the perception of the individual creditors may differ. In this connection, an English court took into account in its ruling the view adopted by the main creditor, an English factoring company, which financed the business activities of a German company, supported by the fact that most administrative activities of the debtor were carried on in England. The court also had regard to the fact that contracts concerning approximately seventy per cent of goods supplied by the company to the German market were contractually executed (contracts signed) by a company from the Group that had its registered office in England (*Daisytek-ISA Limited*, Judgement High Court of Justice, Leeds District, Chancery Division, 2003; Hyde *et al.*).

6. Conclusion

It is necessary to point out that the changes in the regime of EU insolvency proceedings will make sure that its legal basis solidifies into a more effective set of rules. But the possibility of a broad interpretation of the COMI still leaves room for individual subjective discretion of the judge – it is the judge of the insolvency court seized of a request to open the proceedings who must assess the existence of the centre of the debtor's main interests in the place of the said

court. Both Regulation 2015/848 and a number of published opinions strive to present the COMI as an objectively existing fact, which only needs to be ascertained on the basis of an assessment of all potentially applicable circumstances. This opinion is certainly correct, but it would be overly academic and detached from practice if we failed to realise that the determination of the place on the basis of all available circumstances presupposes a significant quantum of information and practical professional, economic and general abilities to be possessed by the judge. The judge must assess the existence of the COMI with maximum economic and international knowledge and insight. The concept of Regulation 2015/848 provides room for the protection of the debtor's interests, rather than the interests of the creditors, its main objective. The reason is that the debtor usually has at their disposal the greatest amount of information that could be of significance for the assessment of the COMI, as opposed to the creditors, who usually have at their disposal only very limited and incomplete information regarding the debtor's economic interests. The judge who examines the issue of main interests should therefore base their conclusions on the maximum objectivisation of facts presented to them in the request to open the proceedings. It is therefore more than advisable to make use of, to the maximum extent possible, any expert reports and preliminary receivers, who could and should supply the judge with information that is as objective as possible.

We cannot agree that the rules for the determination of international jurisdiction are sufficiently clear and exclude almost entirely any conflicts of jurisdiction, whether positive or negative. On the contrary, the highly politicised circumstances attending the adoption of both Regulations and the discussion thereof, as well as the compromising approach to the resolution of crucial issues, render the problem and the resolution thereof rather unclear and vague. The reason is that the COMI depends on the assessment of many factors, which can be ascribed a completely different significance by judges from various Member States. Hence, the problem inheres in the fact that the assessment of the given conflict-of-laws issue is substantially influenced by subjective reasoning or evaluation by the judge, as applicable, and the approaches adopted by national legal cultures. This results in principal conflicts of jurisdiction. Consequently, the determination and definition of clear conflict-of-laws criteria, which would make them generally applicable, is the principal assignment for the future decision-making practice of the Court of Justice of the EU and for the courts of the Member States.

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The Impact of Tax Competition on the FDI Flows within EU in Conditions of Globalization

Beata Blechová

Silesian university in Opava
School of Business Administration in Karvina
Department of Finance and Accounting
Univerzitní náměstí 1934/3
Karviná, Czech Republic
e-mail: blechova@opf.slu.cz

Abstract

With the emergence of multinational corporations and globalization of their economic activities, the competition between these companies is being expanded also on the competition between individual states. This competition is also manifested in the tax area, when less economically developed countries are trying to attract the foreign investors from economically advanced countries to their country through a lower corporate tax burden, which is considered as harmful tax competition. This article examines the extent of Foreign Direct Investments flows depending on the size of corporate income tax burden in EU countries. The amount of the corporate income tax burden is expressed here using two types of tax rates, namely the statutory tax rate and the effective tax rate, defined by the ratio of the aggregate revenue of corporate income taxes to GDP. The degree of dependence of FDI flows on the size of the corporate tax rates is determined using correlation analysis.

Keywords: *Globalization, Multinational Corporations, Foreign Direct Investment, Corporate Income Burden, Tax Competition, Tax Advantages, Agglomeration Advantages*

JEL Classification: *F21, H25, H26, O16*

1. Introduction

Much discussed topic today is the globalization process, which has developed into its present form as a result of continuous development of the world economy. (Stiglitz, 2002) characterizes the globalization as the closer integration of the countries and peoples of the world, brought about by the enormous reduction of costs of transportation and communication, and the breaking down of artificial barriers to the flows of goods, services, capital, knowledge, and people across borders.

Globalization is indissolubly linked with the emergence of Multinational Corporations (MNC), i.e. companies which have their headquarters in one country and develop continuous operation under their control (they own there at least 10% of the common stocks and decision-making powers) in at least two other countries with the use of Foreign Direct Investment (FDI).

The poorer countries are trying their best to attract investments of these companies, since they enable them capital inflows and attracting or invoking of the secondary investments. They also provide them with access to advanced technologies, to advanced managerial experiences, to the developed markets and also simultaneously to create a new job. Individual countries are using different tools for the FDI promotion. These include the liberal regulation of exchange

of national and foreign currencies, guarantees against expropriation, setting up of the industrial parks, some tax breaks or direct subsidies.

An important factor that also may influence the investors' deciding about the allocation of their investments is the size of the corporate tax burden. To a tax instruments that are the most important for decisions of foreign investors we can include mainly the level of the statutory corporate tax rates, the extent of applicable tax benefits and mutual relations between the taxation of income in the host and home country. Among the most frequently applied tax benefits we can include in particular the following:

- the temporary tax exemption from income, which applies to new businesses,
- the possibility to add a certain part of the costs associated with buying or setting up a new company in addition to the normal depreciation of fixed assets,
- the possibility to apply more favorable depreciation method at the fixed assets,
- the lower income taxes for all foreign investors, or only within a particular sector or region.

The application of these tax instruments gives rise to tax competition, which most economically advanced states consider as harmful. However, tax competition may also represent certain medicine against effort to expansion of state power and to increasing of the government spending associated with them, which have an impact on the tax increases. It can act more effectively than political mechanisms, because in this case it has the same effect as competition in business. Under the influence of tax competition, governments would be forced behave more efficient and more responsive to the priorities of their "customers" i.e. of their business entities and private individuals.

Also among the politicians and economists within EU taking place currently numerous discussions about the impact of tax competition on the economic and fiscal situation in individual EU countries. Economists and politicians from the original fifteen Member States (EU15MS) mostly critically evaluate tax policy of thirteen new economically less developed Member States (EU13MS), which manifests by effort to attracting capital from EU15MS by decreasing the statutory tax rates on corporate income and by providing various tax benefits. They argue that these activities of EU13MS lead to the growth of harmful tax competition, which has a negative impact on their tax and fiscal policy. As a result, they are themselves forced to reduce the tax burden of incomes, to prevent the leakage of capital to the EU13MS, causing the reduction of their tax revenues. This then has resulted in limiting their opportunities in the provision of public goods and in fulfilling of social functions. These states therefore endeavor to enforce greater tax coordination and harmonization within the EU, particularly in the area of corporate income taxation.

The opinions on the importance of taxation like a factor influencing FDI are very different. Among the economists who share the view, that the level of corporations' income tax rates and their reduction has an impact on the growth of FDI inflows, and thus may lead to harmful tax competition, include for example (Bradford and Oates, 1971), (Hartman, 1984), (Wilson, 1986) or (Zodrow and Mieszkowski, 1986). They are inclined to the view that due to the effect of corporate tax competition, governments will to shift the tax burden from mobile production factors, falling into the economic function "capital", on the immobile factors belonging into the economic functions "labor" and "consumption". This can cause the effect known as "Race to the Bottom" in the taxation of mobile factors and to lead to economic decrease due to the reduction in consumption, caused by higher tax burden of labor and consumption. The opinion that corporate tax competition is harmful and leads to the sub-optimally low tax rates for

mobile factors of production has also supported (Bucovetsky, 1991) and (Wildasin, 1998). On the contrary, the positive effect of corporate tax competition on FDI flows states e.g. (Swenson, 1994), while (Wheeler and Moody, 1992) found no significant effect. (Margan, 2012) then emphasizes the significant impact of the corporate tax burden on the global economic competitiveness of individual countries.

For finding out the size of corporate income tax burden are often used the statutory tax rates, which are readily available. However, don't take into account different rules for determining the amount of the income tax base. Therefore, a more objective seem to be the effective tax rates, which take into account both the tax base and the way in which are integrated the systems of corporate and personal income tax.

2. Development of FDI and Corporate Income Tax Burden in the EU

For monitoring the development of FDI flows has been selected period 2004 - 2012. The limited scope of this period is affected by the availability of the necessary statistical data in Eurostat Database, and also by the fact that the individual EU Member States used a different methodology for determining the size of FDI flows in earlier time. The uniform principles, based on the third edition of the OECD model definition of 1995, which is fully consistent with the fifth edition of the "Balance of Payments Manual," elaborated by International Monetary Fund, the individual EU Member States began gradually implement until 2004, from which the data on FDI flows in EU countries are comparable among themselves.

The underlying data on inflows and outflows of FDI in the EU have been taken from (Eurostat [online], 2016). For the more objective comparability of FDI flows in individual MS EU a there are used the percentage ratio metric data FDI_{in}/GDP and FDI_{out}/GDP .

Table 1: Development of Average Values of the Indicators FDI/GDP, SCITR and ECITR in Groups of EU Member States

		2004	2005	2006	2007	2008	2009	2010	2011	2012
$\bar{\emptyset} FDI_{in}/GDP$ (%)	EU28	12.29	15.94	17.2	20.62	11.84	17.94	18.16	28.65	21.82
	EU15	18.17	23.23	23.53	30.79	16.59	30.16	31.07	50.51	37.67
	EU13	5.96	7.52	9.90	8.88	6.35	3.83	3.28	3.42	3.53
$\bar{\emptyset} FDI_{out}/GDP$ (%)	EU28	11.93	15.25	13.14	23.12	13.64	18.35	15.89	25.03	19.11
	EU15	21.27	27.34	22.84	41.31	23.36	33.06	29.05	46.19	35.10
	EU13	1.03	1.31	1.95	2.14	2.42	1.38	0.70	0.68	1.00
$\bar{\emptyset} SCITR$ (%)	EU28	26.79	25.26	25.08	24.37	23.84	23.78	23.20	22.97	23.14
	EU15	31.39	30.06	29.64	28.67	28.21	27.89	27.33	26.91	27.35
	EU13	21.47	19.73	19.81	19.41	18.79	19.02	18.43	18.43	18.28
$\bar{\emptyset} ECITR$ (%)	EU28	2.93	3.08	3.31	3.63	3.37	2.76	2.66	2.70	2.65
	EU15	3.18	3.35	3.52	3.61	3.27	2.58	2.75	2.76	2.68
	EU13	2.63	2.76	3.08	3.66	3.49	2.96	2.55	2.62	2.61

Source: (Eurostat, 2014, 2015), own calculation

Data on the development of corporate tax rates have been taken from (Eurostat, 2014). Here were applied the statutory corporate income tax rate (SCITR) and the effective corporate income tax rate (ECITR), defined as the ratio of annual aggregate tax revenues from corporate income to annual GDP values, which more objectively evaluates the level of tax burden.

Table 1 presents the evolution of the average values of these parameters in groups of the original 15 Member States (MS EU15), 13 new Member States (MS EU13) and in all 28 current Member States (MS EU28) in the period 2004-2012. As the table shows, the development of indicators FDI/GDP in the reporting period was markedly fluctuating, while the value of these indicators in the MS EU15 group were fold higher than in the EU13 MS. For SCITR indicators we see the steady decline in both groups of MS EU between 2004 - 2012, when the decline in the MS EU15 group amounted to 4.04 pp. and was larger than in the MS EU13 group, where amounted only to 3.19 pp. During the entire period, the SCITR value in MS EU13 group was in average lower about 9 pp. than in MS-15 group. The development of ECITR indicator had also a similar course in both groups of MS EU, while between years 2004 - 2007 showed the growth and subsequently the decline and stagnation. The difference in the ECITR values between the groups MS EU15 and MS EU13 was much smaller than at indicator SCITR and during the reporting period decreased from 0.55 pp. to 0.07 pp. From it can be deduced that the level of corporate income tax burden, expressed as ECITR, has approached in both MS EU groups.

3. The Assessment of the Tax Competition Impact on the Extent of FDI in the EU

The association between development of FDI and corporate tax rates is here assessed using the degree of correlation between the sets of random variables X and Y. The X files represent files of average SCITR and ECITR values in groups of MS EU15 and MS EU13, Y files then the files of average values of FDI in/GDP and of FDI out/GDP in both those groups that were detected in the reporting period. The range of selective files of x_i and y_i pairs is determined by the length of the reporting period 2004 - 2012, i.e. that these files contain 9 pairs.

The value of the correlation coefficient r is calculated as follows:

$$r = \frac{n \sum_{i=1}^n x_i y_i - \sum_{i=1}^n x_i \sum_{i=1}^n y_i}{\sqrt{[n \sum_{i=1}^n (x_i)^2 - (\sum_{i=1}^n x_i)^2][n \sum_{i=1}^n (y_i)^2 - (\sum_{i=1}^n y_i)^2]}} \quad (1)$$

where n is the number of pairs x_i and y_i in the selective file.

This selective correlation coefficient r is calculated from the values of the sample of random variables x_i and y_i hence its value reflects the proportions in the sample and not a correlation coefficient ρ in the basic file, from which the selection was made. When interpreting the results of the calculation of the coefficient r , we are trying to broaden its validity for the basic file with the aim to generalize this result. In order to simplify all of this testing procedure were for the null hypothesis that $\rho = 0$ (i.e. that the basic set of pairs of random variables X and Y does not show the linear dependence) tabulated the critical values of this coefficient, designated as the r_p . These values are tabulated in mathematic - statistical tables, depending on the parameters $\nu = n - 2$ and p , where ν denotes a parameter called as *the degree of freedom* and parameter p is called as *the level of statistical significance*, i.e. the probability that the absolute value of the calculated selective correlation coefficient r (when $\rho = 0$) exceeds the value of r_p . The values of r_p are usually tabulated for the *degrees of freedom*

$v = 1$ to 100 and for the level of statistical significance $p = 0.05$ and $p = 0.01$. In practice, the procedure is such, that the calculated selective correlation coefficient r is compared with respective value of r_p given in the table for the corresponding value of the parameter v , and the chosen significance level p . If $|r| > r_p$ is possible to refuse the null hypothesis that $\rho = 0$, and to consider the existence of a linear relationship between random variables X and Y of the basic file as proven at a significance level of p , i.e. with the probability $P = 100(1 - p)$.

The value of selective correlation coefficient r varies in the range $-1 \leq r \leq 1$, and determines the degree of mutual linear dependence of two monitored random variables X and Y . The value of the coefficient $r = 1$ indicates, that the statistical dependence of these random variables shows a direct linear functional dependency, the value $r = -1$ indicates, that there is the indirect linear functional dependency, and the value $r = 0$ indicates, that between the observed random variables does not exist a linear relationship. The more the value of coefficient r is approaching to $+1$ or -1 , the greater is the degree of linear relationship between selected files of random variables X and Y (direct for positive r values and indirect for its negative values). When the r value is approaching to zero (from left or right), this indicates a minimal or even zero degree of linear dependence between the files of random variables X and Y .

In our case the number of the pairs x_i and y_i in the sample is equal to $n = 9$, i.e. that the degree of freedom $v = n - 2 = 9 - 2 = 7$. If we choose the significance level $p = 0.05$, then for the calculated degree of freedom $v = 7$ we find at the mathematical and statistical tables the critical value $r_p = 0.6664$. In the case that the calculated selective correlation coefficient r satisfies the condition $|r| > 0.6664$ we can consider the analyzed dependence between selected files of random variables X and Y as linear with the probability $P = 100(1 - 0.05) = 95\%$.

The following Table 2 contains the calculated values of selective correlation coefficients r , characterizing the degree of linear dependence among the selection files of pairs in each group of MS EU15 and MS EU13 and between these groups:

$$\begin{array}{ll} \text{FDI}_{\text{in}}/\text{GDP} - \text{SCITR} & \text{FDI}_{\text{in}}/\text{GDP} - \text{ECITR} \\ \text{FID}_{\text{out}}/\text{GDP} - \text{SCITR} & \text{FID}_{\text{out}}/\text{GDP} - \text{SCITR} \end{array}$$

Table 2: The Values of the Selective Correlation Coefficients r between the Files \emptyset FDI_{in}/GDP, \emptyset FDI_{out}/GDP and the files \emptyset SCITR, \emptyset ECITR in groups of MS EU15 and MS EU13

	\emptyset FDI/GDP inflow		\emptyset FDI/GDP outflow	
	MS EU15	MS EU13	MS EU15	MS EU13
\emptyset SCITR	-0,7208502	0,51379814	-0,65387	0,127804
\emptyset ECITR	-0,5528034	0,63033956	-0,31476	0,936396

Source: own calculation

The table shows that with regard to the size and sign of the calculated selective correlation coefficients r is only in two cases possible, with a probability of 95%, to evaluate the dependence between the values of the indicators FDI/GDP and the values of indicators SCITR, ECITR as linear. Specifically, the dependence of \emptyset FDI in/GDP on \emptyset SCITR in MS EU15 group, and the dependence of \emptyset FDI out/GDP on \emptyset ECITR in MS EU13 group. Partial impact on the presented result could have an impact of the global financial crisis in 2008, as well as the small size of the selective files used for correlation analysis.

4. Conclusion

Based on the performed correlation analysis we can not make a definite conclusion about the impact of the level of corporate income tax rates on the volume of FDI flows within the EU. However, the analysis clearly demonstrated that reduction of statutory corporate tax rates in the reporting period in MS EU13 group did not affect the growth of the FDIin/GDP ratio in these EU MS. Therefore, it does not confirm the view of the part of economists and politicians from the MS EU15 group, that the reduction of the tax rates in the MS EU13 raises tax competition, which causes undesirable outflow of capital from the MS EU15 group to MS EU13 group.

The volume of FDI inflows into some country is not only influenced by the level of the corporate tax rates. There are also many other fiscal factors, such as the so-called "*tax optimization*" or "*tax planning*," enabling companies, that operate on an international level, certain options to reduction or completely avoiding taxation by using the tools of fiscal engineering. These include in particular the use of so-called. "*Tax havens*" and "*Offshore financial centers*", i.e. tax jurisdictions applying very low taxation of corporate profits, in which multinational companies set up their headquarters.

Besides the tax factors, investors decide about direction of their foreign investments also according to a range of different "*agglomeration advantages*" that occur in individual countries, as it they mention in their works e.g. (Ludema & Wooton, 2000) or (Baldwin & Krugman, 2004). These advantages can e.g. include the proximity of sources of necessary raw materials, the assumption of high sales, the proximity of companies that can provide the necessary cooperation, quality local education system, enough skilled workers, advanced infrastructure, guarantee against a possible expropriation, liberal regulation of national and foreign currencies exchange, consent with international arbitration in the disputable cases or state financial aid in the form of preferential loans, of the share in capital in newly founded companies or of direct financial subsidies to foreign investors.

All these tax and non-tax factors affect the size and direction of flow of FDI, which are not only dependent on the size of corporate tax rates in individual countries. Tax competition, caused by differences in these rates within the EU, so can not be a decisive factor that influences FDI flows in individual EU MS and can therefore not be considered as harmful for that reason.

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The Development of Tourism in the Czech and Slovak Republics as the Result of European Integration Processes

Hanne-Lore Bobáková, Martina Chylková
Silesian University, School of Business Administration
Dept of Tourism and Leisure Activities
Univerzitní náměstí 1934/3
Karviná, Czech Republic
e-mail: bobakova@opf.cz, chylkova@opf.cz

Abstract

This article aims to provide an overview of the development of tourist trips in the Czech and Slovak Republics. The article deals with the development of tourism in the Czech and the Slovak Republics with regard to European integration processes. Its attention is focused on tourist trips, which are analyzed by purpose and length of stay. The gathered data in the years 2012 – 2014 are being compared. In the introduction to the article, the concept of tourism is set in the deeper historical context, followed by the selection of the most important publications on the topic and clarification of key terminology. The research deals with tourist trips in the Czech and Slovak Republics. The analyzed data come from the Czech Statistical Office, which provides Eurostat statistical data to be able to be compared in the European context.

Keywords: Czech Republic, European Integration, Slovak Republic, Tourism, Tourist Trip

JEL Classification: F02, F22, F6, J61

1. Introduction

Processes of European economic integration play the key role in the development of all member states and affect the activities of all institutions and firms in both public and private sectors (Skokan, 2012, p. 296). The development of tourism in the countries of the former Eastern Bloc countries profits from the political changes in the last century. As Mundt stated (1999, p.1) the foundations of tourism are politically based and without the guarantee of generosity and mobility, which belongs to the fundamental rights of citizens in liberal states, tourism is not as possible as without economic base. Globalization is the common denominator of what is happening in Europe. It affects all sectors of economy, including tourism. Globalization characters in tourism are reflected in economy (by horizontal and vertical integration strategies, foreign investments in hotels and tourist attractions, by global players and strategic alliances, global tourism management and global tourist areas competition (Petermann, Wenrich 1999, p.74). As a consequence, it has an influence on tourism.

Tourist trips represent the foundation stone of tourism, which can be examined from a lot of aspects. According to Freyer (2011, 9) travelling in Europe can be divided into four stages:

- 1 Early stage (till 1850), period before travelling,
- 2 Beginning stage (1850 – 1914),
- 3 Development stage (1915 – 1945),
- 4 Advanced stage.

The above mentioned phases are formed, according to him, by changing the ways of travel using various means of transport (on foot, horseback, by steamboat, boat, car, plane), by motivation for travel (education, treatment, recovery, regeneration), by number of participants and their social composition (from the elite and the new middle class to the mass).

At the same time Freyer emphasizes that when discussing the human context of tourism, it is difficult to assess whether to talk about "world tourism" or just "local tourism" in individual countries (Freyer, 2011, p. 9).

1.1 Professional Literature on Tourism

Professional literature on tourism is quite extensive. It is necessary to draw attention to the fact that tourism can be viewed from different angles, especially in terms of economic, marketing, sociological, geographical, culturological, political and ecological disciplines, e.g. publications with respect to economic growth (Palatková, Zichová 2014), with regard to employment (income of population) and unemployment (Freyer 2007), (Vorlaufer 2003), publications focused on the sustainability of nature and society (Abbega 1996), publications with attention to the tourism industry from the perspective of management (Müller 2004). Tourism policy is understood as development and environmental policy from many points of view, e.g. employment policy through the promotion of tourism as a means of the European Union integration policy (Mundt 2004). From other possible approaches, it is possible to mention an interdisciplinary approach (Mundt 2012), satisfaction surveys on the hotel business (Dreyer, 2003), the travelling culture (Henning 1997), from the point of view of psychology and sociology (Hahn), from the perspective of marketing (Haedrich 1997), from the perspective of public administration (Tittelbachová 2011).

1.2 Terminology

Similarly, to other countries, in the Czech Republic there are synonymous terms associated with travelling such as "turismus", "turistika", "cestovní ruch" being not distinguished a lot in informal speech. In German terms "Tourismus", "Touristik" or "Fremdenverkehr" are used. The German term "Fremdenverkehr" was used in the 19th century and as a technical term it was employed in the 19th and 20th centuries.

In the Czech Republic there are used terms "turismus", "turistika" and besides the term "cizinecký ruch" is more common "cestovní ruch". Simultaneously with the German equivalent "Fremdenverkehr" the term "cizinecký ruch" continues to decline in use, which might be related to the root of "cizinec" associated with mostly negative connotations. The word tourism can be described as an international word being used in English (tourism), French (tourisme), and (turismo) both in Italian and Spanish.

Tourism is referred to people that stay outside their own environment in places that are far from their place of residency for a variety of purposes, except for migration and the normal daily work (Jakubíková 2012, p.18).

In the German environment, the term tourism began to be used after World War II. Interesting is also the meaning of "Reiseverkehr" (in Czech "cestovní ruch"). According to Freyer (2011, p. 8), it is possible to see the differences in the term with the other terms in these connotations:

- 1 Traffic and transport aspects of travelling
- 2 Techno-logical aspects

Into the tourism sector Freyer ranks all aspects related to the length of trips and travel arrangements in destinations.

Defining the term tourist trips according to Freyer, who considers tourist trips the constitutive elements of tourism and specifies them further:

- Persons' change of place using means of transport
- Stay in different place
- Motivation for this change.

Following the above-mentioned classification of tourist trips, tourist trips are limited in the article with respect to their length and motivation or purpose of stay.

2. Problem Formulation and Methodology

The research deals with tourist trips in the Czech and Slovak Republics. The analyzed data come from the Czech Statistical Office, which provides Eurostat statistics enabling comparison of statistic data in the European context. From the statistic data we focus on tourist trips that we will analyze further:

- by purpose,
- by length of stay.

Tourist trips by purpose are considered all tourist trips of residents aged 15 years and more for personal or business purpose with at least 1 overnight stay. These trips are further specified as:

- private,
- holiday, free time and recreation,
- visiting friends and relatives,
- other trips including pilgrimage and health care,
- work and business.

Tourist trips by the length of stay are specified as follows:

- 1 and more nights,
- 1 – 3 nights,
- 4 and more nights,
- 4 – 7 nights,
- 8 – 14 nights,
- 15 – 28 nights,
- 29 – 91 nights.

For the purposes of this article we focus solely on the Czech and Slovak Republics. The observed period comprises years 2012, 2013 and 2014. Older detailed statistic data are not available in Eurostat.

The aim of this research was to analyze of abovementioned data, evaluate their positive or negative connotations and find further determinants of these phenomena. In connection with the declared aims, the following hypothesis were formulated, the confirmation or disproval of which was the research objective:

- H1: The number of tourist trips by purpose in the both Czech and Slovak Republics is increasing due to European integration processes.
- H2: Tourist trips in classification by purpose are predominated by personal trips and trips realized within holiday, free time and recreation in both countries.
- H3: Tourist trips in classification by length of stay are predominated by short-term trips.

In terms of methodology, the article was based on the research of domestic and foreign literature, its analysis and the analysis of own investigation results which was conducted according to abovementioned aspects. In our research we use the method of analysis, synthesis and comparison.

3. Results

3.1 Tourist Trips by Purpose

Tourist trips by purpose, by which are meant all tourist trips of residents aged 15 or more with private or work purpose with at least an overnight stay. In the observed period the number of tourist trips in the Czech Republic is the highest (32,858,426). There were fewer trips in Slovakia (7,166,228).

Table 1: Tourist Trips by Purpose 2012

Country	Total	Private	Holiday, free time and recreation	Visiting friends and relatives	Others, pilgrimage, health care	Work, business
Czech Republic	32 858 426	31 406 312	19 222 585	11 374 177	809 550	1 452 114
Slovak Republic	7 166 228	5 569 134	3 553 156	1 502 857	913 121	1 197 094

Source: CSO

The same order in the overall number of tourist trips can be observed in the following years 2013 and 2014. If we compare, however, development of the total number of trips in the years 2012-2014 in the Czech and Slovak Republics, we come to interesting results. In the Czech Republic total number of trips fell from 32,858,426 in 2012 to 31,280,116 in 2013, a decrease of 1,578,310 trips and in 2014 while the number of trips in total again grew by 165,801, the state from 2012 was not achieved. Also in the Slovak Republic the same trend can be observed. The total number of trips fell from 7,166,228 in 2012 to 6,894,459 in 2013, representing a decrease of 271,769 trips. Statistical data from 2014 are not available.

If we look at tourist trips sorted by their purpose, the private trips and trips for holiday, free time and recreation are the most prevalent from the quantitative perspective. This trend was recorded in both observed countries and in all selected years (see Table 2).

Table 2: Tourist Trips by Purpose 2013

Country	Total	Private	Holiday, free time and recreation	Visiting friends and relatives	Others, pilgrimage, health care	Work, business
Czech Republic	31 280 116	29 608 213	17 383 492	11 506 127	718 595	1 671 902
Slovak Republic	6 894 459 b	5 733 000 b	3 723 238 b	1 630 221 b	379 541 b	1 161 459 b

Source: CSO

While looking at private trips in both countries during years 2012, 2013 and 2014, we can see a different development in selected countries. In the Czech Republic the amount of private trips decreased from 31, 406, 312 in 2012 to 29, 608 ,213 in 2013, while in 2014 their amount rose to 31, 442,035. Statistical data on private trips in Slovakia during 2014 are not available, only the data from 2012 and 2013 are available, when there was an increment in the number of this type of trips from the original 5, 569, 134 in 2012 to 5, 733, 000 in 2013 (see Table 3).

Table 3: Tourist Trips by Purpose 2014

Country	Total	Private	Holiday, free time and recreation	Visiting friends and relatives	Others, pilgrimage, health care	Work, business
Czech Republic	32 692 625	31 442 035	17 850 044	12 956 258	635 733	1 250 590
Slovak Republic	not available	not available	not available	not available	not available	not available

Source: CSO

The lowest amount of trips is represented by the category of others, which include pilgrimages and diverse health care. The percentage ratio of this type of trips on the overall number of trips is demonstrated in the following table including years of 2012, 2013 and 2014.

Table 4: The Share of other Trips on the Total Number of Tourist Trips

Country	Year 2012	Year 2013	Year 2014
Czech Republic	2,46 %	2,29 %	1,94 %
Slovak Republic	12,74 %	5,51 %	–

Source: CSO, own creation

The above table shows that the share of other trips in the total number of trips is relatively low in the Czech Republic. In the Czech Republic, this share was in the years 2012 - 2014 in the range of 2.46% in 2012 to 1.94% in 2014.

3.2 Tourist Trips by the Length of Stay

In both observed countries in 2012 tourist trips with one or more overnight stays dominate, which have the highest number compared with an overnight stay between 1-3 days, more than 4, 4-7, 8-14, 15-28 days and 29-91 days. Also tourist trips for 1-3 days are very popular - it should be noted, however, that their number is significantly lower than for 1 or more nights.

Table 5: Tourist Trips by the Length of Stay 2012

Country	1 and more nights	1 – 3	4 and more	4 – 7	8 – 14	15 – 28	29 – 91	92 – 365
Czech Republic	32 858 426	20 834 411	12 024 015	8 302 532	3 002 532	699 105 ☒	140 312	☒
Slovak Republic	7 166 228	3 255 258	3 910 970	2 654 437	935 359	242 245	☒ ☉	☒

Source: CSO

Also in 2013, it is possible to notice the same trend. For overnight stays for 1-3 days, however, we must note that in the Czech Republic the number of overnight stays dropped from 32,858,426 to 31 280 116. In Slovakia the number decreased from 7,166,228 to 6,894 459. Also, for overnight stays for one to three days there was a decline in the Czech Republic from 20,834,411 to 19,678,829. Conversely, an increment in those stays is evident in the Slovak Republic from 3,255,258 to 3,856,133.

Table 6: Tourist Trips by the Length of Stay 2013

Country	1 and more nights	1 – 3	4 and more	4 – 7	8 – 14	15 – 28	29 – 91	92 – 365
Czech Republic	31 280 116	19 678 829	11 601 287	7 646 789	3 122 418	679 870	152 210	☒
Slovak Republic	6 894 45 9b	3 856 13 3b	3 038 326	1 996 52 2b	895 018 b	88 449b	☒ ☉	☒

Source: CSO

Table 7: Tourist Trips by the Length of Stay 2014

Country	1 and more nights	1 – 3	4 and more	4 – 7	8 – 14	15 – 28	29 – 91	92 – 365
Czech Republic	32 692 625	20 674 834	12 017 790	8 480 945	2 664 042	693 934	176 293	☒
Slovak Republic	☒	☒	☒	☒	☒	☒	☒	☒

Source: CSO

☒ not available

☉ unreliable data

3.3 Discussion

The hypothesis 1 supposing that tourist trips are on the rise both in the Czech and Slovak Republics was not confirmed. We have seen the highest number of total of tourist trips by purpose in the Czech Republic in 2012, in following years the number was not exceeded. The same was observed in Slovakia.

The hypothesis 2 claiming that tourist trips divided by their purpose are dominated by private trips and trips for holiday, free time and recreation, was confirmed for both Czech and Slovak Republic.

The hypothesis 3 assuming the short-term trips are the most prevalent type of trips considering their time of duration was successfully confirmed.

The results of the research could lead to the reflection of the causes of the uneven development of tourism, which may relate to many aspects of European integration processes, especially to aspects of economic and social nature.

4. Conclusion

Political changes in 1989 in the former Czechoslovakia started the development of the society and its integration within Europe in a lot of areas. It is quite evident that they led to the development of labour mobility, influenced the way of leisure and extended the possibilities of travelling. European integration processes have also affected international tourism. We cannot perceive tourism as an independent phenomenon, but always in connection with the integration processes. It becomes the part of global life.

The development of tourism as a brunch of industry is difficult to predict as it is influenced by a number of factors. Apart from the economic ones some others can be pointed out as for instance psychological and political factors in connection with increasing threats of terrorist attacks and fears of insecurity, etc. It is reasonable to suppose, however, that tourism will remain a significant social and economic factor in the future.

In relation to abovementioned risks, it is also possible to expect apart from the globalization tendency even regionalization of the tourism branch, i.e. reinforcement and propagation of domestic tourism. This is connected with diversification of tourist journeys in terms of their purpose and length.

The significance of tourism has to be seen above all in the economic level as it creates opportunities for economic growth of both the country and the region in question while at the same time in the social level since it creates job opportunities. The task of the tourism state policy is to increase its competitiveness and sustainability of economic performance.

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Social Cohesion Between Regions: Bratislava Region and Košice Region

Ol'ga Bočáková

University of Ss. Cyril and Methodius
Faculty of Social Sciences, Department of Social services and counselling
Bučianska 4/A
Trnava, Slovak republic
e-mail: olga.bocakova@ucm.sk

Abstract

This research paper has the title Social cohesion between Slovak regions: Bratislava Region and Košice Region. In our contribution, we also deal with the European integration and its development from the end of World War II, until the entering of Slovakia to the EU. We introduce particular steps of European integration, as for example European Communities, extending of European Union, entering of Slovakia to the EU and ratification process. In this regards, main role plays the social cohesion, which is one of principles of European Union. For this purpose, were established in the EU the Solidarity Fund, the European Social Fund, The Cohesion Fund, and The European Fund for Regional Development. Among the regions across the Slovak republic, it is possible to see the substantial differences, mainly from west to east direction. A questionnaire method is the fundamental method used in our research paper. Our research paper is focused on standard of living in these regions. Our intention is to use the questionnaire to find out how the inhabitants of two self-governing regions – Bratislava self-governing Region and Košice self-governing Region - evaluate their standard of living. We supported the research paper in the context of EU regional policy.

Keywords: Bratislava Region, Košice Region, Region, Standard of Living, EU Regional Policy

JEL Classification: I310, J600, R580

1. Introduction

The regional policy is one of policies of the European Union. The research paper deals with the issue of regionalism on the example of the Bratislava Region and Košice Region. The issue of regional policy and regions in the conditions of Slovak republic emerged after the revolutionary changes and in connection with the decentralization of public administration. Its goal was to bring public administration (governance) closer to the citizen. Because of this, at first the towns and cities became the subject of a territorial self-government. As the time passed, the public administration went through a certain restructuring in the sense that there were 8 regions established, and those represented in 2001 the next level of territorial self-government. Their meaning brings the fact that they are closer to the citizen and thus can more effectively deal with its problems as central bodies of state administration in the center of the state.

In our research paper, we focus on two regions (self-governing): the Bratislava Region and Košice Region. The aim of our research paper is to find out, how their residents evaluate their own standard of living.

2. Social Cohesion in Regions of Slovakia

Social cohesion represents balancing. Cohesion can have many forms. In our contribution, we deal with the cohesion between regions.

2.1 Problem Formulation

The transformational changes in our country are associated with economic and social development. These changes have brought many new problems that need to be identified and solved. The modified approach also requires management of the development of the regions and the solution of interregional differences. (Adamkovičová, 2013) The task of the state is to balance the pressures inside (Horváth, 2013), and therefore also among the regions. In addition to transformational processes, we are talking also about the European integration processes, including the Slovak republic. In the context of this topic, it is necessary to highlight that the regional policy is closely related to the European integration, or more precisely the European Union due to the fact that the regional policy allocates the EU the largest part of the budget for 2014–2020 (351,8 billion € from the total amount of 1 082 billion). (The policy of the European Union: Regional policy, 2014)

Nowadays, it is possible to understand the region as a multidimensional concept. (Čemez, 2013) Europe is interpreted as Europe of regions. In our research paper, we will understand the term region as the self-governing region. Regional development faces a whole range of new challenges. The European Union has a crucial contribution to the adjustment among regions of Slovakia and their development. From the above mentioned facts, it can be assumed that the European Union proves a success in the implementation of its policies in the national states. (Mihálik, 2011)

The solidarity and social cohesion are among the core principles of the European Union. It can be also among the reasons, why the European Union is attractive for migrants. (Slovák, 2015) These principles are also reflected between regions. The social cohesion between Bratislava and Košice Region needs to be understood in the broader geographic and historical contexts. Bratislava, as the center of Bratislava Region, is located on the intersection between Vienna, Budapest and the Czech Republic. Because of this, even the economic activity and intellectual activity derived from it is concentrated in Bratislava and its surroundings, and to the east it is reduced. It has its impact on the standard of living in different regions. The standard of living or quality of life represents the life situation of a human in different situations. (Kubíčková, 2013)

Regions have a considerable importance for the European Union. For the purpose of the implementation of regional policy, the European Union has created The Solidarity Fund, the European Social Fund, The Cohesion Fund, and The European Fund for Regional Development. (The policy of the European Union: Regional policy, 2014)

In this context, a vital role is played by enterprises that may have common interests in the areas of human resources, research and innovation, trade promotion, etc. (Gajdová, 2014) The importance of the enterprises (especially small and medium-sized) is based in the reduction of an unemployment rate, in creating and developing the middle class and in the creation of a competitive environment. (Dobai Korcsmáros, 2012) Clusters are being created. The cluster has to be a wide and open platform of businesses that are interested in the further development of their industries in the region. (Kovalev, Littvová, 2013).

2.2 Research Aim, Research Objective, Methodology, Characteristics of the Sample

The aim of our research is to find out, how the residents evaluate their standard of living in two regions (the Bratislava Region and Košice Region) and to compare the results.

We have set the following objectives:

1. To find out, how the inhabitants of Bratislava Region evaluate their standard of living,
2. To find out, how the inhabitants of Košice Region evaluate their standard of living,
3. To compare the results of the evaluation between objective 1 and objective 2,
4. To find out, how the inhabitants of Bratislava Region evaluate the severity of certain social problems,
5. To find out, how the inhabitants of Košice Region evaluate the severity of certain social problems,
6. To compare the results between objective 4 and objective 5.

As a method, we applied a questionnaire method determined for the selected respondents by quota selection in terms of region residence, age, gender, and marital status. We used questionnaires in two regions - Košice Region and Bratislava Region. In each region, we have determined the necessary number of questionnaires for 1260. Respondents had the choice to rate the researched issue by values from 1 to 5.

In the table 1, respondents had to evaluate their standard of living from 1 (best) to 5 (worst). By each evaluation, we have introduced the number of people, who marked the given value. From results, we have calculated the average values. In the table 2, respondents had to evaluate the seriousness of given social problem from 1 (most serious) to 5 (least serious). From results, we have calculated the average values.

3. European Integration

The process of European integration had several steps. Its beginnings can be seen in far past. Among grounding points of today's European integration belongs Benelux, which was created on the basis of Agreement on Customs Union between Netherlands, Belgium and Luxembourg, which was established in 1944. The core of future Europe was the French-German partnership, together with Great Britain. Significant importance had also the integration initiative of Jean Monnet and Robert Schumann. (Hrivík, 2005) Their aim was to establish the infrastructure of peace, and to ensure that the war will not repeat. (Krejčí, 2009)

The base of Schumann's plan was creation of common market for coal and steel, and in this way was established the European Community for Coal and Steel. Another community was the European Community for Nuclear Energy. Its objective was the mutual cooperation by coordination of research in the field of nuclear energy. The third established community was the European Economic Community. Together with this one was established the European Social Fund, which had to coordinate the social politics of member countries. In 1965 was adopted the unifying agreement, on the basis of which were individual communities considered as European Communities. (Hrivík, 2005) The process of European integration had the logic of expansive sector integration. (Krejčí, 2009)

Later, there appeared extending and in 1973 joined Great Britain, Ireland and Denmark. Then there were further waves of extending, mainly the southern countries (Greece, Portugal, Spain). Subsequently, this community joined Austria, Sweden and Finland. (Mazúrek, 2002) In later periods was adopted the Agreement on European Union in Maastricht, 1991. (Hrivík, 2005)

However, extending was directed mostly to the east. In relation to entering of Slovakia to the EU, it was necessary to fulfill several criteria: political, economical, work harmonization, improving the administration and court capacities. (Hrivík, 2005)

Ratification process was completed by signature of the Agreement on Entering to the EU in 2003. Subsequently, the president of Slovakia announced the referendum on entering of Slovakia to the EU. Referendum was valid and absolute majority voted for entering to the EU. National Council of Slovak republic announced the consent with entering of Slovakia to the EU. (Hrivík, 2005) Entering of Slovakia to the EU was understood as the decisive factor of ensuring of Slovak national interests. (Krejčí, 2009)

In this context, significant role plays the regional politics of the EU. This has the task of elimination of most serious inequalities between regions, support of participation on development of regions, and also participation on sustainable development and creation of sustainable workplaces. Cohesion politics of the EU contributes to strengthening of economical and social compactness. (Hrivík, 2005)

The membership in the EU also brings some negative aspects, by which we mean mainly the democratic deficit in the EU. (Bellamy, Kröger, 2016) In this regard, national parliaments should serve for interpreting the opinions of inhabitants towards the EU. (Auel, Eisele, Kinski, 2016) Enforcement of member countries and their interests requires application of cooperative strategy between parliaments, governments and political parties, or also other subjects. (Sprungk, 2016)

4. Regional Differences between Bratislava and Košice Region

In this part, we introduce evaluation of empirical research on the basis of questionnaire, which was evaluated.

4.1 Evaluation and Analysis of the Research Results

As it arises from the table 1, on average, inhabitants of Bratislava region evaluate their standard of living better than inhabitants of Košice region.

Table 1: The Comparison Evaluation of Bratislava Region and Košice Region Inhabitants' Standard of Living from 1 (the Best) to 5 (the Worst) on the Basis of Tables 1 and 5 in %

Evaluation	Bratislava Region	Košice Region
1	152	104
2	199	151
3	402	312
4	224	328
5	145	204
I do not know	138	161
total	1260	1260
average	2,94	3,34

Source: author's calculations

As it arises from the table 1, on average, inhabitants of Bratislava region evaluate their standard of living better than inhabitants of Košice region. It has some concrete causes. Historically, Bratislava region was in the vicinity of Vienna, which was the source for Bratislava. It became the important centre in conditions of Slovakia in regards that it is the capital city of Slovakia,

where were centralized all significant political, cultural and social institutions. Bratislava was and still is the residence of many industrial enterprises. Also, it is necessary to take into account the fact that its geographical placement is in the west edge of Slovakia, and therefore also its economical activity is focused more on west of Slovakia, which has its relation with the unemployment, of which rate is higher in Eastern Slovakia. It has the effect on standard of living. Practical use of introduced results lies in the fact that they signalize results of comparison of living standard evaluation in Bratislava and Košice region, and they also point out that there are significant regional differences, so the regional cohesion does not work.

Table 2: Evaluation of Severity of Selected Social Problems by Respondents from 1 (Most Severe) to 5 (Least Severe)

Social problem	Bratislava Region	Košice Region
unemployment	2,55	2,21
low wages	3,38	2,43
housing issue	2,79	2,66
education system quality	2,47	2,91
social services	2,53	2,82
moral level	2,42	2,61
average	2,69	2,61

Source: author's calculations

If we take a look at above introduced table, we can see how inhabitants of two regions evaluate the severity of selected social problems. Among social problems, which are researched in our contribution, belong: unemployment, low wages, housing issue, education system quality and moral and cultural level.

Respondents had to mark in our questionnaire particular social problems with the mark from 1 to 5. The value 1 meant that it is very serious problem and the value 5 meant that it is not significant problem. From results, we have calculated the average values from respondents of Bratislava and Košice region.

From the table 2, it is possible to state following outcomes. We will start with the issue of unemployment. It is one of key problems of today's era. As we can see from the results, which are introduced in the table 2, by inhabitants of Košice region, it is more serious problem than by inhabitants of Bratislava region. As the cause, it is possible to consider the higher unemployment rate, which is connected with the lack of work opportunities in the east of Slovakia. Also the unemployment has its causes. It is mainly caused by insufficient infrastructure in this part of Slovakia.

Analogically, it is possible to consider the problem of low wages. In regards that in Bratislava region is concentrated more companies, which make their business in the sector of services, also wages there are higher than in the Košice region.

If we will come to the housing issue, there is also possible to see that inhabitants of Košice region consider this problem as more serious. The explanation can be found in the fact that after 1989, as the consequence of revolution, there occurred the total change in social politics, which included also the family politics and housing politics. In the consequence of total change of paradigm after 1989 and of lack of resources for financing appeared the decrease in housing development. The state stopped to support young families in such extent, as it was before 1989. Families were forced to take mortgages and loans, in order to be able to purchase own

accommodation. High prices of accommodation and unprofitable loans cause that not everyone can afford this. Economical activity was concentrated in Bratislava and its surroundings, and also higher wages are in this region.

If we take a look on education system quality, it is even more serious problem, mainly for inhabitants of Bratislava region. The explanation can be found in the fact that previous problems, such as unemployment, low wages and housing issue are the basic problems. People, who have solved these ones, are not focused so much on them, but they focus rather on social problems of higher levels. In the same way it is possible to consider the question of social services quality.

The last problem in our table is the moral and cultural level. This social problem is more significant for inhabitants of Bratislava region than for inhabitants of Košice region. The explanation lies in the fact that the human has to solve basic problems at first, such as employment or housing issue, and only after that can consider also other problems, which are present in the society, but do not affect him/her directly.

From introduced partial results, it is possible to state following outcomes:

1. As it arises from our contribution, inhabitants of Bratislava region evaluate their standard of living more positively (2,94) than inhabitants of Košice region (3,34). As the main cause, it is necessary to consider the historical development and geographical placement of Bratislava in the vicinity of Vienna, on western borders of Slovakia. With this is also related the increased economical activity in Bratislava and its surroundings, and also higher unemployment rate in east of Slovakia. It has some effect on standard of living.
2. From our contribution also arises that problems, which are connected with ensuring of basic life needs, such as housing issue, wages or unemployment, are more significant by inhabitants of Košice region. In contrary, problems, which are related to higher needs (education system quality, moral and cultural level, social services level), are more significant for inhabitants of Košice region.

Practical use of introduced results lies in the fact that they reflect the regional cohesion and its results on the example of standard of living in condition of Slovakia.

5. Conclusion

In the end, it is possible to state that generally, inhabitants of Bratislava region evaluate the standard of living better than inhabitants of Košice region.

As more serious problems inhabitants of Košice region consider such ones, which are connected with ensuring of their basic life needs; opposite it is by inhabitants of Bratislava region, by whose dominate higher needs.

In this context, it is necessary to point out the European Union and its regional politics with regards on interregional balancing, which represents currently, and also to the future, a great challenge, for example also in the connection with differences between regions in Slovakia.

Value added of submitted paper lies in the fact that in the context of social cohesion it provides the example of how great are differences between regions of Slovakia, mainly in the standard of living and in selected social problems. To new information, which are introduced in this contribution, belong results of empirical research, according to which inhabitants of Košice region evaluate their standard of living worse than inhabitants of Bratislava region, and also from our contribution arises that inhabitants of Bratislava region consider as more significant

problems such ones, which are related with higher needs; by inhabitants of Košice region it is opposite. Introduced information can be contributive for managing representatives of self-government regions, for organizations, which deal with the research of standard of living, also for particular ministries and other official offices and agencies of state administration. Future research of subjected issue is suitable to focus towards other regions and research of their standard of living, or possibly of their mutual comparison or of changes during some time. To practical and economical aspects belong the fact that particular institutions should deal more with marginal areas of Slovakia, such as east of Slovakia, where should be directed financial cash-flows and regional aid from EU for building of infrastructure, which will attract foreign investments. Moreover, it is necessary to prefer domestic investors, and to focus their attention on east of Slovakia. With this is related also building of high-quality education system in such fields of study, which are required in east of Slovakia.

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Productivity in the European Union: Do Labour Market Institutions Really Matter?

Petra Čekmeová
Masaryk University
Department of Economics
Lipová 507/41a
602 00 Brno, Czech Republic
e-mail: 441117@mail.muni.cz

Abstract

In recent years, many policy papers have suggested that the institutional setup of the labour markets have considerable influence on the economic performance. But, what about the European Union? Is the declining trend of the European productivity connected with the European labour market institutions? This paper investigates the impact of selected labour market institutions and their interactions on the total factor productivity growth in 19 EU member states. As basis for the empirical analysis, an endogenous growth model extended by institutions is derived. As analytical tool, panel data model is applied. The analysis covers the period from 1995 to 2013. Data for total factor productivity growths were calculated using growth accounting method. The results suggest that labour market institutions really matter, in the sense that they are statistically significant in explaining the European total factor productivity growth in the analysed period.

Keywords: *The European Union, Total Factor Productivity, Labour Market Institutions*

JEL Classification: *C23, E24, J48*

1. Introduction

Given the significant contribution of total factor productivity to economic growth and its decisive impact on national competitiveness⁴, the relatively low level of productivity and its declining trend in recent years constitutes a serious problem for the member states of the European Union. Besides the threat for national economies, the gap in productivity fosters imbalances and creates adverse spill-overs for the monetary union (Draghi, 2014) as well as impedes the euro area's capability to get over the negative outcomes of the crisis. Therefore, it is not surprising that various initiatives to boost productivity have been started in the European Union.⁵

However, it is not possible to improve the situation without an exact knowledge of factors that could induce this unsatisfactory development. Over the last years, several policy paper have suggested that the institutional setup of labour markets has considerable influence on the economic performance. The economic theory is inconclusive in this issue excepting both

⁴Productivity is usually seen as the main determinant of national competitiveness, especially in the case of its external dimension. However, it can be also considered as a proxy (see e.g. Krugman, 1994) or as an anchor variable (for more details see Compnet Task Force, 2015) for national competitiveness.

⁵For example, the issue of higher productivity is threatened in Europe 2020 or by Competitiveness Research Network of the ECB.

positive and negative impact of labour market institutions on the productivity growth. The inconclusiveness of the economic theory is expected as that their effect crucially depend on country context and overall institutional set-up. Only an empirical research would provide unambiguous conclusions. However, there is no academic study which would perform more complex investigation of various labour market institutions and their interactions for the member states of the European Union.

The goal of this paper is to investigate the impact of selected labour market institutions and their interactions on the total factor productivity growth in 19 member states⁶ of the European Union. More precisely, five labour market institutions is taken into account, namely: (a) trade unions, (b) employment protection legislation, (c) unemployment benefits, (d) minimum wages and (e) active labour market policies. To determine the impact of these institutions on total factor productivity growth a panel data analysis, based on an institutions-augmented endogenous growth model, is provided for the period from 1995 to 2013.

The structure of the paper is as follows. After a short introduction, the second section provides an overview of the theoretical relations between total factor productivity and labour market institutions. The second part of the section is devoted to description of methodological issues. The empirical results of the model derived in the second section are consequently presented (Section 3). The last section summarises our main findings.

2. Theoretical Background and Methodology

Total factor productivity (TFP) reflects the ability of production factors to jointly generate output (Compnet Task Force, 2015). On the contrary to other measures of productivity, TFP is an overall measure which accounts for all production factors (Coelli, 2005). With respect to its computation, TFP growth is derived as residual catching up that part of output growth which cannot be attributed to extensive factors (see e.g. Solow, 1957; Barro, 1998). As the growth accounting provides only a decomposition of economic growth, causal explanations require construction and testing economic theories. While the neoclassical growth theory viewed TFP as a proxy for technological progress which is exogenously given, new growth theories allow for a wider interpretation, including the impact of labour market institutions on TFP.

Labour market institutions (LMI) represent a set of laws, norms and conventions, outcomes of collective choice mechanisms, that alter decisions of labour force by imposing constraints or incentives (Boeri and van Ours, 2013). They are introduced with aim to protect workers or redistribute income to them; but simultaneously they can lead to efficiency gains due to their impact on labour market functioning and productivity (Betcherman, 2012). The recent research in LMI is dominated by two contradicting intuitions providing an ambiguous answer on their role. The distortionism claims that institutions impede economic growth, while according to the institutionalism institutions are able to reduce costs, enhance productivity or moderate crises (Freeman, 1993).

2.1 Theoretical Channels between LMI and TFP

Labour market institutions may theoretically influence productivity (levels and growth rates) through various channels with both positive and negative effects. The net effect of LMI on productivity will depend on several other factors, such as country and industry context,

⁶Bulgaria, Croatia, Cyprus, Estonia, Latvia, Lithuania, Malta, Romania and Slovenia were excluded from the analysis regarding the unavailability of required data.

interactions of LMI, differences in the level of development among countries or particular organizational features of LMI.

The positive effect of trade unions (TU) can be induced by encouraging training, labour reallocation and technological changes as firms support productivity enhancing measures when labour cost rises (Heyes and Rainbird, 2011) or via better organization and efficiency of production (Machin and Wadhvani, 1991). TU may also increase productivity by lowering the quit rate or improving workers' moral (Freeman and Medoff, 1984). An increase of aggregate skills (thereby of average productivity) through involvement of more skilled labour force into the production process (Neumark and Wascher, 2006; Aaronson and French, 2007) or thanks to higher incentive to invest more in human capital of low skilled workers to avoid unemployment (Cahuc and Michel, 1996; Agell and Lommerud, 1997) may be induced by minimum wages. Moreover, unemployment benefits may leads to the creation of more productive, high quality post-unemployment jobs (Lippman and McCall, 1979) or to the generation of better matches and higher-productivity jobs (Acemoglu and Pischke, 1999; Marimon and Zilibotti, 1999). Similarly, active labour market policies have positive effect on TFP as they are introduced to make workers more employable by increasing their skills (Calmfors et al., 2002). And finally, employment protection legislation (EPL) which is the most considered LMI in recent studies. It may encourage workers' commitment and thus their willingness to be involved in productivity enhancing activities (Soskice, 1997, Belot et al. 2007, Buchele and Christiansen, 1999) or firms to adjust by investing more in both physical and human capital (Betcherman, 2012). Other theoretical channel through which EPL may influence productivity is a positive impact of less stringent regulations on the flexibility of high-risk entrepreneurial firms and their chance to expand and become high-growth firms (Acs, 2008).

There are also various theoretical explanation of their negative impact on productivity. As Aidt and Tzannatos (2002) suggested management could be reluctant to introduce productivity enhancing technologies if regulations negotiated by trade unions are restrictive or job loss is expected. Or wage-setting institutions (MW and TU) may create barriers for potential high-growth firms, having in turn negative impact on productivity (Henrekson and Johansson, 2009). Bassanini (2008) pointed out that a reduction of wage differential between high-skill and low-skill job, due to higher MW, could reduce workers' incentive to invest in training. In addition, too generous UBs likely increase the duration of unemployment leading to human capital depreciation and inefficient use of resources (OECD, 2006). They may also reduce the work effort of employees (Shapiro and Stiglitz, 1984) or reduce incentives to innovates (Bartelsman et al., 2005) and thereby lower the productivity. Moreover, increasing adjustment costs impedes the reallocation of resources from declining sectors to expanding ones having negative implication for aggregate productivity (Hopenhayn and Rogerson, 1993; Saint-Paul, 1997). EPL may make workers to be more willing to put less effort which in turn leads to declining productivity (Ichino and Riphahn, 2005; Boeri and van Ours, 2013).

2.2 Methods and Data

In this section we describe the baseline model used to assess the impact of selected labour market institutions and the methods of its estimation. In the second subsection, the data used in the empirical analysis are presented.

2.2.1 The Model and Estimation

In order to determine the impact of LMI on TFP growth we use a panel data method. Assuming that TFP is endogenously determined, the baseline model is derived in compliance with the conventional endogenous growth model in which TFP growth is explained by the accumulation of knowledge and a residual set of factors (Aghion and Howitt, 2009). More specifically, in our specification the baseline model contains research and development (R&D) and human capital (HC) as variables for knowledge accumulations and labour market institutions (LMI) as institutional factors. Formally, the institutions-augmented productivity equation is as follows:

$$\Delta \ln TFP_{it} = \beta R\&D_{it} + \gamma HC_{it} + \sum_k \delta_k LMI_{kit} + \varepsilon_{it} \quad (1)$$

where ε_{it} stands for disturbance term, i is country index and t is time index.

As we focus on the specific set of the European countries and the inference will be restricted on the behaviour of these countries, we assume the presence of unobserved (individual) heterogeneity. Thus, the error structure of the disturbance term can be decomposed into an individual time-invariant effect α_i and an iid error term μ_{it} . Then, our baseline model becomes:

$$\Delta \ln TFP_{it} = \beta R\&D_{it} + \gamma HC_{it} + \sum_k \delta_k LMI_{kit} + \alpha_i + \mu_{it} \quad (2)$$

The correctness of this specification and its estimation via fixed effects estimator is tested by Hausmann specification test (1978). In all regressions, a null hypothesis of common intercept is rejected at any reasonable significance level preferring the application of fixed effects estimator to the random effects estimator.

In addition to one-way error component regression model based on (2) with country-specific effects, we run a regression model based on a two-way error component specification in the following form:

$$\Delta \ln TFP_{it} = \beta R\&D_{it} + \gamma HC_{it} + \sum_k \delta_k LMI_{kit} + \alpha_i + d_t + \mu_{it} \quad (3)$$

where d_t stands for time dummies to control for common aggregate shocks that could have impact on all the European countries in a given year.

As LMI did not operate separately in the European countries, it is reasonable to assume that beside their simple effect on TFP growth, their interactions are also decisive. The interaction terms of LMI is modelled, following Bassanini and Duval (2010), taking the form of products of deviations of institutions from their sample mean (over countries and years). In the case of one pairwise interaction of LMI_k and LMI_h the augmented productivity equation is as follows:

$$\Delta \ln TFP_{it} = \beta R\&D_{it} + \gamma HC_{it} + \sum_k \delta_k LMI_{kit} + \vartheta_{kh} (LMI_{it}^k - \overline{LMI}^k) (LMI_{it}^h - \overline{LMI}^h) + \alpha_i + d_t + \mu_{it} \quad (4)$$

In this specification, a negative sign for the interaction coefficient ϑ_{kh} would provide an evidence of reform complementarity.

In order to avoid the issue of heteroscedastic and autocorrelated error terms, we use HAC error term (Arellano) for all regression equations.

2.2.2 Data

The empirical analysis is conducted on the panel of 19 member states of the European Union and covers the period of 1995-2013. The choice of member states and time period was determined by the availability of data for the given period. In total, the dataset includes 7 explanatory variables and TFP growth as dependent variable. The description of all variables and references data sources are depicted in the Table 1. Notice that TFP growth rates were calculated via growth accounting method (Čekmeová, 2016) and EPL was obtained as a weighted average of three partial measures of employment protection published by OECD.

To get un-biased results in the case of panel data, stationary time series are required. Therefore, before running regressions, unit root tests for all variables were conducted via Levin-Lin-Chu test (Levin, Lin & Chu, 2002). According to the results, all explanatory variables, with exception MW, indicated the presence of unit roots. As solution for the issue of non-stationarity first differences of variables were used in the regression models.

Table 1: Description and Sources of Data

Variable	Source	Description
TFP growth	Own calculation	Log difference of total factor productivity
R&D	OECD.Stat	Total patent applications
HC	Eurostat	Upper secondary and tertiary education (% of population)
TUD	OECD.Stat	Trade union density
ALMP	OECD.Stat	Public expenditures on active labour market policies (% of GDP)
UB	OECD.Stat	Public expenditures on unemployment (% of GDP)
MW	Eurostat	Monthly minimum wages in EUR (PPP)
EPL	Own calculation	Strictness of employment protection, overall index (0-7)

Source: Own construction

3. Empirical Results

The empirical results of regression for the baseline model (2) and its extensions (3) and (4) are reported in the Table 2. By comparison the Within R^2 of the regression models (2) and (3), it is clear that the latter is able to explain bigger portions of variability between variables. Therefore, our findings are interpreted in line with this regression model.

The results of the productivity equation (3) approve the importance of research and development for productivity growth given the positive sign of the corresponding parameter estimate and its statistical significance. However, in contrast with the theory, human capital seems to be insignificant.⁷ Regarding the institutional variables, four of the selected LMI have statistically significant impact on the growth rate of TFP, however, with different signs. While the net effects of trade unions, unemployment benefits and minimum wages are negative, the net impact of employment protection legislation is positive. These findings are in compliance with our assumptions about the relation between the unsatisfactory development of TFP in the EU member states and the institutional set-up of the European labour markets.

⁷ It could be partially caused by a problem to account for all the aspects of human capital accumulation by available indicators (e.g. training in workplace or other courses behind the formal institutions).

The last column of the Table 2 includes the estimates of the productivity equation augmented by LMI interactions. Notice that we include only those interaction that indicated a high level of significance in separated regressions with single interaction terms. The results suggest that only the pairwise interaction, UB and EPL, significantly explain the growth rate of TFP. The negative sign of this parameter provide evidence of reform complementarity (i.e. reforms diminishing the levels of these LMI should be implemented together to maximise their impact).

Table 2: Regression Results – Institutions-Augmented Productivity Equations

	(2)	(3)	(4)
const	0,049** (0,004)	0,054*** (0,001)	0,056*** (0,008)
d_R&D	6,02e-9*** (2,16e-9)	3,93e-9** (1,56e-9)	3,31e-9** (3,31e-9)
d_HC	-0,001** (0,001)	-0,001 (0,001)	-0,001 (0,001)
d_TUD	-0,002*** (0,001)	-0,001* (0,001)	-0,001* (0,001)
d_ALMP	-0,038* (0,021)	-0,017 (0,017)	-0,018 (0,017)
d_UB	-0,06*** (0,017)	-0,03*** (0,009)	-0,031*** (0,001)
MW	-3,89e-8*** (7,78e-9)	-3,91e-8*** (7,69e-9)	-4,71e-8*** (1,33e-8)
D_EPL	0,018 (0,012)	0,020* (0,012)	0,019 (0,013)
TUDxUB	-	-	-3,17e-8 (6,73e-9)
ALMPxUB	-	-	0,001 (0,001)
UBxMW	-	-	-5,17e-9 (6,73e-9)
UBxEPL	-	-	-0,000** (0,000)
MWxEPL	-	-	-1,21e-8 (1,26e-8)
TUDxALMP	-	-	-3,75e-8 (0,000)
Time Dummies	no	yes	yes
Observations	342	342	342
Within R²	0,22	0,45	0,46
F Statistic	33,93	87,98	906,78
P-value (F)	4,1e-39	9,3e-89	1,5e-251

Source: Own calculations using GRETL software package

4. Conclusion

Over the last years, several policy papers have suggested that the institutional setup of labour markets has considerable influence on the economic performance, including the development of productivity growth. In this paper, we were interested in the question whether the institutional set-up of the European labour markets could be related to the unsatisfactory development of total factor productivity in the member states. With aim to investigate the impact of five labour market institutions and their interactions on the total factor productivity growth in 19 EU member states we executed a panel data estimation based on an institutions-augmented endogenous growth model.

The results of our empirical analysis suggest a significantly negative effect of trade unions, unemployment benefits and minimum wages on the growth rate of total factor productivity in the analysed period. On the contrary, employment protection legislation indicates a significant positive impact. Therefore, we can conclude that labour market institutions really matter in determining the European productivity growth. Moreover, we approved our assumptions about the importance of institutional interactions. As the impact of selected labour market institutions seem to be, in average, negative, suitable reforms of institutional set-up of the labour markets would improve (at least partially) the situation of the European total factor productivity.

However, to be able to design suitable measures for the European labour markets, more complex investigation of their impact on total factor productivity will be necessary. In our upcoming studies, we plan to re-estimate the productivity equation using industry level data for total factor productivity to find out whether the influence of labour market institutions varies across industries. Moreover, we plan to apply a catch-up specification of productivity equation to account for differences in productivity levels among countries and test the hypothesis about distance-dependent institutions.

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Analysis of Logistics Communication of SMEs with their Environs in the Region NUTS II: Case Study for Moravian Silesian Region

Šárka Čemerková

Silesian University in Opava

School of Business Administration in Karviná, Department of Business

Economics and Management

Univerzitní náměstí 1934/3

Karviná, Czech Republic

e-mail: cemerкова@opf.slu.cz

Abstract

The aim of this article is to analyse the current state of logistics communication of SMEs in the region NUTS II, especially in Moravian Silesian Region. To fulfil the objectives, the article is divided into two parts. The first part contains a search of available literature on the topic. The influence of globalization, openness of the European market and increasing competitive pressures cause in enterprises need to streamline a number of processes, including logistics communication. Quality logistics communication is absolutely necessary for efficient material flow through the supply chain. The second part contains the results of a questionnaire survey realized in the region NUTS II (Moravian Silesian Region) focused, among other things also on the level of logistics communication of SMEs having headquarters in this region with their surroundings. Attention is aimed at communication via EDI. The results of this survey can help to increase the competitiveness of companies of this region in the context of the European environment.

Keywords: Logistics Communication, Moravian Silesian Region, NUTS II, SME, Supply Chain

JEL Classification: M15, M39, L21

1. Introduction

One of the objectives of the creation of an integrated European space was, among other things to increase the competitiveness of this created space globally. Each system is as strong as its weakest link. The EU is aware of this fact and in its regional policy is taking a number of steps to remove regional disparities.

The EU understands support of the continuous development of knowledge as a necessity, involves innovation policy in her strategic targets, such as the Europe 2020 strategy for smart, sustainable growth. Its aim is to lend support to research and innovation performance of Europe and to accelerate the process from ideas to markets.

Innovation in enterprises can take place in different areas, one of them is also process and technology. Rapid development of ICT is an important factor helping innovation in the corporate environment. This development arouses both at world and European level as well as in the Czech Republic interested in the analysis of the impact of the development of this sector to the economy's competitiveness, namely economic growth, employment, labour productivity, total factor productivity, and other key indicators (Fisher et al., 2013).

In today's oversaturated market logistics is one of the last opportunities to enhance the competitiveness of companies. The success of logistics management is based on high-quality communication of particular segments in the supply chain. Therefore, the aim of this article is to analyse the current state of logistics communication of SMEs in the region NUTS II, especially in Moravian Silesian Region.

2. Problem Formulation and Methodology

To perform analysis of logistics communication of SMEs in Region NUTS II methodological process, based on the problem formulation, bibliography and description of the applied methodology is necessary.

2.1 Problem Formulation

European politicians were aware of the uneven level of individual regions of Europe and early in European integration were a matter of regional disparities problem. One of the tools that help to reduce disparities is also innovative and knowledge-based policy.

EU Innovation policy is about helping companies to perform better and contributing to wider social objectives such as growth, jobs and sustainability. The main current European Union's innovation policy is the *Innovation Union*, as one of the seven flagship initiatives of the Europe 2020 strategy for a smart, sustainable and inclusive economy (European Commission [online], 2016).

Strengthening the individual, especially the weaker regions, will make the EU stranger as a whole. High competitiveness in the global economy can only be achieved by introducing innovations in production and services in EU Member States (Lipková, 2012). Innovation is the key not only to creating more jobs, building a greener society and improving our quality of life, but also to maintaining our competitiveness on the global market (Kordoš, 2014).

For purposes of international comparison of the performance of regions NUTS classification system originated in the 70s of the 20th century. Moravian-Silesian Region is one of the NUTS II regions. In the long term this region evinces in comparison to other regions the lower row range of indicators. Regional politicians of Moravian-Silesian Region, aware of this situation, are looking for ways to support the development of this region. For efficient routing of support for regional development in Moravian-Silesian Region the project *Sustainable business and its supporting in context of expected socio-economics development of Moravian-Silesian Region* was implemented in 2015. The project focused on a range of factors affecting SMEs in this region. Focus on SMEs reflects the fact that SMEs account for around 99% of all enterprises in the EU. These businesses are crucial importance, because they generate approximately 2/3 of all jobs (Juříček, 2010). These enterprises also play an important role in introducing innovation, what is for EU, which prides itself on the knowledge economy, an important factor and the right way.

Globalization pressures are forcing companies to form themselves into supply chains. The supply chain can be understood as a network of interlinked and dependent organizations, which operate on the basis of cooperation, joint control, management and improvement of physical and information flows from suppliers to end users (Christopher, 2000). Proper application of logistics methods and tools enables independent firms to efficiently manage the flow of materials and processes not only within these companies, but also throughout the supply chain. The interdependence enables SMEs to achieve greater competitiveness.

Without the cooperation relations in the framework of the course of material and information flows there is not the existence of the supply chain and the importance of information transmission in this context is increasingly emphasized and analysed (Lukoszová, 2012). Because supply chains are dependent on vast amounts of information in real time, it is essential that the information can be transferred seamlessly across organizations (Murphy, Wood, 2011).

To survive in today's market conditions, businesses need an information infrastructure that would enable to implement accurate decisions in real time, and also full concentration on customer satisfaction (Lukoszová, 2012), because that is the only source of profit.

Supplier-customer interdependence goes hand in hand with communication consistency. Innovative influences are reflected in the types of communication channels that companies use in the exchange of information in the supply chain.

Under the pressure of market organizations are being forced to adapt their communication channels so as to be able to quickly and efficiently view information on computer screens or on increasingly smaller mobile screens device (Dorčák et al., 2015). Communication between sub-units should be improved at every level of the organization to streamline networking concept in practice (Průša, 2010). Face to face communication and traditional written communications are increasingly being replaced by so-called electronic communications (Vydrová, 2010). The question is whether this is so even in SMEs in Moravian-Silesian Region (MSR).

The communication does not take place only at the corporate level. The company customer may not necessarily be an enterprise, but also the end customer, i.e. we do not only consider the B2B sector, but also B2C, not only in itself ordering and delivery of the product, but also for example in the maintenance or reverse logistics.

Efficient logistic communication is positively perceived by the customer. Customer satisfaction is reflected in his loyalty, which subsequently positively influence the economic indicators of the company. Economic stability and competitiveness of the effectively communicating organizations increases, which is in a macroeconomic point of view reflected in the growth of living standards of the population. The growth of population living standards of the region, here for example NUTS II Moravian-Silesian Region will be reflected in reduction disparities of this region. And the money spent by the European Union's regional policy will achieve its goal.

2.2 Methodology

To obtain quantitative data on SMEs operating a business in the area of MSR (NUTS II) questionnaire survey was realised in autumn 2014. This type of questioning was preferred over using electronic polling, because the pilot survey response rate does not exceed 10%. The main task of the questionnaire was to find out respondents' awareness and attitudes about the basic elements of cooperation between regions, municipalities and entrepreneurs and to identify the factors that affect small and medium-sized enterprises in MSR.

The questionnaire survey was conducted with owners and managers of SMEs operating in this region the between years of 2009-2013. Completed questionnaires were subjected to visual inspection and then processed using MS Excel. SPSS statistical software was used for statistical analysis.

The sample size n was calculated by using the formula (Olaru et al., 2010):

$$n = \frac{t^2 \cdot p \cdot (1 - p)}{\omega^2}, \quad (1)$$

where:

t ...confidence level, corresponding to probability with which the accuracy of the results will be guaranteed, from the statistical tables of the Student distribution;
 p ...prevalence, probability or proportion of the sample components that will explore the problem;

ωacceptable margin of error.

The sample size corresponds to recommended minimum value in probability of 0.95. The minimum sample size was computed according equation (1), where t value in $\alpha = 0.05$ is 1.645; p -value = 0.1699 is counted as proportion of businesses, which are active in year 2014 in MSR (250,028) to whole number of businesses in the Czech Republic 1,470, 929 (CSO [online], 2015); $\omega = 0.05$ is acceptable error limit of 5 %. Minimum sample size is 153 respondents (Tvrdoň, 2015). 400 respondents were randomly interviewed. In total it was received 285 questionnaires, but 70 of which had to be excluded for several reasons. For statistical evaluation 215 valid replies (215>153) was used.

The total internal reliability was measured using Cronbach's alpha, which had value of 0.845, while partial analyses internal reliability of data ranged around values 0.79, which satisfies the condition for further data analysis (Nunally, 1978).

To test the relationships basic statistical methods were used. Cramer's contingency coefficient V which represents the most appropriate measure of association between two nominal variables was one of the most important. Scale, introduced by Cohen (1988) for the correlation coefficient, was used for coefficient interpretation. For predictive interpretation the formulation, that can be found in the work of Liebetrau (1989), was also used, where the degree of significance between 0.25 and 0.5 means a factor in the causal linkage and value between 0.7 and 0.9 makes it possible to predict the factor behaviour in the next period. Research was conducted in order to determine: (i) identify the type of logistics communication channels; (ii) identify the route of placing and taking orders; (iii) find the interaction between ordering via EDI - test the hypothesis H : there is relationship between receiving and submitting orders via EDI in SMEs; (iv) find connection within EDI and business sector.

3. Problem Solution

Research was conducted in all districts of MSR; the percentage of respondents in each district corresponds to the percentage proportion of economically active enterprises in this region. Enterprises met the criteria of size and turnover, according to EU requirements for classification of SMEs. Firms up to 9 employees and a turnover of between 10 to 100 million CZK dominate in the sample.

In terms of legal form, the sample can be classified as follows: limited liability companies (45.6%) and self-employed persons (39.5%) make up the largest share, joint stock companies make up the third place (12.1%). Other types of enterprises are presented only in small amounts (up to 1%). In terms of business constitute the group of companies, which the core business is trade (36.28%) is the largest, closely followed by companies dealing with services (33.95%), the third group in the ranking are companies engaged in the building industry (13.95%), followed by industrial companies (10.70%). Farmers (1.86%) and companies dedicated to public service (3.26%) have the smallest share.

From Table 1 we can see that any of the communication channels is not used in 100% of cases. This represents a change from the research, which was implemented in 2013 (Čemerková, 2015) (Čemerková, 2014) when the telephone was used in 100% of cases. Still, the phone takes for communication with suppliers the first place (211 companies, 98.14%), followed closely by personal contact (210 companies, 97.67%). The third place occupies the communication via e-mail (95.35%, 205 firms). Text communicators, video chats and teleconferencing is used by about half of the companies. Strangely there has not been recorded no case of use other than offered the communication channel.

Table 1: Channels Use for Communication with Suppliers and Customers

	Supplier		Customer	
	Number of appl. abs.	Number of appl. rel.	Number of appl. abs.	Number of appl. rel.
E-mail	205	95.35%	196	91.16%
Text communicator	118	54.88%	119	55.35%
Videoconference, Teleconference	110	51.16%	102	47.44%
Telephone	211	98.14%	208	96.74%
Personal contact	210	97.67%	211	98.14%
Otherwise	0	0.00%	0	0.00%

Source: author's calculations

Given that many companies are recently focused mainly on services, we could in communication with customers expect a high proportion of personal contact. We also expected high utilization of the transmission of information over the phone and now for many especially young people common use e-mail. The survey showed that the personal contact is the most frequently used channel (211, 98.14%). Communication by telephone takes second place (96.74%, 208 firms). Third place was occupied by e-mail (91.16%, 196 firms). Analogously to the case of communication with supplier's possibility otherwise was not occurred.

Table 2: Way of Submitting and Receiving Orders

	Supplier		Customer	
	Number of appl. abs.	Number of appl. rel.	Number of appl. abs.	Number of appl. rel.
E-mail	196	91.16%	191	88.84%
WWW	127	59.07%	122	56.74%
EDI	84	39.07%	85	39.53%
Telephone	194	90.23%	195	90.70%
Personal contact	171	79.53%	195	90.70%
Otherwise	0	0.00%	0	0.00%

Source: author's calculations

Firms were also asked how they served their orders to their suppliers, respectively how they take orders from their customers, see Table 2. In relation to supplier's orders via e-mail take the first place (91.16%, 196 firms). Telephone is used almost as often it (90.23%, 194 firms). 39.07% of companies are using EDI orders. Any company did not indicate possibility otherwise. In relation to customers, telephone and personal contact again prevail (90.7%, 195

firms). In contrast, the order received via EDI has occupied the last position (39.53%, 85 companies). Even here companies have not listed other route of received orders.

Although classic written communication is in retreat, we can only doubt that it way of communication is not used by any company. Results of the survey also demonstrate the fact that companies do not associate ordering process with communication with their surroundings. But to place an order equals to communicate.

Table 3: The Order of Use of EDI for Submitting and Receiving Orrders

Order of use of EDI	Number of appl. abs.	
	Supplier	Customer
0	131	130
1	3	3
2	2	0
3	5	7
4	13	13
5	61	62

Source: author's calculations

In their responses companies also reported by importance ranking of routes of submitting orders, where 1 means the most efficient way. Although EDI is used by almost every other business, it is not a priority, see Table 3. Of all the options it received the lowest average rating that is 4.51.

In Table 3, we can also see the order of importance of use of EDI in receiving orders from customers. Only 3 companies consider EDI as the most important way of receiving orders (rating 1), while the overwhelming majority of respondents consider EDI as the method with the lowest priority. In the case of receiving orders EDI have obtained from all the possibilities the worst average rating (4.54).

Table 4: Use of EDI Ordering in the Supply Chain

Use of EDI in receiving of orders	Use of EDI in submitting of orders	
	Yes	No
Yes	70	15
No	14	116

Source: author's calculations

Table 5: Use of EDI versus Business Sector

Business sector	Supplier		Customer	
	EDI yes	EDI no	EDI yes	EDI no
Agriculture	50.00%	50.00%	50.00%	50.00%
Industrial production	47.83%	52.17%	65.22%	34.78%
Construction industry	60.00%	40.00%	60.00%	40.00%
Public service	14.29%	85.71%	14.29%	85.71%
Trade	35.90%	64.10%	33.33%	66.67%
Services	32.88%	67.12%	31.51%	68.49%

Source: author's calculations

The association between the use of EDI for submitting and receiving orders we can see in the Table 4. It has been founded a strong statistical dependence between the use of EDI for submitting and receiving orders (Cramer's $V = 0.71$), i.e. H hypothesis was confirmed.

With regard to the field of business we can say that EDI orders prevail in the construction industry, farmers use EDI from 50%. In services, the prevalence of EDI was not expected; nasty surprise is about 48% representation in the case of industrial production in relation to suppliers, which contraries to the customer's EDI order. It is used in about 65% of cases, see Table 5.

4. Conclusion

From the survey results in the SME segment in the NUTS II Moravian-Silesian Region it was found, that although the literature states that personal contact is within communication of companies with their suppliers and customers on the decline, in that region it is still crucial. E-mail and telephone are also frequent communication channels. Modern communication tools such as videoconference, teleconference and text communicators are used by companies of 50%. None of the available communication channels, even in relation to the supplier or the customer, lagged significantly.

The survey also showed that a progressive way of ordering via EDI is already used by companies in MSR. However, it plays an insignificant role. It was further confirmed that when companies use EDI, then this communication method used by both towards suppliers and towards the customer. Furthermore, it was found that the EDI is mainly used by companies from construction industry and agriculture, where this was not expected. Conversely, industrial enterprises use EDI rather in relation to customers.

Found findings do not correspond with the findings from the literature. SMEs in MSR do not fully exploit the potential of modern communication channels. This fact has a negative effect on the performance of these companies. But companies do not realize that situation. If the EU wants to reduce the regional disparity and strengthen Europe as a whole, there is opportunity to increase the performance of SMEs. It is questionable whether the EU should be targeted to communication in organizations, or develops all processes in organizations. The impact of this policy would then be much greater. Similar survey would be appropriate to implement in other regions NUTS II and then perform a cross-regional comparison. Certainly it would be very interesting to compare these communication channels in differently developed regions.

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Enhancing Competitiveness of Human Capital to Meet the Labour Market Demands in the EU

Elena Delgadová¹, Monika Gullerová², Miquel Oltra Albiach³

A. Dubcek University of Trenčín^{1,2}, Universitat de Valencia³

Faculty of Social and Economic Relations, Department of Social Sciences and Humanities^{1,2}, Facultat de Magisteri, Department de Didàctica de la Llengua i la Literatura³

Študentská 2^{1,2}, Av. de Blasco Ibáñez, 13³

Trenčín, Slovakia^{1,2}, Valencia, Spain³

e-mail: elena.delgadova@tnuni.sk, monika.gullerova@tnuni.sk, Miquel.Oltra@uv.es

Abstract

The European Union needs a well-trained and highly-qualified human capital to strengthen its knowledge-based competitive advantage. In the process of creating human capital, education plays a key role. Since competitiveness is highly correlated with the quality of education, there have been many studies conducted to assess the global educational outcomes. In the paper, one of the core competences to succeed in both academic and professional setting – the ability to comprehend and work effectively with academic texts was examined and analysed. In addition, reading literacy deficiencies of the Bachelor program students at A. Dubcek University of Trenčín were identified. This pre-research will serve as a basis for a follow-up comprehensive and comparative research to be carried out in collaboration with colleagues from the Universidad de Valencia and Universidad Católica de Valencia San Vicente Mártir in Spain.

Keywords: Reading Literacy, Reading Comprehension, Competence, University Students

JEL Classification: I21, I23, Z00

1. Introduction

In the process of European integration, continuous efforts have been made in order to enhance the level of knowledge and skills of all citizens of EU countries and thus to promote employment. The European Union top representatives have acknowledged that education and training are the cornerstones for the development of today's knowledge society and economy. In order to be competitive in the global labour market, innovations and knowledge are of primary concern. We maintain that a competitive and knowledge-based society needs highly-qualified, creative and suitably trained people possessing human capital in order to be capable of facing and responding flexibly to major challenges within a society. Human capital refers to the "ability of an individual to create new knowledge (innovations)" (Vojtovič, 2009, p. 320). It follows, that new knowledge is the key prerequisite for economic and social progress of societies. New knowledge means that "it is something new, what distinguishes itself from the old one. It is new not only because knowledge is its driving engine (knowledge economy), neither because it uses innovations (innovative economy), nor because it is network-interconnected (network economy) (Krajňáková, Vojtovič, 2011, p.144). Since new knowledge can be created by highly-qualified people with sound human capital, we agree that "investing in human capital brings about improvement of performance, flexibility, and

productivity, and enhances the ability to innovate, which naturally follows from continuous enhancement of qualification as well as skills and expertise of staff” (Grenčíková, Vojtovič, Gullerová, 2013, p. 42). The European Council meeting held in Lisbon in March 2000 set several key goals for the EU for the next decade. One of the goals aims to turn the European Union into the most competitive and knowledge-based economy with stronger social cohesion and higher employment rates. In order to accomplish these goals, a set of partial objectives to be met was put forward, including the transition to knowledge economy (stepping up the process of structural reform for competitiveness and innovation and completing the internal market), making the European social model modern, mainly through the process of investing in people and acting to eliminate social exclusion, preserving a sound economic environment and economic growth by implementing an appropriate set of macroeconomic policies. (Lisbon European Council 2000) The process of attaining these goals was assessed as the vital one for the upcoming period of time by the European Union in 2010. (Lisbon Strategy evaluation document, A strategy for smart, sustainable and inclusive growth, 2010).

1.1 Reading Literacy – One of the Key EU Competence

The issue of reading literacy is of primary concern among primary and secondary school students. The PISA (The Programme for International Student Assessment) triennial international survey coordinated by OECD is a project which aims to assess the skills and knowledge of 15-year-old students and improve educational policy and education results. Another program acknowledging the importance of this skill was launched in 2001 under the title Program for International Reading Literacy Study (PIRLS). PIRLS was last conducted in 2011 as the third international 5-year cycle of assessments focused on measuring trends in reading literacy achievement at the fourth grade.

The notion of academic competence refers to a cluster of related abilities, skills, knowledge and cognitive and non-cognitive dispositions that allow students in institutions of higher education to carry out the necessary activities as required, and thus to graduate and be successful in their career. Reading literacy, along with professional, technical and other academic competences, ranks among the essential competences in an academic setting. It is considered to be the core academic competence in terms of processing the information gained, innovating it and consequently creating new knowledge. The definition of reading literacy undergoes constant modifications to reflect changes within societies, economies, culture and education. Therefore, reading literacy is not a simple skill encompassing the processes of reading, decoding and comprehension. Recently, reading literacy pertains to understanding of not only explicit but also implicit content of the read text. International organizations doing research on reading literacy point out mainly to its functional aspect. They consider the functional aspect to be crucial in achieving goals in a career and society. They do not pay enough attention to the active and initiative role of readers in comprehending and utilizing the information. The PISA international research, however, highlighted not only the comprehension competence, but also the competence of thinking about the texts read and using own judgment and experience. The PISA 2000 defined reading literacy as understanding, using and reflecting on written texts, in order to achieve one’s goals, to develop one’s knowledge and potential, and to participate in society. The PISA 2009 definition of reading, continued for 2012 and 2015, adds engagement in reading as an integral part of reading literacy: Reading literacy is understanding, using, reflecting on and engaging with written texts, in order to achieve one’s goals, to develop one’s knowledge and potential, and to participate in society. Thus, PISA (2009) defined reading literacy as the ability to comprehend a written text, think about it and use for achieving one’s goals; to develop one’s skills, knowledge and potential for

active involvement in the society. Švrčková defines reading literacy as "a functional use of an acquired skill in a particular social context. Being literate means that one has to develop a broader set of skills, which activate functional use of an acquired skill (e. g. language) in everyday life. Hence, reading literacy refers not only to mastering the reading skill, but also the ability to work with texts, communicate in writing, acquire and process information contained in texts." (Švrčková, 2011, p. 13) According to Holloway (1999), reading skills are essential to the academic achievement of middle- and high school students. Olson (1977) claims that in today's society, reading literacy introduces a bias because it provides advantages to those who acquire the necessary skills. As the currency used in schools, literacy provides access to literate institutions and has an impact on cognition, or thinking processes (Kern and Friedman, 2008; Olson, 1994; Pretorius, 2000); it also shapes the way in which we think. Achievement in reading literacy is not only a foundation for achievement in other subject areas within the educational system, but also a prerequisite for successful participation in most areas of adult life. (Cunningham & Stanovich, 1998) Barthes (2006) claims that modern literary science and semiotics offer readers, contrary to the established ways of the text reception schemes, more freedom in text interpretation. Reading is not merely a source of new knowledge about reality or a matter of aesthetic satisfaction. Reading is often regarded as a source of pleasure originating from the joy of breaking laws and norms of society. Procházková (2006) notes that research results indicate that poor, immature reading and information literacy leads to grave difficulties in studying and employability in the labour market. Reaching an optimum level of both types of literacy is also a prerequisite for the development of key competencies related to academic, professional and personal growth of each person. We hold that reading literacy is a comprehensive set of reading skills and abilities that are needed to work with texts effectively. Reading literacy does not refer to a mere speed reading of words, phrases or full texts. What is more, reading literacy refers to being able to comprehend the contents properly, find both explicit and implicit meanings, analyse the content and the information obtained; and being able to interpret the content properly and pass it on. In the first place, however, it is the ability to make one's own judgments about texts, and apply their content to innovate and create new knowledge as a result of the information received. Reading literacy is one of the key skills required in an academic setting, since the vast amount of knowledge is acquired through books, monographs and written documents; and we consider it a core competence in the process of transforming information into understanding.

2. Problem Formulation and Methodology

The main reasons of conducting the research were our own experience with the students' difficulties to decode meaning in academic discourse, low students' grades in examinations, frequent retaking of examinations, and last but not least low rating of Slovak students in the PISA 2012 assessment. There has, however, a lot of research been done on validity of such studies. It has been found that many factors, such as translation, familiarity with the item content, differences across curricula, student motivation, test anxiety, etc. can make the validity of such studies less reliable. (Kreiner & Christensen, 2014) There are six types of problem identified by Arffman (2010) endangering the equivalence of PISA reading texts. These were language-specific differences in grammar, language-specific differences in writing, language-specific differences in meaning, differences in culture, translators' choices and strategies, and problems with editing. It is a complex process to examine and assess the reading literacy level. In order to determine and assess the reading competence level, students were assigned two tasks related to working with the text. An identical text in Slovak and Spanish language titled Gender and Perception of Equality in relation to Education / Género y concepciones de igualdad en la educación of intermediate academic difficulty level was

selected. The tasks assigned to students were to compose a 150-word abstract and make an 8-slide power-point presentation. The following hypothesis was formulated prior conducting the research: More than 40% of Slovak students in higher education in their first year of study lack the needed level of reading literacy. The evaluation of results was done based on the grading system in line with the European Credit Transfer System. In the assessment, however, A-B-C grades were considered satisfactory and D-E grades unsatisfactory.

2.1 Model and Data

The research sample consisted of 22 Slovak students in the first year of the Bachelor program of study and 27 Slovak students in the second year of the Master program of study. For the purposes of comparison, 7 Erasmus students of Spanish nationality were also tested. Erasmus students were in their third and fourth year of study, studying at 3 universities in Valencia, two of which will participate in the follow-up comparative research. This sample, however, does not provide any relevant results and is provided for information purposes only.

Table 1: Writing an Abstract / Power-Point Presentation – Research Results

Number and nationality of students	Abstract		Power-point presentation	
	Satisfactory A-B-C	Unsatisfactory D-E	Satisfactory A-B-C	Unsatisfactory D-E
22 students, 1st year, BA study program SK	55%	45%	41%	59%
27 students, 2 nd year, BA study program SK			67%	33%
36 students, 2nd year, MA study program SK	67%	33%	64%	36%
7 Erasmus students, 3rd/4th year, BA study program ES	71%	29%	71%	29%

Source: research findings

As seen from the table, 45% of the 1st year students in the Bachelor program of study and 33% of the 2nd year students in the Master program of study had difficulties in writing an abstract.

Regarding the power-point presentation, 59% of the 1st year students, 33% of the 2nd year students in the Bachelor program of study, and 36% of the 2nd year students in the Master program of study faced problems in writing a PowerPoint presentation. The data found indicate that students lack a competency of reproducing main ideas as well as structure of the original piece of writing in an accurate manner.

With respect to the adverse findings, a questionnaire containing self-assessment items was distributed among 26 students in the first year of Bachelor study, and 70 students in the second year of Bachelor study, Faculty of Social and Economic Relations, A. Dubcek University of Trenčín. Self-assessment items were to examine the nature of student reading difficulties. The findings given in Table 1 confirm the hypotheses formulated prior conducting the research on

reading literacy. The results are alarming, yet not surprising as reading comprehension problems are frequently encountered with in an academic setting.

Given the findings, a self-assessment questionnaire was elaborated and distributed among 26 students in the first year and 70 students in the second year of the Bachelor program of study, Faculty of Social and Economic Relations, A. Dubcek University of Trenčín. It was found that 38% of the 1st year students and 48% of the 2nd year students find their reading rate moderate, i.e. their reading rate is neither quick/easy nor slow/laborious.

The results also showed that 58% of 1st year students and 55% of the 2nd year students have some difficulties to understand the content of texts on their reading lists. Serious reading difficulties have 4% of the 1st year students and 1% of the 2nd year students.

Unfamiliar words represent a major challenge when reading academic texts. The research findings indicate that 39% of the 1st year students and 41% of the 2nd year students do not understand approximately 3 words in one print page of their reading lists. In that respect, 46% of the 1st year students sometimes check the meaning of unfamiliar words in a dictionary and 43% of the 2nd year students always use dictionaries to deal with unfamiliar words. Concerning the use of dictionaries, 35% of the 1st year students almost never, while additional 35% almost always use dictionaries while reading and 31% of the 2nd year students sometimes use dictionaries while reading. Interestingly, 62% of the 1st year students and 42% of the 2nd year students do not know what coherent texts are. Only 4% of the 1st year students and 19% of the 2nd year students know what coherent texts are.

3. Problem Solution

The main purpose of the paper was to examine the reading literacy competence in students studying at A. Dubček University of Trenčín. Reading literacy is one of the core skills required in not only academic but also professional settings. It was found that 45% of students in the first year of the Bachelor program of study and 33% of students in the second year of the Master program of study faced serious difficulties in writing an abstract. Writing a power-point presentation posed difficulties for 59% of students in the first year of the Bachelor program of study and 36% of students in the second year of the Master program of study. There are several reasons why a high percentage of students in the second year of the Master program of study failed to write an effective presentation, such as research done close to the end of the semester, low motivation or interest as participation in the survey was not counted as a component of the students' grade.

4. Conclusion

It is taken for granted that students studying at institutions of higher education have developed the skills and strategies needed for academic reading. The research showed that, contrary to expectations, secondary schools in Slovakia fail to develop the academic reading literacy required for higher education or for occupational purposes. Thus, reading literacy-related difficulties found in PISA testing continue to persist in higher education as well. Reading skills are of crucial importance in the information society of today as they are regarded as effective tools for acquiring, organising, and applying information in various domains. New technologies and applications have brought great benefits and opportunities in terms of getting information in a fast and efficient manner. Yet, they are an obstacle to developing reading literacy. The information society, which is referred to as a knowledge-based society, is based on knowledge economy in which the ability of economic entities to assess their knowledge capital plays a crucial role, whereas knowledge capital refers to creating added value through

applying commonly acquired knowledge and experience and their further enhancing and exchanging with others. To be informed is of strategic importance to survive in the information society, therefore the ability to identify, acquire and process information intellectually, as well as to apply, enhance and innovate it and consequently create new knowledge is of utmost significance. This is, however, only possible when having the top-level reading literacy. As indicated by the data in Table 1, students studying in institutions of higher education face serious difficulties reading academic texts, i.e. they have not developed the cognitive academic language proficiency required for higher education or for employment purposes. Therefore, institutions of higher education should integrate various text-processing skills and strategies as well as linguistic disciplines into their curricula in order to build mastery of the reading literacy in their students. It is the only way to prepare students to face the challenges of the future, become productive citizens and thrive in the European labour market.

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Building Credibility in a Small-Open Economy: A Case of the Bank of Albania

Ján Dráb¹, Daniel Dujava², Nevila Mehmetaj³

University of Economics in Bratislava¹, Slovak Academy of Sciences², Universiteti i Shkodrës "Luigj Gurakuqi"³

Department of International Trade¹, Institute of Economic Research², Fakulteti Ekonomik³

Dolnozemska cesta 1, 852 19 Bratislava, Slovakia¹

Šancová 56, 811 05 Bratislava, Slovakia²

Sheshi 2 Prilli, Rruga Studenti 24, Shkodër, Albania³

e-mail^{1, 2, 3}: jan.drab23@gmail.com¹, daniel.dujava@euba.com²,
nevilamehmetaj@gmail.com³

Abstract

Economic integration is necessarily accompanied with the process of building credible institutions. This paper focuses on the process of building monetary credibility of a candidate for membership in EU - Albania. It follows the main events that formed Albanian monetary framework and evaluates what effect it had on the Bank of Albania and its actions during the outbreak of the global financial crisis and the Great Recession, when the country became one of the lone economies not falling into recession.

Keywords: *Monetary Policy, Bank of Albania, Great Recession, Credibility, Inflation Targeting*

JEL Classification: *E52, F41, F44*

1. Introduction

A successful of integration to European Union (EU) assumes that the candidate country have functioning monetary institutions so it is able to meet Maastricht criteria and finally adapt euro. Without sound institutions that are able to define and keep the target there is no chance that country can integrate to European Monetary Union. Adopting inflation targeting is a standard way of ensuring price stability (defined as inflation no more than 1.5% percentage point higher above the rate of three best performing countries). However, Great Recession showed that 2%-inflation target might be too low and even that inflation targeting might not be optimal when nominal interest rates approach zero. Since abandoning inflation targeting during the crisis can easily lead to loss of credibility, most central banks decided to stick to inflation target. In addition to the risk of losing credibility, countries which may have an ambition to join the EU in the future are constrained by the need to comply with Maastricht criteria. Necessity to meet the Maastricht is more important in countries not yet in EU. It is reasonable to expect that due to current problems, EU will be less inclined towards further adopting new members. Therefore, aspiring countries will be judged much more strictly than EU-members.

This paper deals with the building of functional monetary institutions necessary for fulfilment of EU integration criteria in Albania which is a candidate country for EU accession. Albania was recognized as a potential candidate for EU membership in 2000. In 2006, Albania signed

Stabilization and Association Agreement and finally, in 2009 applied for EU membership. Without proper institutions country cannot guarantee macroeconomic stability necessary for becoming a member of EU and especially member of the currency union. Building of monetary institutions is therefore a crucial part of successful synchronizing of candidate country's institutional framework with EU standards.

2. Problem Formulation and Methodology

Batini, Levine and Pearlman argue that inflation targeting is superior to the stabilization of exchange rate and that the unstable emerging-market economies should “fear to fix” rather than “fear to float”. (Batini, Levine and Pearlman, 2009) Dennis reaches the same conclusion, but he considers the exchange rate movements to be a source of valuable information even under inflation targeting. Taking the exchange rate into consideration in the monetary-policy decisions can lead to better economic outcomes. (Dennis, 2001) Parrado compares the inflation targeting and the exchange rate rules. He states that under external and real shocks, the social costs are significantly higher when the exchange rate is managed. On the other hand, in the case of nominal shocks, the loss is higher when a flexible exchange rate is applied. (Parrado, 2004) Monacelli and Galí point out the trade-off between the stabilization of domestic inflation and the output gap on the one hand and the stabilization of the nominal exchange rate and the terms of trade on the other hand. They conclude that the optimal volatility of exchange rate is proportional to the openness of the economy. (Monacelli and Galí, 2005)

Independence and credibility of central bank, developed financial market and fiscal discipline are also considered to be basic criteria for successful inflation targeting. Credibility of central bank is important for realizing of any monetary regime and gaining credibility is the greatest challenge of transition economies. Siklos and Bordo define credibility as “a commitment to follow well-articulated and transparent rules and policy goals”. According to them, economic shocks and the manner of how central bank uses its monetary policy instruments determine how credibility evolves over time. (Bordo and Siklos, 2015) Blinder has more straightforward definition: “A central bank is credible if people believe it will do what it says.” (Blinder, 2000) Since the beginning of central banking, their credibility over the time has been volatile. Before 1914, under gold standard it was high, then failed and finally was regained in 1980's to great extent thanks to introducing inflation targeting. The ability to control inflation is often mentioned as one of the crucial conditions of central bank credibility – not only the ability of disinflation but also to keep the target. According to Kožetinac, a great extent of credibility lies in the ability of central bank to communicate its goals to public. (Kožetinac, 2011)

The aim of this paper is to determine a degree of credibility of monetary institutions of EU membership candidate Albania as it is a necessary condition of successful integration process. Functional monetary framework providing macroeconomic stability is crucial for meeting Maastricht criteria. To assess how credible Albanian monetary institutions are, we analyze historical development of Albanian monetary policy and its reaction during global financial crisis and the Great Recession in context of European integration.

We have done a literature review about the origins of Albanian monetary policy, with the impact on two crucial crises of confidence in 1997 and 2002 and on how the monetary targeting regime transformed into inflation targeting. We have confronted this information with the economic development during the Great Recession and its consequences for the on-going integration process in Albania. Finally, we conclude what could be desired further development of Albanian monetary policy as a candidate for membership in EU.

3. Problem Solution

During past 25 years' Albanian monetary framework went through various changes and crises and finally it gained proper credibility, not the least thanks to adopting inflation targeting. However, now it faces several challenges. The years of isolation and state controlled economy had consequences in the lack of skills in conducting of the monetary policy what strongly affected first decade of Bank of Albania's modern history and led to two crises of confidence (in 1997 and in 2002). Finally, during the early years of the global financial crisis (2007-2008) that led to the Great Recession (since 2008), the country experienced the best outcome of monetary policy, but also it brought some challenges. However, low inflation target was a cornerstone of successful monetary policy in the past might easily lead the country into liquidity trap. Therefore, Albania will have to rethink its monetary framework having in mind risks of (1) losing credibility, (2) violating the Maastricht which will be costly since Albania aspire to be a member of EU and (3) hitting zero lower bound.

3.1 Forming of the Monetary Policy and Financial Sector

The beginning of modern monetary policy in Albania can be dated to year 1992 when the framework of the Bank of Albania (BoA) was established. Its main objective was defined as "to preserve the internal and external value of the domestic currency," what could have been considered as ambiguous as it was unclear what was the ultimate goal, if it was price stability or exchange rate stability or some vague combination of both. (Themeli, 2012) Setting initial monetary rule was equally confusing. It could be characterized as monetary targeting with announcing the annual growth rate of M3 what with time gained more features of inflation targeting. As Kodheli lists, following objectives were pursued by the Bank of Albania in years preceding turning to inflation targeting: "reducing inflation, increasing its international reserves, easing exchange rate volatility, improving financial system stability and finally boosting economic development". Tools to conduct the policy changed within a time. In 1995, ceilings imposed on the total domestic credit expansion of the banking sectors were completed with adjustments to bank deposit interest rates. (Kodheli, 2008)

The focus of monetary policy on banking sector can be seen now as quite dubious as the financial and banking sector was heavily underdeveloped. This led to the rise of the infamous pyramid scheme companies whose bubble burst in 1997. Before, financial sector was characterized by 90% dominance of the state-owned banks, which credited mostly state-owned enterprises. Private banks were resistant to involve in operational activities in domestic currency which limited a supply of credit to common people and private enterprises. Another outcome was high level of currency outside the banks what limited control of BoA over the monetary aggregates. (Naqellari, Pacukaj and Shahini, 2014) Above all, the regulatory system was ineffective. Central bank lacked the experience and there was no demand for the introduction of the regulations. All that combined with absence of culture of loan repayment led to the fact that the fear from the law was minimal. (Cani and Hadëri, 2002)

All of this was a base-ground for the private financial companies providing suspicious and not guaranteed financial services. Pyramid-scheme institutions provided deposits with 6-8% interest rates monthly and were initially supported by officials as the financial intermediaries pushing economic growth and providing services uncovered by banks. (Cani and Hadëri, 2002) The pyramid scheme bubble burst in 1997 contouring the first crisis of confidence. The currency depreciated by 44.6%, the money was massively withdrawn from banks and the panic spread over the country. It had tragic consequences of riots, burglaries in arm depots, a loss of the state of control, state collapse and almost civil war. This, in combination with the large

budgetary expenses of government before elections, tripled inflation and led country to the greatest financial and economic crisis in its post-communist history. (Pisha and Vorpsi, 2010)

Despite the fact that even in the most crucial time the central bank was still successful in disinflation, the reforms were inevitable. In 1997, new law strengthened the independence of BoA. Between 1998 and 2003, total privatization of the banking system was accomplished. In 1999, credit ceilings to second tier banks were removed and ratio of bad loans to total loans was introduced and later on in 2000, direct control over the deposit interest rates was removed and was replaced by indirect instruments like open market operations in T-bills. (Kodheli, 2008) One of the leading reforms was the deposit insurance with aim to protect smaller depositors from unexpected events (in 2002). Despite good economic situation, the introduction of this safety measure sparked nation-wide panic of withdrawals of the deposits and proved to be a textbook version of self-fulfilling prophecy. (Tanku, 2008) It underlined the lack of transmitting the information to its citizens as well as unclear communication of the policies of central bank. As the result, BoA started educational campaign with cooperation of academics, non-governmental organizations or politicians and started everyday cooperation with banks. Economic indicators soon return to its pre-crisis values. (Cani and Hadëri, 2002)

3.2 Current Framework of Monetary Rules

The law amended in 2002 defined the objective of monetary policy as “to achieve and maintain price stability” with a medium-term inflation objective. (Kodheli, 2008) The inflation targets were introduced in 1999 as 3+/-1%, but BoA still followed monetary targeting. Later, exchange rate channel proved to be the most important channel. (Tanku, 2008) Growth rate of M3 diverged widely from its target, in contrast of official inflation that often even undershot the target. BoA was only slowly opening the discussion on introducing inflation targeting, mostly because of lack of empirical evidence on transmission mechanism. As Kodheli sums up, the only difference was the lack of the publication of target and formal mechanism that makes BoA accountable to the announced target.

3.3 Leader of the Region in Monetary Policy

Every country in the region went through more or less severe processes towards building its monetary stability. It is interesting to compare the evolution of Macedonian and Serbian monetary system as they are both EU membership candidates. Similarly, to Albania, Macedonia had various problems in 1990's because of limited independence and lack of experience in conducting monetary policy in a market economy. In terms of monetary policy, both countries can be considered now as reliable stable economies. Monetary policy in Albania was characterized by no drastic changes and slow evolution from monetary targeting to inflation targeting. The situation in Macedonia was different. After the period of hyperinflation in the early years of independence it changed its policy towards exchange rate targeting which had to be later adjusted. There was pressure on Macedonian dinar to depreciate and because of it the current account deficit was deteriorating. In 1997, Macedonian national bank was forced to devaluate denar. (Fetai, 2008) Since then Macedonia central bank targets same exchange rate. It had to limit its monetary policy, while Albania reached stability of its monetary policy while keeping more flexibility. With Serbia it is the only country with inflation targeting and not some degree of fixation of the currency among the countries at the regional comparable context. But apart from Albania, Serbia never reached credibility (mostly due to high level of informal dollarization, general distrust in local currency and slow reactions of central bank).

3.4 Monetary Policy during the Crisis

Inflation targeting is considered to be a desirable way of conducting a monetary policy because inflation is a good indicator of demand shocks. However, inflation is far from being a perfect indicator. It also reflects shifts in aggregate supply. In theory, an ideal central bank should be able to distinguish between demand (nominal) and supply (real) shocks and ignore the latter (Clarida, Galí and Gertler, 1999). In 2008, many central banks reacted to the increase in oil prices either by tightening or not loosening their policy enough in face of crumbling financial sector. Central bank of Albania was one of them. During 2008 it increased interest rates to 6.25% - the highest values during the last decade. It managed to prevent inflation rate from soaring too high, but still prices increased faster than they were supposed to. Were high interest rates the price for keeping the inflation target or were there other reasons for monetary restriction?

Global financial crisis put a test on all the central banks in the region – Serbia targeting inflation and Macedonia and Bosnia and Herzegovina which fixed exchange rate (Macedonia via exchange rate peg, Bosnia and Herzegovina using currency board). In 2008, Serbian central bank also having inflation target increased interest rate from 10% (2007/Q2) to 17% (2008/Q4). On the other hand, Bosnia and Herzegovina and Macedonia did not pay too much attention to rising prices of oil. We conclude that if Albania had not target inflation, its central bank would probably behave much more like its Macedonian and Bosnian counterparts.

3.4.1 Providing Stability and Letting Exchange Rate do the Trick

In 2009, Western Balkans felt the impact of the financial crisis. Economic slowdown in many of their trading partners led to decrease in exports and capital outflow. Increase in uncertainty pushed down investment and consumption demand. Worries about debt sustainability created pressures on government finances. In situation like this, central bank is supposed to push down the interest rate. Albanian central bank did exactly that. It decreased interest rate from 6.25% back to 5.7% and later to 5.1% and increased monetary base by more than one fifth to meet liquidity needs.

However, Albanian monetary policy cannot be considered too expansionary for several reasons: (1) Going back from 6.25% to 5.7% was just returning to normal pre-2008 levels. (2) In small open economy actual level of interest rate is not very important. It is interest differential with respect to other countries what determines whether money is tight or loose.) Interest rate of European Central Bank (ECB) at that time was 0.5%. (3) Serbia decreased interest rates more significantly – from average 15.1% in 2008 to 13.1% in 2009 and 9.13% year after. (4) Whereas country with flexible exchange rate is supposed to loosen monetary policy in situation like year 2009, country with fixed exchange rate has to tighten to keep the value of currency stable. Macedonia and Bosnia and Herzegovina decreased their money base but they kept interest rates stable. In 2010, they started to push interest rates down and to increase monetary base. Albanian monetary policy which is supposed to be expansionary did not dramatically differ from policy in Macedonia and Bosnia and Herzegovina which is supposed to be restrictive.

Looking only at what Albanian central bank really did can be misleading. It is necessary also to acknowledge what it let happen. It let exchange rate depreciate. Bosnian and Macedonian central bank kept exchange rate fixed. In 2009 Albanian lek lost about 7% of its value with respect to euro. One year after it lost another 5%. Whereas Albanian exports slowed down in

2009, Macedonian and Bosnian decreased by one third and one fourth respectively. While Albanian economy grew slightly less rapidly, Macedonian and Bosnian economies froze.

Was flexible interest rate the secret of Albanian success? Yes and no. Serbian dinar also lost about 15% of its value, its export just slowed down (they did not decrease) but Serbian economy shrank by 3% in 2009. Nevertheless, exchange rate depreciation helped to soften the blow of European crisis. So was it inflation target? Yes and no. Inflation targeting in Albania did not lead to especially loose policy but it provided a guarantee of stable economic environment. This is what was absent in Serbia which is still a long way from successful inflation targeting. And that is what is absent in Bosnia and Herzegovina, too. On the other hand Macedonia provided stable investment environment and experienced unique latter investment and output growth.

3.4.2 Loosing Monetary Ammunition as a Barrier for Integration

Understanding inflation targeting is easy if you do not ask which inflation to target. These are actually two questions – prices of what goods, services (and assets) to target and in what time horizon. We would like to focus on the time horizon question. Targeting year-to-year inflation is a source of lot of uncertainty about the level of prices in the long run. Suppose that central bank undershoots the inflation target by 1% five years in a row. This makes price level 5% lower in comparison with scenario when central bank always meets the target. Likewise, central bank can overshoot the target several years in a row. The longer the time horizon, the higher the uncertainty about the price level. This makes long-term planning especially difficult.

Central banks usually target inflation in the medium run but they rarely define how long the medium run is. This is also true for Albania. This creates the environment where inflation target can be undershooting several times in a row with the excuse that target was almost met or that undershooting was within acceptable range ($\pm 1\%$ in case of Bank of Albania) even though price level is very different from what economic subjects could have anticipated in the past. Albanian inflation rate has been below target since late 2011. It is not clear whether this low inflation is supposed to compensate for slightly higher inflation before 2011 or Bank of Albania is willing to let bygones be bygones. It seems that Bank of Albania is trying to push inflation up since it continually decreases the interest rates but at the same time it is afraid to significantly ease the policy. There is one possible explanation: fearing the zero lower bound.

While for a long period inflation targeting provided country a credibility and flexible exchange rate gave it nominal stability (both even during the outbreak of the crisis), now Albania can lose both. Zero lower bound is a definite obstacle that can possibly put a barrier in the monetary integration of Albania. Once in the liquidity trap, central bank is more or less out of control of its monetary policy and therefore cannot fulfil the Maastricht criteria.

Albania is an example that the process of building the credibility never ends. Despite building a proper set of instruments and clear commitment, Albania faces another crisis. If Bank of Albania wants to keep flexible exchange rate it should put stronger sign to the market that it wants to fulfil its target, but on the other hand if it is unsuccessful the possibility of further easing is limited. Finally, it can end in Czech situation. When Czech National Bank's interest rates fell on zero lower bound, it was forced to implement new tool nominal exchange rate targeting in order to ease monetary policy.

4. Conclusion

Albanian monetary framework went through various challenges and continuous changes but despite the experience of some other countries in the region, Albania did not lose flexibility in order to gain credibility. Economy went through slow changes moving itself from monetary targeting to the regime resembling inflation targeting. The greatest test to the monetary policy was global financial crisis leading to the Great Recession. Let us sum up Albanian monetary experiences since 2008: (1) Inflation target forced Bank of Albania to tighten in 2008 as a response to higher oil prices. This is not something that central bank should do. Many countries did the same thing in 2008 and ended up regretting it. (2) Inflation target helped to provide stable environment in 2009 and together with flexible exchange rate regime were keys to good performance. (3) Actual inflation has been undershooting the target several years in a row. It is not clear whether Bank of Albania will let bygones be bygones or whether it will try to compensate with higher inflation in the future. (4) With interest rates already on 2%, there is a limit to monetary expansion in Albania. Zero lower bound is dangerously close. It is not clear how Bank of Albania would respond if it hits the zero.

It seems desirable to think about different monetary frameworks which carry same benefits as inflation targeting but have fewer disadvantages. Nominal GDP targeting and price level targeting might be one of those. These two regimes provide same nominal stability as inflation targeting but they do not require monetary restriction as a response to negative real shocks (e.g. spike in oil prices). They also provide clear guidelines about future monetary policy since they never let bygones be bygones. According to Merola, a price level targeting policy produces lower levels of volatility of interest rates and exchange rates. Price level targeting policy reduces the risk of deflation and affects the private sector's expectations in such a way that they work as automatic stabilizers. (Merola, 2010) It is widely accepted that they also perform better at zero lower bound. Once economy finds itself at zero lower bound, it might be too late to change the regime (as admitted by St. Louis Fed governor James Bullard).

With these regimes it might not fulfil inflation Maastricht criteria, but apart from nominal exchange rate targeting it would be definitely more of a control over inflation target. Price level targeting seems to be ideal compromise of nominal stability, credibility and integration ambitions. In case of Albanian, switching from inflation targeting to price level targeting would not be particularly risky since these two regimes are in many respects similar. Furthermore, Albanian managed to change its monetary target without losing credibility in the past. With respect to Albanian integration in EU, changing monetary target does not seem to be a problem. In other candidate country, Serbia, attempt to change monetary rule would be more risky since Serbian central bank have not been successful in targeting inflation in the past. It is possible that a change of target would be interpreted as admission of central bank incapability of meeting its promises and would seriously thwarted its integration ambitions. In Macedonia, with respect to integration process, abandoning exchange rate peg seems superfluous because after becoming a member of the union, it would need to target exchange rate anyway. By now current framework provides as much stability as possible.

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Climate Change in the Sustainable Development Context with the Focus on the EU

Magdaléna Drastichová

VŠB - Technical University of Ostrava

Faculty of Economics, Department of Regional and Environmental Economics

Sokolská třída 33, 701 21

Ostrava, Czech Republic

e-mail: magdalena.drastichova@vsb.cz

Abstract

Climate change is a significant threat to sustainable development. Climate change and Sustainable Consumption and Production are among the main themes of the European Union's Sustainable Development Strategy (EU SDS) and these topics are significantly interconnected. The aim of the Paper is to detect the extent of the climate change problem in the sustainable development context in the EU and its countries. The special attention is paid to the relations between the Greenhouse Gas (GHG) Emissions per capita or the so called Carbon Footprint on the one hand and the Resource Productivity and the Ecological Footprint on the other hand. The EU made an enormous effort to reduce its GHGs. The relations between the Carbon Footprint and the Resource Productivity as a main indicator of the Sustainable Consumption and Production in the EU countries are not straightforward. As the Carbon Footprint is the highest component of the Ecological Footprint they are significantly correlated in the EU countries.

Keywords: Carbon Footprint, Climate Change, European Union (EU), Greenhouse Gas Emissions (GHGs), Kyoto Protocol, Sustainable Development (SD)

JEL Classification: F64, Q51, Q54, Q56

1. Introduction

Sustainable development (SD) is a global challenge which requires a progressive transformation of economies (Hediger, 2006), more specifically the substantial changes in production processes and lifestyles according to the idea that the global development cannot only be understood from the economic point of view (FEEM, 2011). The most quoted definition of the World Commission on Environment and Development (WCED, 1987) claims that *SD is development that meets the needs of the present without compromising the ability of future generations to meet their own needs*. Although the term of SD is still vague there is an emerging political consensus on its desirability (Daly, 1996). SD is amongst the top policy priorities worldwide (FEEM, 2011) and an overarching objective of the European Union (EU) policies enshrined in its primary law. SD became a fundamental objective of the EU in 1997 when it was included in the Treaty of Amsterdam and in 2001 the EU Sustainable Development Strategy (EU SDS) was launched. It is based on the Commission Communication of 5th May 2001 (Commission of the European Communities, 2001) which limited itself to the internal aspects of SD. With the subsequent Commission Communication of 13th February 2002 (Commission of the European Communities, 2002) the external dimension was added to the EU SDS at the European Council in Barcelona in March 2002 (cited from Drastichová, 2014).

The 2001 strategy is composed of two main parts. The first proposed objectives and policy measures to tackle the key unsustainable trends while the second, more ambitious, part called for a new approach to policy-making that ensures the EU's economic, social and environmental policies mutually reinforce each other. In July 2009 the Commission adopted the 2009 Review of EU SDS. It underlined that in recent years the EU has mainstreamed SD into a broad range of its policies which is inevitable to achieve its goals. In particular, the EU has taken the lead in the fight against climate change and the promotion of a low-carbon economy (European Commission, 2015).

Climate change is a threat to SD. The scientific community agrees that man-made GHG emissions are the dominant cause of Earth's average temperature increases over the past 250 years (IPCC, 2014). This has, among others, led to extreme weather conditions worldwide (Eurostat, 2015c). At the international level the commitments related to the GHG emission limitation / reduction result from the Kyoto Protocol (KP) which is an international agreement linked to the United Nations Framework Convention on Climate Change (UNFCCC), which commits its Parties by setting internationally binding emission reduction targets. The KP was adopted at the Conference of the Parties (COP) 7 in Kyoto / Japan, on 11th December 1997 and entered into force on 16th February 2005. Its first commitment period started in 2008 and ended in 2012. At the COP 18 in Doha / Qatar, on 8th December 2012, the "*Doha Amendment to the Kyoto Protocol*" was adopted which includes new commitments for Annex I Parties to the KP who agreed to take on commitments in a second commitment period from 1st January 2013 to 31st December 2020. During the first commitment period, 37 industrialized countries and the European Community (EC) committed to reduce GHG emissions to an average of 5% against 1990 levels. During the second commitment period, Parties (different composition) committed to reduce GHG emissions by at least 18% below 1990 levels in the eight-year period from 2013 to 2020. The EC / EU's commitments go beyond these basic commitments and the EU and its countries committed themselves to reduce the GHGs by 8% on average in the first period and by 20% on average in the second period (UNFCCC, 2015). However, the countries are provided with flexibility via the flexible mechanisms due to the different structures of their economies and thus there are differences in the GHGs' reduction costs and the possibilities of the countries to reduce these emissions vary as well.

The aim of the Paper is to detect the extent of the climate change problem in the sustainable development context in the EU and its countries.

2. Problem Formulation and Methodology

In this section the indicators' and methodological background used in the Paper are described.

2.1 Underlying Context of the Applied Indicators

As a foundation of the methodology the selected Sustainable Development Indicators (SDIs) are used. The SDIs are presented in ten themes to monitor the EU SDS in a report published by Eurostat every two years. The 10 themes such as *Socio-economic Development, Sustainable Consumption and Production, Social Inclusion, Demographic changes, Public health, Climate Change and Energy, Sustainable Transport, Natural Resources, Global Partnership and Good Governance* reflect the economic, social, environmental, global and institutional dimensions of the SD as well as the key challenges to the SD. Of more than 130 indicators, 10 have been applied as headline indicators. They give an overall picture of whether the EU has achieved progress towards SD in terms of the objectives and targets defined in the EU SDS. For a more complete picture, we need to examine the development of all indicators within a theme. At the

2nd level there are the Operational Indicators related to the operational objectives of the SDS and at the 3rd level the Explanatory Indicators related to actions of the SDS (Eurostat, 2015b).

In this analysis the particular SDIs in *Climate Change and Energy* and *Sustainable Consumption and Production Themes* and the Ecological Footprint (EF) are used to measure the climate change aspects in relation to the SD. The overall objective of the *Climate Change and Energy Theme* in the EU Sustainable EU SDS is to limit climate change and its costs and negative effects to society and the environment (Eurostat, 2015c). The EU SDS also sets out the objective of promoting sustainable consumption and production patterns. An essential requirement for SD is to address social and economic development within the carrying capacity of ecosystems and decoupling economic growth from environmental degradation (Eurostat, 2015d). Decoupling indicates breaking the link between environmental bads and economic goods (OECD, 2002) and it is the necessary instrument / process to achieve SD.

The effects of production and consumption activities which impose a heavy burden on the Earth's capacity in the present times as well as in future and thus affect the SD can be alternatively measured by the EF Indicator. The EF is a method for estimating the biologically productive area necessary to support current consumption patterns, given prevailing technical and economic processes (Holmberg et al., 1999). Thus the EF is a measure of the demand which human activities put on the biosphere. It is measured in global hectares (gha) whereas a gha represents a hectare with world average productivity. The EF can be expressed as *Population x Consumption per person x Footprint Intensity* which are the so called EF drivers. The EF calculations have so far included land for energy supply, food, forest products, and the built environment, degraded areas, and sea space for fishing. For the waste side the land needed for sequestering CO₂ is included in the EF. Thus the Carbon Footprint (CF) component of the EF is represented by the area of forest land required to sequester these carbon emissions and recently it represents the largest portion of humanity's EF. (Global Footprint Network, 2015). In 2010 it comprised 53% of the EF (WWF, 2014).

2.2 Data and Model

The data sources of indicators and the methodology / model are described in this sub-section.

2.2.1 Data

In this Paper the data of Eurostat (2015a, c) were used to calculate the CF per capita by dividing the SDI of "GHG Emissions by Sector", which is one of the Operational Indicators in the *Climate Change and Energy Theme*, by "Population on 1st January" in the EU-28 and each EU country. The "GHG Emissions by Sector" indicator shows the GHG emissions of key source categories that have a significant influence on a country's GHG inventory in terms of the absolute level of emissions, the trend in emissions, or both. The different GHGs are weighted by their global warming potential, and the results are expressed in CO₂ equivalents. The annual EU's GHG inventory is reported under the UNFCCC, the Kyoto Protocol and the Decision 280/2004/EC (European Parliament and Council, 2004). The so called Kyoto basket includes six gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆). The impact of land use, land use changes and forestry (LULUCF) on the GHG inventories is excluded. International aviation is included (Eurostat, 2015c). This methodology was inspired (and adapted to the data available) by Tukker et al. (2014) computing the CF as life cycle emissions of GHGs of final consumption, expressed in tonnes of CO₂-equivalents. This includes non-CO₂ GHGs, such as CH₄ or N₂O, but does not cover GHGs related to land use change.

Resource productivity (RP) is the headline indicator in the *Sustainable Consumption and Production Theme* and one of the so called decoupling indicators designed to monitor the extent of decoupling between economic growth and environmental pressures. The RP is measured as the ratio between Gross Domestic Product (GDP) and Domestic Material Consumption (DMC). Due to its construction the RP growth rate is equal to the difference between the GDP and DMC growth rates. The DMC indicator is based on the Economy-wide Material Flow Accounts. It measures the total amount of materials directly used by an economy and is defined as the annual quantity of raw materials extracted from the domestic territory of the focal economy, plus all physical imports minus all physical exports. The term *consumption* as used in DMC denotes apparent consumption and not final consumption. The DMC indicator is one of the Explanatory Indicators of the *Sustainable consumption and production theme* (Eurostat, 2015d). For the calculation of RP, Eurostat uses GDP either in *EUR in chain-linked volumes unit* to the reference year 2010 at 2010 exchange rates or in *Purchasing Power Standard unit* (PPS). Consequently, the indicator is expressed:

- i. In euro per kg, for comparing the changes in one country over time: this RP indicator was used to investigate the relations between the GHGs emissions and the RP percentage changes in the EU countries;
- ii. In PPS per kg, for comparing different countries in one specific year: this RP indicator was used to investigate the relations between the GHGs emissions and the RP levels in the specific years, i.e. in the cross-section analysis;
- iii. It is also calculated as an index on year 2005, for comparing countries in different years. (Eurostat, 2015b)

To obtain the most recent available data on Ecological Footprint (of consumption) per capita in 2011, in gha, the Results from the National Footprint Accounts: NFA 2015 Public Data Package, 2015 Edition Global Footprint Network (2015) were used. For Malta and Luxembourg, data on EF in 2008 are only available.

2.2.2 Regression Analysis

The Regression Model was created and the Linear Least-Squares Regression was applied to detect the relations between the Carbon Footprint and the Resource Productivity. The countries included in the sample are the 28 EU countries. The time period used is 2005 – 2013 for which the data of both indicators were available. The applied formula to detect the relationship is as follows:

$$\Delta(\ln) CF = a + b \times \Delta(\ln) RP + \mu_i, \quad (1)$$

where *CF* is the Carbon Footprint (tonnes per capita), *RP* is Resource Productivity and symbol Δ indicates the change in variables in per cent. Symbols *a* and *b* represent coefficients where *a* is the intercept and *b* is the elasticity, i.e. it indicates percentage change of the CF by the change of the RP by 1 per cent. Symbol *ln* represents the natural logarithm which is used to eliminate the effect of the different units of the variables. The assumptions of Linear Regression such as (1) statistical independence of the errors, (2) homoscedasticity (constant variance) of the errors, and (3) normality of the error distribution are verified with the suitable tests such as Breusch-Godfrey Serial Correlation LM Test for the first assumption, Breusch-Pagan-Godfrey, Harvey, Glejser and White test for the second one and the Jarque-Bera test for the third one.

3. Problem Solution

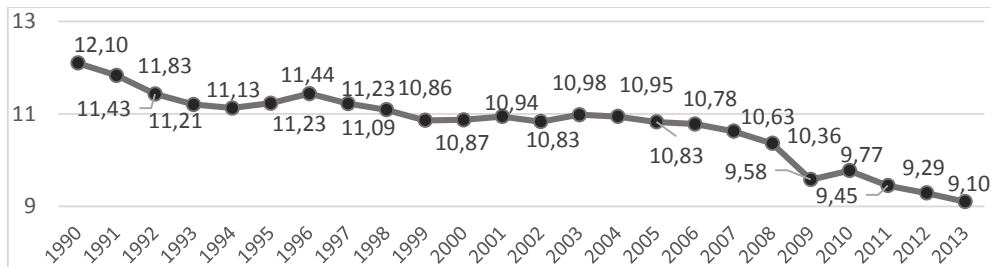
In this section the climate change problem in the EU is examined using the Carbon Footprint Indicator and its relations to other SD indicators according to the methodology described in the section 2.

3.1 Extent of Climate Change Issue in the EU

In period 1990 – 2013 the GHG emissions per capita in the EU decreased significantly. The downward trend of the Carbon Footprint per capita in the EU is obvious from the Fig. 1 where the long – term time series are shown. It dropped by 2.129 t (-18.956%) in period 1995 – 2013, by 1.727 t (-15.946%) in 2005 – 2013 and even by -2.999 t (-24,784%) in period 1990 – 2013. This is the result of the strong EU commitments to combat climate change resulting from the KP but the EU's commitments and reduction efforts go beyond these commitments. Regarding the EU countries, the most significant GHGs per capita and thus the CF per capita reductions were shown by Denmark (-4.966 t) and Belgium (-4.457 t) in period 1995 – 2013 and by Luxembourg (-8.583 t) and Ireland (-4,773 t) in period 2005 – 2013 whereas in both periods these are the only two drops in each of them which are higher than 4 tonnes per capita. In the overall period 1990 – 2013 the highest declines were typical of Luxembourg, (-12.152 t), Estonia (-9.02 t), the Czech Republic (-6.539 t), Lithuania (-6.27t) and Slovakia (-6.209 t) which are the only five countries with the higher drops than 6 tonnes per capita.

It is curious that exactly Estonia and Luxembourg achieved the worst results in the analysis of the recent period and their CF is the highest among the EU countries in 2013 (see Fig. 3). However, their CF was also by far the highest in 1990, in Estonia 25.556 t and in Luxembourg even 35.051 t. Although in the long term period 1990 – 2013 the GHGs slightly increased only in two countries such as Malta (0.281t) and Portugal (1.14 t) and in all the other decreased the increase was by far highest in Estonia in both partial periods, i.e. 2.714 in 1995 – 2013 and 2.892 in 2005 – 2013. On the contrary Portugal and Malta showed the lowest levels of the CF per capita in 1990, i.e. 6.193 t and 6.275 t respectively, which are the only levels lower than 7 t in this year among the EU countries. Finally, it is important to note that in percentage terms the GHGs drops in the transition economies, such as Romania, Lithuania, Latvia and Slovakia, were the highest, i.e. by more than 40%, in the overall period 1990 – 2013. In the transition economies it was predominantly caused by the inefficient resource use in the previous regime and the significant drops often occurred in 1990s. In more recent period the reduction does not have to be so significant or the emissions even grow, among others, due to the higher economic growth rates in these countries. In the partial periods the highest drops were also typical of the Northern and Southern countries. Denmark and Romania, the UK, Sweden and Belgium showed the highest drops in 1995 – 2013 and Spain in 2005 – 2013 (-31.394%, see Fig. 2).

Figure 1: Carbon Footprint per Capita (Tonnes per Capita), EU-28, 1990 – 2013



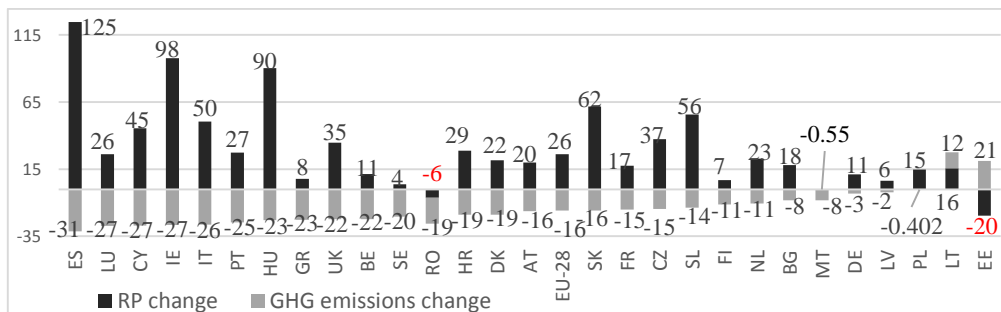
Source: Eurostat (2015a, c), own calculation

The additional factors, which can affect the development of the GHGs generation, are the economic shocks, such as the last economic crisis. It contributed to the GHGs emissions' drop in 2009 and subsequently in the following years with the start in 2011. Although the only annual GHG emissions growth in the EU during the long-term period occurred in 1995, 1996, 2000, 2001, 2003 and 2010, the most recent drops are predominantly affected with the recession induced by the economic crisis and not the structural change. This development also led to the increase of the Resource Productivity in the EU and majority of its countries when DMC drops more significantly than GDP which is likely not a result of positive structural change (see more in Drastichová, 2015). In the next sub-section, the CF in the EU countries is examined in relation to the other SD indicators such as the RP and the total EF per capita.

3.2 Relations of Climate Change Issue and Resource Productivity in the EU

Climate Change and Energy and *Sustainable Consumption and Production* are two crucial themes of the EU SDS and it is inevitable to investigate them together. The indicators in the first one can affect the indicators in the latter and vice versa. The correlation coefficient (r) between their selected indicators (as determined in 2.2.1), i.e. GHGs (CF) per capita and the RP percentage changes in 2005 – 2013, is -0.559 which indicates the moderate negative correlation. The indirectly proportional relations between the variables are also obvious in Fig. 2 with several exceptions within the EU group. The only three countries with the drop of the RP in this period are Estonia, Romania and Malta whereas in the two latter the GHGs dropped as well. On the other hand, the increase of GHGs in Estonia was 21.194% which is one of two cases of increase in the EU and also the highest increase. Spain, Ireland and Hungary achieved the highest RP increases by 124.767, 97.811 and 90.379% respectively. These increases are significantly higher in comparison to other countries and in the same period these countries also showed significant GHGs drops. The fourth highest increase which occurred in Slovakia reached 61.8%. These three countries also achieved the most significant decreases in GHGs in the same period together with Luxembourg, Cyprus, Italy and Portugal (see Fig. 2). Although the Spanish economy achieved the best results, they can be significantly affected by the adverse economic development due to the economic crisis. The highest drops of the CF in Spain occurred in 2008 and 2009 and the high increase in the RP occurred in 2009 as well. However, as a result of the economic crisis, the GHGs / CF per capita dropped in 2009 in all the EU economies and the RP increased in the majority of them. There is the only country with simultaneous increases of both indicators in 2005 – 2013. The increase of the GHGs was the second highest in Latvia, i.e. 11.879%. However, its RP increased as well, by 15.603%.

Figure 2: Carbon Footprint per Capita (Tonnes) and Resource Productivity (Euro per Kg, Chain Linked Volumes, 2010); Changes in %, 2005 – 2013, EU-28 and its Countries



Source: Eurostat (2015a, c, d), own calculation

Even though the correlation coefficient is negative and Fig. 2 indicates the indirectly proportional relations between the RP and CF per capita the regression analysis does not confirm the significant relations, i.e. these relations are not so straightforward and can be affected by many other factors. The relations between the RP and CF per capita were investigated in the EU using the percentage changes of both variables in 2005 – 2013 whereas the outliers were gradually removed from the sample due to violation of model assumptions starting with Estonia (Sample: 27), followed by Latvia (Sample: 26), Poland (Sample: 25) and Lithuania (Sample: 24). The last model including 24 EU countries most significantly indicates the indirectly proportional between the RP and CF per capita changes. In the models some heteroscedasticity tests indicate its presence. When this result is not confirmed by all the applied tests, then these models are presented. Based on these results, the model of the sample with the 24 EU countries is most reliable. The model including 27 EU countries (Estonia was excluded) is not presented due to the autocorrelation. The cross-section models (the last line in Tab. 1) constructed for the individual years in the period from 2005 to 2013 did not confirm any significant relation between the variables except for the initial year 2005, however, even in this year the *b* coefficient and the overall model can be regarded as statistically insignificant or it is only marginally significant. All the models for the years 2006 – 2013 are statistically insignificant with very slight positive elasticity, i.e. *b* coefficient between 0.13 – 0.27. These models are not presented.

Table 1: Results of the Regression Analysis in the EU Countries

Sample Y / P	<i>a, b</i> (Prob.)	Prob (F-st.)	<i>R</i> ² , <i>adj. R</i> ²
28 / 2005 –13	-0.087 (0.003); -0.208 (0.002)	0.002	0.313; 0.286
26 / 2005 –13	-0.128 (0); -0.14 (0.005)	0.005	0.288; 0.259
25 / 2005 –13	-0.138 (0); -0.13 (0.005)	0.005	0.294; 0.264
24 / 2005 –13	-0.147 (0); -0.116 (0.008)	0.008	0.278; 0.245
2005	2.338 (0); 0.275 (0.061)	0.061	0.129; 0.095

Source: Eurostat (2015a, c, d), own calculation in EViews Programme

It can be concluded that in the cross-section analysis there is no relation between the RP and CF per capita except for the very slight directly proportional relation in the initial year 2005 which was the year when the KP entered into force. In this year the countries with the higher productivity of their inputs also produced more GHGs per capita. In more recent years this relation has not been proved. Regarding the changes of the variables, the indirectly proportional relation can be confirmed as more reliable, even though there are some outliers, i.e. those countries, whose development differs more significantly from the others. The more the countries in the sample, the higher the absolute value of the elasticity is, however, some models' assumptions can be violated. Moreover, the coefficients of determination *R*² in all models presented in Tab. 1 are relatively low. Generally, it can be claimed that the strong commitments of the EU and its countries to move to the SD and to reduce climate change led to some improvements in these areas.

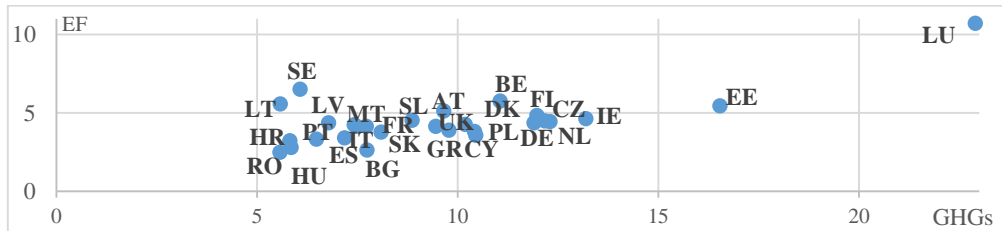
3.3 Relations of Climate Change Issue and Resource Productivity in the EU

Finally, the relations between the CF and the total EF, both per capita, are examined. Even though the methodology and units of these two indicators are different, both of them reflect the climate change effects of countries and as the CF is the highest component of the EF, they are significantly correlated one with another (EU 28: *r*= 0.712). The lower level of GHGs / CF per capita than 7 tonnes were reached by Lithuania (6.783), Portugal (6.474) and Sweden

(6.074) and even lower than 6 tonnes by Hungary (5.846), Croatia (5.815), Latvia (5.58) and Romania (5.566). These countries can be found in the left part of Fig. 3. Romania also showed the lowest total EF, i.e. 2.5 gha. It is followed by Bulgaria (2.64) and Hungary (2.81) and then by Croatia (3.24), Portugal (3.34), Spain (3.41), Cyprus (3.59), Slovakia (3.78), Poland (3.83) and Greece (3.91) whose EF per capita is between 3 – 4 gha. These countries can be found in the bottom part of Fig. 3. Hence in the left bottom part there are the countries which showed the low level of both variables, especially Romania with the lowest levels of both Footprints among the EU countries as well as Hungary, Croatia, Portugal and Spain. The first three countries are among the least developed EU countries whereas the standard of living is the significant determinant of the EF. On the other hand, Spain achieved the most significant percentage decrease of the GHGs and increase of the RP in period 2005 – 2013 among the EU countries and, to a lesser extent, this development was also typical of Portugal (see Fig. 2).

Regarding the Northern and Baltic economies, Latvia and Lithuania showed the low levels of the CF, however, their EF is higher, especially that of Latvia. Sweden and Latvia can be found in the upper left part showing one of the highest values of the EF (6.51 and 5.58 gha respectively) among the EU countries together with the lowest levels of the CF. Thus the Footprint Indicators are determined and affected by many factors including the standards of living but also the structural characteristics of the economies. The third Baltic economy, i.e. Estonia, can be found in the separate part of Fig. 3 with the fifth highest EF (5.46 gha) and the second highest CF among the EU countries (16.536 t). This can be the result of the adverse development indicated in Fig. 2. The CF in Estonia increased by 21.194% in period 2005 – 2013 and already in 1990 it showed the second highest level, i.e. 25.556 t, and regardless of the second significant drop among the EU countries (in tonnes) in the overall period 1990 – 2013. Other country with the highest levels of both Footprint Indicators (EF: 10.724 gha; CF: 22.898 t) also lies separately in the right upper part of Fig. 3. However, the results of this small developed EU country are biased because of the low number of inhabitants whereas the product is predominantly produced by foreign workers.

Figure 3: Carbon Footprint per Capita (Tonnes per Capita) in 2013 and Total Ecological Footprint (gha) in 2011; 28 EU Countries



Source: Eurostat (2015a, c, d); Global Footprint Network (2015)

To sum up the majority of the EU countries showed the CF in the range from 5.566 t in Romania to 13.194 t in Ireland and the EF from 2.5gha in Romania to 6.51 in Sweden. There are two outliers in the sample: Estonia and Luxembourg with the high levels of both indicators.

3.4 Discussion

The push towards some climate-friendly economies brings many opportunities for the EU. The demand for green technologies can accelerate innovation and create new jobs. More efficient energy use also reduces production costs while increasing competitiveness of EU businesses.

The climate change and energy theme is linked to other areas of the SD in many ways. Since energy is used in virtually every economic activity, climate change and energy policies have an impact on many economic activities. A more sustainable energy sector can thus have synergies with actions covered in the areas of sustainable consumption and production as well as transport. The EU has developed a large number of strategies which are linked to the several areas of the SD including climate change and energy and the efficient resource use. It is necessary to implement these strategies in all the EU countries. They can also help to initiate the adoption of the new binding law to strengthen the EU commitments to combat climate change. Except for the long term EU SDS, among the most important strategies there is the EU 2020 Strategy (COM(2010) 2020) which includes the GHG emissions reduction target of at least 20% to be achieved by 2020. This is also consistent with the EU's commitment resulting from the KP in its second commitment period. This strategy is significantly interlinked with the 7th Environment Action Programme (EAP) to 2020 (Decision No. 1386/2013/EU), the Roadmap for moving to a low-carbon economy in 2050 (COM(2011) 112), or the Roadmap to a Resource Efficient Europe (COM(2011) 571) whereas the 7th EAP builds on these policy initiatives. The number of the strategies which are focused on the energetic sector, such as the Energy Efficiency Plan (COM(2011) 109), are also related to the above mentioned initiatives and to the climate policy in general. Moreover, a policy framework for climate and energy in the period from 2020 to 2030 (COM(2014) 15) adopted in 2014 includes a new reduction target for domestic EU's GHG emissions of 40% in 2030 compared to 1990. The new targets of this policy framework can become the basis of the EU commitments with regard to the new climate accord agreed at COP 21 in December 2015 where the Paris Agreement was adopted and it can also encourage the adoption of new binding law provisions in this field. All these and many others strategic initiatives should lead the EU on the path of the low carbon economy and eventually of the SD. Moreover, there is the set of binding pieces of secondary law, the Union's climate and energy package, which is related to the EU 2020 Strategy as well. The structural reforms in the EU countries are inevitable to continue meeting their as well as the overall EU's climate commitments resulting from the KP and the future commitments being developed according to the Paris Agreement.

4. Conclusion

The aim of the Paper was to detect the extent of the climate change problem in the sustainable development context in the EU and its countries. The special attention was paid to the relations between the Carbon Footprint per capita on the one hand and the Resource Productivity and the Ecological Footprint per capita on the other hand.

From 1990 the GHG emissions per capita in the EU decreased substantially. The Carbon Footprint per capita dropped by -2.999 t (-24,784%) in period 1990 – 2013, 2.129 t (-18.956%) in period 1995 – 2013, by 1.727 t (-15.946%) in 2005 – 2013 and thus the EU met its commitments of the Kyoto Protocol in its first commitment period terminating, in 2012 and it has already met its commitments in the second period which ends in 2020. Due to the significant links between the climate change problem and the sustainable development when the GHGs production causing the climate change is clearly unsustainable trend, the EU is on the right path to approach the sustainable development trajectory. However, the differences persist within the EU group.

The relations between the *Climate Change and Energy* and the *Sustainable Consumption and Production themes* of the EU SDS exist and are crucial to achieve sustainable development, however, the relations between the Carbon Footprint on one hand and the Resource Productivity on the other hand are not straightforward. The cross-section analysis did not

confirm any significant relation between the Resource Productivity and Carbon Footprint per capita with the exception of the very slight positive relation in the initial year 2005 when the Kyoto Protocol took effect. Generally, the countries with the higher productivity of their inputs may also have produced more GHGs this year, but in more recent years this relation has not been proved. The negative relation can be shown more significantly between the changes of the Carbon Footprint per capita and the Resource Productivity, even though there are some outliers, i.e. the EU countries whose development differs from the other countries more dramatically. The Carbon Footprint of the economies is determined by many factors, such as the overall structures of their economies, the shares of the renewables and the other non-carbon as well as carbon energy sources in their energy production. In addition, the extent of GHG emissions reduction depends on the effective structural reforms implementation. Many of these factors also determine the Resource Productivity, however, the structures of the EU economies as regards the GHGs generation often significantly vary which has resulted in the different relations between the Carbon Footprints and Resource Productivity levels and development in the EU countries. Generally, it can be confirmed that the strong commitments of the EU countries to move to sustainable development and to reduce the climate change led to the improvements in these areas.

The positive relationships between the Carbon Footprint and the Ecological Footprint are obvious. As the Carbon Footprint is the highest component of the Ecological Footprint, these indicators are significantly correlated in the EU countries. According to the most recent data, i.e. for the CF in 2013 and for the total EF in 2011, the majority of the EU countries showed the Carbon Footprint in the range from 5.566 t in Romania to 13.194 t in Ireland and the EF in the range from 2.5gha in Romania to 6.51 in Sweden. Romania is one of the least developed EU economies, it reached the lowest levels of both Footprint Indicators. Sweden and Latvia achieved one of the lowest levels of the Carbon Footprint together with the highest levels of the Ecological Footprint. Finally, Estonia and Luxembourg are outliers, they reached the high levels of both indicators. The Ecological Footprint is also determined and affected by many factors including the standard of living but also the structural characteristics of the economies and the Resource Productivity and thus even in this case the different variations of the Carbon and Ecological Footprint levels among the EU countries were detected.

The higher GHGs drops in the transition EU economies, mainly during the 1990s, were predominantly caused by the inefficient resource usage in the previous regime, then the possibilities may have been limited by the high economic growth, among others. Luxembourg and Estonia showed the extraordinary development, however, this is caused by the different factors. Both of them showed the highest levels of the Carbon Footprint in 1990 and the highest drops of the absolute levels of the Carbon Footprint in the overall period 1990 – 2013. However, their Carbon Footprints are still the highest in the EU together with the highest levels of the total Ecological Footprint, both per capita. On the one hand, Estonia is the fast growing transforming economy. On the other hand, Luxembourg is one of the most developed EU economies, i.e. with the high standard of living. Moreover, the results of this country can be biased. To sum up the structural reforms are necessary to reduce the climate change effects as well as the Ecological Footprint and to enhance the Resource Productivity in all countries, however, these reforms must fit the conditions and features of the individual economies. Overall, regarding all the aspects of this analysis, the economy of Spain must be highlighted because it reached the highest fall of the Carbon Footprint together with the highest increase in the Resource Productivity in period 2005 – 2013 while recently showing the lowest levels of the Carbon as well as the total Ecological Footprint. However, it is disputable to which extent it is the result of the structural changes on the one hand or the adverse economic

development of this country on the other hand. The effects of the economic shocks on the development of the investigated indicators are often difficult to separate.

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. The climate change issue must be integrated into all policies and activities of the sectors which contribute to the climate change. The flexibility in meeting the commitments among the EU countries should be maintained, however, under the condition that the rapidly growing countries and the countries with high shares of the sectors contributing to the GHGs emissions also make efforts to reduce the GHGs and implement the structural reforms and the transparency will be sustained as well. The global dimension of the Sustainable Development, which is the last theme of the EU SDS, must be taken into account and carefully followed as well. On the one hand, the EU must not shift the burden of climate change as well as that related to the improvements in its Resource Productivity and to the potential decreases of its Footprint Indicators to the other, especially the developing countries. On the other hand, it is necessary to encourage the rapidly growing developing countries to participate in the climate reduction / limitation commitments from 2020 onwards according to the new climate agreement adopted in Paris in December 2015.

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Method Matters: Essays on the Selected Econometric Techniques for Modelling of Economic Convergence

Kateřina Dvoroková

VŠB - Technical University of Ostrava
Faculty of Economics, Department of European Integration
Sokolská třída 33
Ostrava, Czech Republic
e-mail: katerina.dvorokova@vsb.cz

Abstract

The paper deals with an application of econometric techniques for modelling of economic convergence. Economic convergence is understood as a process of decreasing of differences in the economic level and efficiency of individual countries, and therefore it serves as a starting point of the international comparison and important part of macroeconomic analyses as well. The main goal of the paper is to evaluate possible results of selected econometric techniques for modelling of economic convergence and to draw attention to some advantages and disadvantages of selected methods. The theoretical part of the paper is devoted to the methodological bases of the economic convergence, according to character of examined variables, macroeconomic theories and methodological framework for research. The empirical part is aimed at comparison of individual econometric techniques frequently used to measure economic convergence. The final part of the paper summarizes main advantages and disadvantages of selected econometric approaches that may lead to different results.

Keywords: *Convergence, Cross Sectional, Neoclassical, Panel Data*

JEL Classification: *C210, C230, E130, O470*

1. Introduction

The term convergence is used in a variety of semantic modifications. Therefore its definition is dependent on a type of observed issue⁸. The term convergence can be found in various natural sciences; then it has a specific meaning in the language of economists. Economic convergence is understood as a process where there is a reduction of differences in the economic level and efficiency, e.g. see Staničková (2013), of individual countries (eventually regions) as well. Providing that there is an opposite case, that is an increase of differences in the economic level and economies efficiency, it is a divergence then. The focus is not only whether the differences are decreasing or increasing, but it is also important to examine how quickly these changes are done however. The economic convergence and its speed then become the focus of economic comparisons as well.

Why it is useful to study economic convergence? It is the starting point of the international comparison and integral part of macroeconomic analyses in particular. Regarding to economic

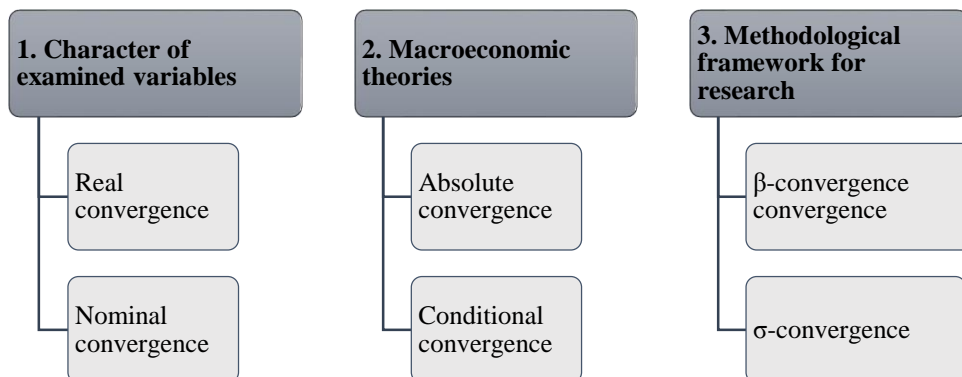
⁸ In medicine for example: Convergence of an eye means simultaneous inward movement of eyes toward each other. Convergence insufficiency occurs when your eyes don't work together while you're trying to focus on a nearby object.

convergence, comparing a production performance (GDP per capita, GDP per worker) of individual countries is possible to research.

2. Theoretical and Methodological Bases of the Economic Convergence

At the beginning of the examination of economic convergence, it is important to know the answer to the fundamental question: “What type of economic convergence are you going to examine actually?”. Different type of economic convergence leads to different results. Economic convergence can be examined from different perspectives and divided according to basic methodological criteria, see Figure 1.

Figure 1: Basic Division of the Economic Convergence



Source: self-elaboration

2.1 Character of Examined Variables

Within the frame of economic analyses convergence is primarily distinguished according to the character of examined variables, namely on the nominal and real convergence. Although the real convergence is inseparably related to the nominal convergence, it is necessary to consider both approaches as evolving in parallel and related processes; it is particularly important to mention that understanding of nominal and real convergence is not explicit among individual authors, see below.

2.1.1 Real Convergence

The measurement of real convergence is executed via a selected real macroeconomic aggregate. In empirical studies the usage of GDP in real terms can be encountered most commonly, in per capita or per worker. In the broadest sense, the real convergence is understood as the convergence of economic level of a compared country to a reference country or group of countries. The real convergence is then a process of reducing the gap in the economic level of compared countries. If there is a reversal process, i.e. expansion of the gap, it can be stated that a process of divergence emerges. In the context of growth theories, we can talk about narrowing a technological gap and adjustment of producing structure. Regarding that the real convergence is expressed via economic indicators, such as convergence of economic level (GDP/capita), business cycles harmonization and structural similarity of economies.

The economic level is usually expressed via gross domestic product calculated per capita. In case of evaluation of the economic level relationship between two economic entities in time it is possible to formally write the process of convergence as follows, see *Smrčková et al. (2008)*:

$$\frac{y_{1,t}}{y_{2,t}} < \frac{y_{1,t+1}}{y_{2,t+1}}, \text{ for } y_{1,t} < y_{2,t} \quad (1)$$

where y is the income per person of country 1 and 2 at time t and $t+1$. This relation can be described in such way that the relative space of economic levels per capita in time declines. In literature (*Slavík, 2005*) it is possible to meet similar definition which is based on the absolute difference:

$$|y_{1,t} - y_{2,t}| > |y_{1,t+1} - y_{2,t+1}| \quad (2)$$

In case of an opposite sign we speak about divergence.

In terms of relative difference (1), real convergence can be observed, i.e. relation in GDP/capita (constant prices) among developing and developed countries. The share of developing/developed countries in year 1990 was smaller (0,049) in comparison with year 2012 (0,081). On the other hand, in terms of absolute difference (2), divergence can be observed, i.e. relation in GDP/capita (constant prices) for identical countries was 24 928,3 USD in year 1990 and increased to 32 105,5 USD in 2012, see Table 1. *Novotný (2010)* and *Smrčková et al. (2008)* highlighted the different results that can be obtained using absolute or relative convergence approach.

Table 1: Comparison of Absolute and Conditional Convergence within Developing and Developed Countries in Years 1990-2012 (in US Dollars)

Year	GDP/capita, constant prices 2005		Relative difference		Absolute difference	
	1990	2012	1990	2012	1990	2012
Developing countries	1 292,7	2 847,6	0,049	0,081	24 928,3	32 105,5
Developed countries	26 221,0	34 953,1				

Source: UNCTAD (2013), self-elaboration

Indicators of business cycles harmonization indicate the extent to which business cycles in compared economies are evolving identically.

Monitoring the similarity of business cycles on the example of EU is important mainly due to the fact that since a particular country has joined the Euro area a common monetary policy, which substitutes existing monetary policy of particular central banks, is implemented. The common monetary policy, after introduction of the common currency, depends on the average economic development in the Euro area. This jointly applied monetary policy may have negative effects on the country which is in a different cycle phase therefore. These negative effects or costs resulting from the loss of their own monetary policy will be lower for economies that will show higher level of business cycle harmonization with monetary union.

One of the methods for examining harmonization of business cycles of a particular economy with business cycle of monetary union (or Euro area) is the usage of correlation coefficient that examines harmonization of annual rates of the real growth of GDP in the national economy with annual growth rates in the monetary union. This coefficient may take values from -1 to 1.

If the coefficient nears 1, it means that there is a strong similarity of business cycle of a particular economy and monetary union. Contrary, if the coefficient nears -1 the business cycles have adverse progress, for details see Kadeřábková and Žďárek (2007).

Another monitored indicator of achieved level of the real convergence is **the structural harmonization of economies**. The structural harmonization of economies is understood as similarity of structures of economic activity among acceding and existing economies of the monetary union. The higher the similarity of the economy structure is, the lower the risk of asymmetric economic shock is. The structural harmonization of economies can be studied, for example via Landesmann structural coefficient. Using this coefficient shares of six sections of economy, e.g. industry or construction in total value added in compared countries are compared. The difference between the shares is weighted by the share of the sector in country A in the total, and the weighted shares are then summed. The coefficient obtains values from 0 to 1 and if the coefficient nears 0, it is possible to expect higher similarity of the economic activity structure, for details see the ČNB (2009) and Landesmann (1995).

The progress of convergence process and the convergence level of monitored economies can be observed beside the indicators of cyclic and structural harmonization via many other indicators. Mandel and Tomšík (2008) point to the indicators examining, for example level of openness and interdependence of economies, harmonization or disharmony of economic shocks, level of financial market integration etc.

2.1.2 Nominal Convergence

The nominal convergence concept can be understood as an analogy of real convergence, so as a convergence of nominal constants, for example GDP in nominal terms, nominal wages (wider concept of convergence). The wider concept of convergence often includes meeting the Maastricht criteria which are exhaustively defined condition for countries to enter the Euro area and adopt euro as the common currency, see *Vintrová (2007)*. *Žďárek (2007)* then aggregates individual approaches and understands the nominal convergence in the following levels:

- price convergence (narrow definition),
- convergence of all nominal constants, such as prices, wages, pensions (broad definition),
- the Maastricht convergence criteria.

In the narrowest sense the nominal convergence can be understood as a convergence of prices. The indicator that is used for monitoring convergence of price level among economies is CPL – Comparative Price Level. This index indicates price level percentage of observed economy in comparison to the economy price level which was selected as the basis for comparison. It is possible to detect relative price levels of different segments of GDP (e.g. only consumption, investments) or the relative price level of entire GDP. The CPL indicates how many units of money in a particular country it is necessary to spend on the purchase of identical basket of goods and services however. This index is expressed in percent and is calculated using purchasing power parities (PPPs), see *Kadeřábková and Žďárek (2007)*. The process of price convergence can then, analogously as the real convergence, be formally written as follows:

$$\frac{CPL_{1,t}}{CPL_{2,t}} < \frac{CPL_{1,t+1}}{CPL_{2,t+1}} \text{ for } CPL_{1,t} < CPL_{2,t}, \quad (3)$$

where CPL is the index of comparative price level of country 1 and 2 in the period t a $t+1$. Then it is possible to express the price convergence via absolute difference in the following way:

$$|CPL_{1,t} - CPL_{2,t}| > |CPL_{1,t+1} - CPL_{2,t+1}|. \quad (4)$$

2.2 Macroeconomic Theories

Convergence as a category of macroeconomic theories is closely related to the issue of long-term economic growth, respectively the economic theory of growth. The goal of this theory is to examine factors that affect the rate of economic growth in individual countries and explain differences in their real incomes per capita.

2.2.1 Absolute Convergence

From the chronological point of view origins of convergence studies can be seen in the examination of absolute convergence. It can be defined as a process where economies with lower capital per worker grow faster than economies with higher capital per worker. Based on an empirical observation it has been found that the absolute convergence hypothesis is out of accord with reality, because economies with a higher ratio of capital per worker achieve faster growth of GDP per worker as well. Due to this fact a necessary condition of economies homogeneity was introduced; if it is valid there is the process of convergence in the real economy (Barro and Sala-i-Martin, 2004).

2.2.2 Conditional Convergence

If there is a measurement of convergence within a homogenous group of economies with the same institutional parameters, we can speak about a conditional convergence. A typical group of countries for measuring the conditional convergence are for example OECD countries. In contrast convergence of Nigeria and Poland can be only hardly expected.

2.3 Methodological Framework

2.3.1 β -convergence

The concept of β -convergence is based on the neoclassical theory of economic growth which postulates that initially poorer countries show higher dynamics of growth. Thus the poorer countries gradually converge to richer countries whose growth rate is not so high. The growth of GDP per capita is negatively dependent on the initial economic level. Beta convergence leads to the following regression equation (Smrčková *et al.*, 2008):

$$\frac{1}{T} \log \left(\frac{Y_{i,T}}{Y_{i,0}} \right) = \alpha + \beta \log Y_{i,0} + \gamma Z_i + \varepsilon_i. \quad (5)$$

The left side of the β -convergence regression equation is the average growth of GDP per capita in the real formulation in the purchasing power parity during the period from 0 to T, which is dependent on the initial economic level $Y_{i,0}$ and a set of exogenous factors Z_i . T variable expresses the number of analyzed years, α indicates the required level constant, β and γ are coefficients, ε_i is a random component. Index i denotes particular countries. The β -convergence occurs when there is a negative direction of the beta line.

2.3.2 σ -convergence

The concept of σ -convergence comes also from the neoclassical theory of economic growth, according to which all countries converge to the same level of forwardness or to the same economic performance. Sigma convergence is defined as a reduction of variance (standard deviation) of real GDP per capita logarithm in time. The sigma convergence can be denoted as the so-called catching up effect among particular economies, while beta convergence is

associated with countries converging to a steady state. When marking the variance (standard deviation) of the logarithm of real GDP per capita in the group of countries at time t , then σ -convergence between period t and $t + 1$ means:

$$\sigma_t^2 > \sigma_{t+1}^2. \quad (6)$$

3. Selected Econometric Techniques for Economic Convergence Modelling

Via a perspective of mathematicians, the economic convergence can be regarded as a concrete realization of stochastic process. The existing empirical literature studying the convergence among different economies can be divided into several different approaches which depend on data characteristics which are used in the studies. The mostly used of them are following:

- Cross-sectional analysis (Baumol, 1986), (Barro and Sala-i-Martin, 1992), (Mankiw et al., 1992),
- Panel data analysis (Islam, 1995).

3.1 Cross-Sectional Analysis

The most famous link to this approach to the convergence measurement is based on the original Baumol's study of real convergence (Baumol, 1986) among economies. Baumol has developed the so called conventional approach to the convergence analysis. The key element of this approach is the estimation of initial growth equation which has been created on the basis of graphical illustration of statistical data.

$$\frac{1}{T} \log \left(\frac{y_{iT}}{y_{i,0}} \right) = \alpha + \beta \log(y_{i,0}) + \varepsilon_i, \quad (7)$$

where the denotation of all variables in the model is the same as in the previous equation (6). The model misses set of exogenous factors Z_i however.

3.2 Panel Data Analysis

This approach to the convergence analysis has been introduced by Islam (1995). He has emphasized that via cross-sectional analysis it is possible to observe and measure differences in steady states of individual economies. The differences, which the cross-sectional analysis is not able to capture, may arise however. He has pointed to the fact that only the panel data analysis allows to remove shortcomings of the conventional analysis of cross-sectional data.

The panel data analysis is statistical and econometric method via which relationships and data correlation in two-dimensional space are analysed. The first dimension captures constants according to the time point of view, the second one cross-sectional data of individual objects of investigation. A typical feature of panel (or longitudinal) data is that individual observations are investigated for several time periods. The investigation of panel data is a model approach of solution where analysis methods of time series are applied, but elements of regression analysis as well.

The panel is a set of units which are similar in a sense (companies, regions, countries etc.) generally, more closely for example Melecký and Nevima (2010). A continual observation is then carried out on this set of units. The panel data compared to the cross-sectional analysis allow different benefits therefore – they better detect and measure effects which cannot be identified by the analysis of cross-sectional data or time series. On the contrary, problematic moments in panel data analysis include mainly small length of time series, deformation of measurement errors or data collection.

The panel linear regression model has generally the following form:

$$y_{i,t} = \alpha + \beta x_{i,t} + \delta_i + \gamma_t + \varepsilon_{i,t}, \quad (8)$$

where y is the explained variable, x is the vector of explanatory variables (the so called regressors), ε is the residual component of the model, i is the index of cross-sectional unit, t is the index of time, α is the overall constant in the model, β are the parameters indicating the slope of variables, δ are cross-sectional effects, γ are time effects.

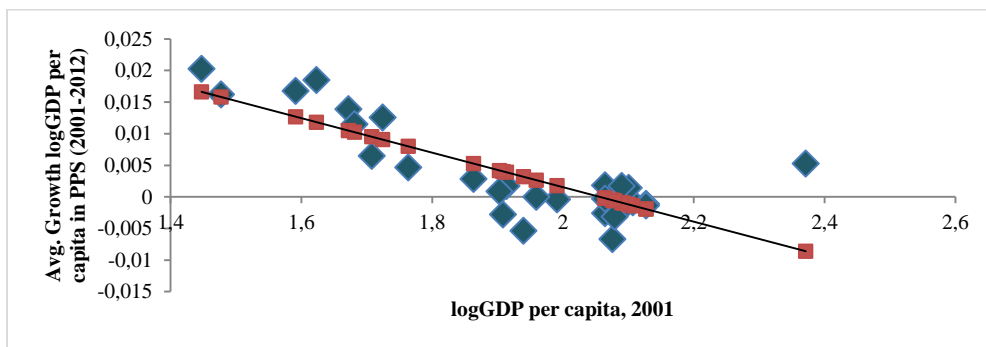
4. Advantages and Disadvantages of Individual Model Approaches

The advantages and disadvantages of individual model approaches will be explained using author's estimations of the previous research, see Dvoroková et al. (2011), Dvoroková et al. (2012), Dvoroková (2013), Dvoroková and Hodula (2013). The assessment of real and nominal convergence within EU28 countries (period of 1995-2012), using both β - and σ -convergence approach was analysed in works of Kulhánek (2012) and Kulhánek (2014) as well.

4.1 Cross-sectional Analysis

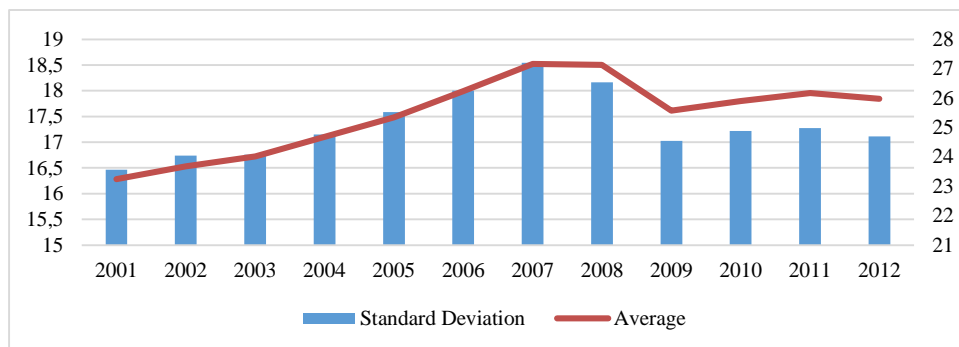
When using cross-sectional data structure, β -convergence approach is appropriate to apply to overall estimation of the selected period in general. Using this method it is possible to recognize the average trend of the economic development - convergence/divergence, see Figure 2. The results to the theoretical basis of the neoclassical growth economics (EU28 countries in 2001-2012 evidence) correspond as well. The basic idea of the neoclassical growth theory is that poorer countries have more dynamic growth than the advanced economies as it was stated earlier in this article (Sala-i-Martin, 1996).

Figure 2: β -convergence among EU28 Economies (2001-2012)



Source: Dvoroková (2013)

If using σ -convergence methodology it is possible to detect convergence/divergence in each of the selected time period. More likely it will be possible to reveal influence factors in individual time period as well. Evidence from EU28 countries in 2001-2012 showed that convergence process was rather volatile, i.e. σ -convergence unlike β -convergence had not indicate a clear downward trend in the standard deviation over the time, compare Figure 2 and Figure 3.

Figure 3: σ -convergence among EU28 Economies 2001-2012 (Log Real GDP per Capita in PPP, in Thousands of US Dollars)

Source: Dvoroková (2013)

4.2 Panel Data Analysis

Panel data for economic research have a few major advantages over cross-sectional or time-series data sets. Panel data analysis deals with large number of data points, which causes the increase of degrees of freedom and reduction of the collinearity among explanatory variables – by which it improves the efficiency of econometrics estimates, see Dvoroková and Hodula (2013). On contrary, panel has a few disadvantages. The problems are primarily a small length of time series, measurement errors deformation or data collection (Green, 2008).

Another way to remove a small number of observations problem is to apply the technique of dummy variable. Dvoroková and Hodula (2013) study deals with the mathematical estimation of the Maastricht convergence criteria influence on economic growth within V4 countries. The model for this specific research goal had been written as follows:

$$\Delta(\ln y_{i,t}) = \sum_{i=0}^n \beta_i \cdot y_{i,t-1} \cdot D_{i,t} + \alpha_1 BDG_{i,t} + \alpha_2 DBT_{i,t} + \alpha_3 HICP_{i,t} + \alpha_4 IR_{i,t} + \alpha_5 ER_{i,t} + \varepsilon_{i,t}, \quad (9)$$

where $\Delta(\ln y_{i,t})$ is natural logarithm of gross domestic product per capita annual change, $BDG_{i,t}$ is government deficit/surplus, $DBT_{i,t}$ is government debt, $HICP_{i,t}$ is harmonized indices of consumer prices, $IR_{i,t}$ is long term government bond yields, $ER_{i,t}$ is EURO exchange rates, β_i is slope parameters, α_i is level constant, D_i is binary dummy variable to identify the country (the value 1 for country data in time t, otherwise the value 0), $\varepsilon_{i,t}$ is random component, i is index indicating the country (base country is Euro Area average), t is index indicating the time. It was necessary to establish dummy variable (see Table 2) for each analyzed country as well. The model works with four countries which are compared to Euro area average.

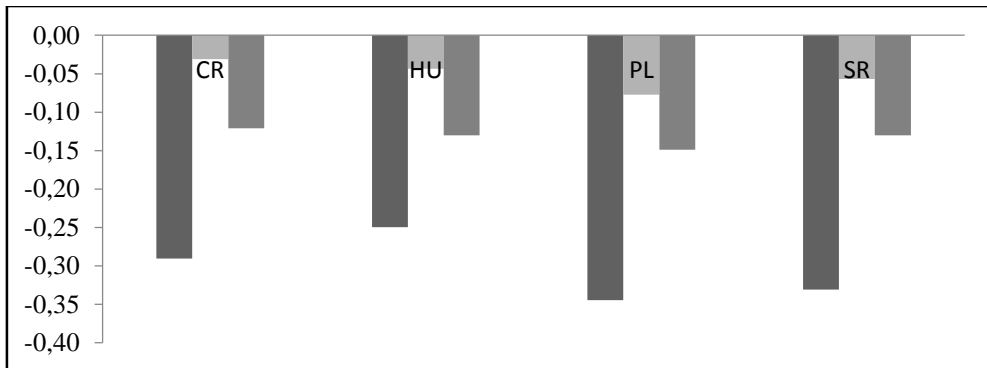
Table 2: List of Dummy Variables for the Czech Republic, Hungary, Poland and Slovakia

Dummy variable	Country
D1	Czech Republic
D2	Hungary
D3	Poland
D4	Slovakia

Source: Dvoroková and Hodula (2013)

By this model specification it was possible to determine whether the chosen countries have been converging or diverging to the average economic level of Euro area for each of Maastricht’s indicators. The average values were obtained using an arithmetic average of 17 Euro area member states. The average economic level was considered to be in permanent state, to which the chosen countries converge (or diverge). The next Figure 4 shows us the graphical projection of results of dummy variables for particular countries of V4 and their convergence to each other. For more details of the results, see *Dvoroková and Hodula (2013)*.

Figure 4: Graphical Projection of the Model Dummy Variables Results



Notes: The dark column represents the time period 2001-2007; the light column 2008-2012; the medium dark column represents the whole analyzed period 2001-2012. Estimated parameters for individual dummies are located on vertical axis.

Source: Dvoroková and Hodula (2013)

Table 3 shows calculated distance of Visegrad Group countries from EA17 average economic level. The distance was obtained by calculating the difference between level constant and calculated dummies parameters for each country.

Table 3: Calculation of Countries Distance from EA Average

2001-2007 average			2008-2012 average		
Rank	D	Value	Rank	D	Value
1	HU	0,86589	1 (2)	CR	0,61697
2	CR	0,90675	2 (1)	HU	0,62926
3	SR	0,94719	3	SR	0,64255
4	PL	0,96087	4	PL	0,66318

Source: Dvoroková and Hodula (2013)

A development and change for each of the countries is evident from the results shown in Table 3. Initially Hungary was ranked closest of V4 countries to the EA17 average followed by the Czech Republic, Slovakia and Poland. This is also clear from results in Fig. 4. This ranking however changed during the time and in the time period 2008-2012 first ranked and therefore closest to the EA17 average was the Czech Republic.

5. Conclusion

The area of economic convergence is paid much attention in general, whether it is the subject of the studies of individuals or institutions, or regarding to making economic policy by political leaders in individual countries. The economic convergence is a clear goal through the prism of

the creators of the economic policy of the EU. Topical is the social dimension of convergence becoming increasingly important as well, see e.g. Šotkovský (2011). The current European Commission President Jean-Claude Juncker puts the emphasis on it. From the methodological perspective however, we encounter many uncertainties, which may appear in the examination of economic convergence. There are several methods we can use to examine the economic convergence. Not all of these methods, however, lead to the same conclusions. Seemingly trivial methods for examining the relative and absolute convergence may lead to different conclusions. While one method can identify convergence between examined countries, the second one shows the divergence. These differences pointed e.g. Novotný (2010) and Smrčková et al. (2008).

If the researcher wants to get a basic overview of the development of the convergence process, the cross-sectional analysis seems to be appropriate input analysis. This allows the researcher to determine the trend for the entire period studied and for all of the economies researched. The most commonly method applied is the β -convergence approach, whose output is the linear regression line. The negative slope of this linear regression line identifies a convergence between the economies surveyed. Convergence analysis through β -convergence concept has one weakness unfortunately. It only focuses on average values in the reference time period. The results tell us whether the economies converge or diverge from steady state in time only. It serves us little when we try to measure the convergence process in particular years. To analyse this, a σ -convergence approach is much more suitable.

In more detail it is possible to examine developments in the different time periods for the same sample of countries using again cross-sectional data structure. For this purpose, it is advisable to apply the σ -convergence method. Using this technique, the researcher can determine whether the diverging development apart from the convergence trend in some years is visible, see Figure 3. If the researcher discovers such anomalies, he may closer focus on that time period and better identify the factors that influenced the process of convergence.

For a deeper analysis of the results obtained from previous research it is useful to examine the panel data of individual economies. When using the technique of the dummy variables i.e., it is possible to identify the convergence process in individual economies in particular and to test the significance of the various factors that drive the convergence. Generally speaking, all approaches are important for the analysis of economic convergence. For mapping the entire breadth of the issue, i.e. identification the factors that influence convergence, the development of the convergence according to individual years etc., it is most appropriate to use as many methods as it is possible.

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Proximity and Cohesion within the European Territorial Cooperation Programmes in 2014-2020

Małgorzata Dziembala

University of Economics in Katowice

Faculty of Economics, Department of International Economic Relations

1 Maja 50

Katowice, Poland

e-mail: malgorzata.dziembala@ue.katowice.pl

Abstract

The article presents deliberations on different categories of proximity and emphasizes the need to ensure proximity in order to improve cohesion within the EU. The projects supported by the EU within the framework of territorial cooperation programmes contribute to the intensification of economic cooperation and to the reduction of the existing barriers that hinder such cooperation. The programmes implemented under the European Territorial Cooperation objective are discussed, with particular emphasis on the programmes implemented in the current programming period of 2014-2020 and the effects of previous cooperation.

Keywords: *Proximity, Cohesion, Territorial Cooperation, European Territorial Cooperation, Interreg*

JEL Classification: *R00, R11, F02*

1. Introduction

The cooperation between the border regions, supraregional cooperation in the period 2014-2020 is, as in the previous programming period, being actively promoted in the EU under the European Territorial Cooperation. This applies to the cooperation initiated and implemented between different agents, including enterprises and territorial authorities. There are cooperation partnerships implemented that involve agents located in different countries. Through such territorial cooperation, institutionalized to a varying degree, international network relations related to trade, manufacturing and technology are initiated and developed which contribute to the socio-economic development of the areas concerned. The implemented programmes of territorial cooperation contribute to the strengthening of cohesion within the EU, not only in economic and social terms, but also in the territorial dimension.

Therefore, for the purpose of further deliberations, it is assumed that territorial cooperation is defined as “a collaboration between administrative bodies and/or political actors in Europe and beyond, representing their respective territories, which can also engage other stakeholders as long as their involvement is within the same institutionalised framework” (TERCO, 2013, p. 3). The concept of cooperation is inherent in the concept of proximity; however, it relates not only to geographic proximity but also to other categories, such as institutional proximity. The implemented European programmes contribute to a bridging of the gap between the actors and therefore to ensuring proximity and intensification of economic cooperation, which is

conducive to network relationships of varying scale and character. The appropriate level of proximity contributes to the development of mutual relations and economic ties, and to the flow of knowledge and technology between regions belonging to different countries, which also facilitates the learning process and is especially visible in the context of the implemented transnational programmes.

2. Problem Formulation and Methodology

The purpose of this article is to present the importance of territorial cooperation programmes implemented under the European cohesion policy, in particular in the new financial perspective of 2014-2020, in order to promote cohesion within the EU. It is claimed that these programmes contribute to reducing the existing distance, and therefore support proximity in varying dimensions between the regions and the entities located therein, while also promoting a learning process. This should increase the integration of territories in the EU, and facilitate an increase in the efficiency of the international territorial cooperation which is visible in the increasing economic integration of the territories covered by this cooperation.

To achieve the stated objective, this article includes an analysis of the relevant literature, documents and legal acts, and evaluation studies on territorial cooperation.

3. Problem Solution

European Territorial Cooperation is one of the objectives of the cohesion policy within which cooperation between actors situated in different countries is promoted. Due to financial support, the barriers to cooperation are reduced or even diminished and proximity and network relations are created.

3.1 Promotion of Proximity and Network Relations through Territorial Cooperation

Territorial cooperation takes different forms, as it can be implemented through twinning and cooperation of towns, cities and municipalities; cross-border cooperation; interregional cooperation (cooperation between regions located in different countries which are not direct neighbours across a national border); transnational cooperation (involving regions that cooperate within the framework of large identified macro-regions, but also regions from outside the EU); and transcontinental cooperation (between towns, cities and territorial units of the EU and those located in different countries). This kind of cooperation is also carried out under a special legal instrument of the European Grouping of Territorial Cooperation (TERCO, 2013, s. 3). Many factors are conducive to the development of territorial cooperation, and they can be grouped into two categories: endogenous and exogenous factors. The endogenous factors include administrative traditions (related to different administrative cultures), geographical and physical links, cultural and historical ties (proximity), the institutional framework, and existing economic disparities. On the other hand, the exogenous factors influencing this kind of cooperation include actions and initiatives implemented within the framework of policies (both national and supranational), financial resources and infrastructure. However, these two groups of factors should be considered as interrelated, due to the occurrence of a feedback loop (TERCO, 2013, pp. 46-47). In this context, it is worth noting that there should be an appropriate level of proximity between the regions, fostering the establishment of multiple relationships and links between territorial units, which also facilitates the creation of various forms to institutionalize mutual transborder relations and cooperation.

The following interrelated types of proximity can be identified: cognitive, organizational, social, institutional and geographic (Boschma, 2005). Cognitive proximity means that economic entities behave in a routine manner in order to reduce uncertainty. It also implies that people with the same knowledge and experience learn from each other, as a result of their combined cognitive abilities. This proximity facilitates communication. However, a certain distance is needed for the learning process to progress. The negative effect of excessive proximity could be a cognitive lock-in, and the risk of involuntary spillovers. Organizational proximity is associated, with networks, among other things, and very broadly regarded⁹ as “the extent to which the relations are shared in an organizational arrangement, either within or between organizations” (Boschma, 2005, p. 65). Social proximity is based on the assumption that economic ties are to a large extent embedded in a certain social context, while social relations may affect the economic performance of companies. Therefore, such proximity relates to the embedded social relations existing between actors which are based on trust (micro level). In contrast, institutional proximity is associated with existing norms, values, cultural norms and customs (i.e. formal and informal institutions) that govern the relationships between the actors, organizations, and mutual bonding activities. This kind of proximity is conducive to the learning process, because it reduces the uncertainty of action and contributes to lowering transaction costs. The last of the proximity categories mentioned, i.e. geographic proximity, is related to an existing spatial or physical distance occurring between economic entities. However, the distance both in an absolute and a relative sense is considered here. If the agents are concentrated, positive externalities occur. It should be emphasized that “insufficient proximity” in this dimension does not encourage the occurrence of spatial externalities. This kind of proximity (spatial proximity) facilitates the process of interaction and cooperation. However, co-location is not necessary if a central entity can coordinate tasks - there is organizational proximity as well as cognitive proximity. In this context the importance of networks is stressed - social networks as vehicles of knowledge creation and diffusion, which are not localized geographically (Boschma, 2005, pp. 62-71).

However, geographic proximity remains important for advancing processes of innovation. This is illustrated by the presence of agglomeration processes: innovative activity is still concentrated. The existing national borders remain an obstacle for the flow of knowledge, even when the regions are physically close (cross-border area) (OECD, 2013, pp. 33-36). The presence of an international border, as confirmed by the studies, affects the spread of knowledge and the spillover effect (OECD, 2013, p. 38).

The significance of different types of proximity is presented in the model of the cross-border innovation system (Lundqist, Tripple, 2013). The development of cross-border links in the implementation of a cross-border innovation system, a more integrated system, will be carried out in three stages. The first stage determines the least integrated system, exemplified by some Euroregions with a low degree of economic integration and a lack of innovative links and interaction in the field of knowledge. It is characterized by the occurrence of cognitive, functional and institutional distance, as well as physical proximity of a low to medium degree. The next stage, relating to a partly integrated system, involves the development of cognitive and functional proximity, as well as a high to medium degree of physical proximity. In contrast, the tightly integrated system is characterized by a cross-border innovation system (Lundqist, Tripple, 2013, pp. 454- 458).

⁹ More deliberations on this topic can be found in: (Klimas, Czakon, 2013).

Individual types of proximity influence the formation of economic networks and are an important factor contributing to the creation of such networks. Economic networks are a way of organizing existing relations which are particularly important for the transfer of such resources as tacit knowledge, trust and strategic information, i.e. things which are difficult to transfer within the market (Boschma, Balland, de Vaan, 2014, p. 243). As has been emphasized, proximity is mentioned among the numerous reasons for network creation, and in particular, a significant role is played by geographical, cognitive, social and organizational proximity. Nevertheless, as the cited authors suggest, the impact of proximity on the development of networks evolves due to the fact that even the networks themselves are subject to transformation. It should be also taken into account that there are many other mechanisms for the transfer of knowledge apart from networks (Boschma, Balland, de Vaan, 2014, pp. 243-261).

Proximity is conducive to networking and the process of learning. The aforementioned processes take place as part of interregional cooperation, which has a networking character thanks to the cooperation of regional authorities covering at least two regions, and also the agents located there. By involving different actors, such cooperation creates a network of connections for the transfer of knowledge and innovation and contributes to regional development. The aim of interregional cooperation is the development of production and intangible assets, also through jointly implemented projects. The development of telecommunications and data transmission technologies fosters the shortening of distance, and thus the growing importance of networks, perhaps contributing to the creation of interregional clusters (e.g. Baden-Württemberg) (Frąckowiak, 2008, pp. 417-418).

Cross-border territorial cooperation helps to solve various problems, fostering the exchange of knowledge and good practices and the creation of specific cooperative structures to this effect - such as project partnerships, diverse both in terms of geographical range and the number of agents. When moving to more advanced forms, the intensity of such cooperation increases (Dühr, Colomb, Nadin, 2010, p. 348). The most advanced form of cooperation is a transnational regional cooperation, in which the projects are based on enterprises existing or emerging in the functional region or in the transnational cluster (Böhme et al., 2003, citing: Dühr, Colomb, Nadin, 2010, p. 348). As part of the transnational territorial cooperation supported by Interreg programmes, a process of learning occurs (in particular in the framework of the interregional and transnational cooperation component), which can be determined by the following types (Böhme et al., 2003 citing: Dühr, Colomb, Nadin, 2010, p. 349]: individual learning - the partners get to know each other through cooperation and learning from individual persons with whom the interaction is made; intra-organizational - associated with sharing the experience arising from cooperation under the project partners organization, and inter-organizational - the experience and knowledge acquired by the project partners are used outside the organization and this kind of learning occurs at the regional, national and transnational scale.

The homogeneity of the regions does not automatically guarantee success arising from cooperation, as the experiences of Interreg show - a minimum of relations between the cooperating partners should exist (ESPON, 2006, pp. 222-223). The proximity existing between the cooperating agents and regions in different dimensions contributes to the intensification of cooperation between the regions and its effectiveness, which should also translate into real results in the form of the socio-economic development of regions involved in such cooperation.

3.2 Directions of Support under the European Territorial Cooperation Programmes in the Perspective of 2014-2020

The implemented cohesion policy involves support for territorial cooperation of a cross-border, transnational and interregional character, aimed at the implementation of joint activities. The measures to initiate activity in favour of territorial cooperation, backed up by adequate financial resources from the EU budget, have already been implemented in the 1980s. Starting from 1990, the Interreg initiative has been implemented in the subsequent programming periods. However, since 2007 it has been implemented as part of the objective of European Territorial Cooperation (ETC) (European Union, 2015, p. 30). The size of expenditure on the implementation of this direction of EU efforts has been increasing, but it has also been associated with an increasing number of countries involved in the cooperation, including the countries which did not belong to the grouping (Table 1).

Table 1: Territorial Cooperation Programmes Supported under the EU's Regional Policy

Interreg	Phase	Number of programmes	Support from the European Regional Development Fund (million EUR in real terms)	The number of Member States involved
0	1988-1989	14 projects	0,021	
I	1990-1993	31	1,082	12
II	1994-1999	59	3,500	15
III	2000-2006	79	5,100	25 (after 2004)
IV*	2007-2013**	92	7,800	27
V*	2014-2020	100	10,100	28

Explanation: * territorial cooperation programmes implemented under the objective of ETC.

** In the period of 2007-2013, the programmes for territorial cooperation also included the new instruments: IPA CBC and ENPI CBC. A new legal instrument was introduced: European Grouping of Territorial Cooperation.

Source: (European Union, 2015, p. 32, p. 33).

When it comes to the directions of cross-border cooperation, the dominant areas in the period of 2007-2013 included: improving knowledge and innovation for growth (21%), environment and risk mitigation (20%), attractive places to invest, work and live (18%), mobility and accessibility (13%) (http://ec.europa.eu/regional_policy/en/policy/cooperation/european-territorial/cross-border/#3). Interreg programme supports different aspects of territorial cooperation with different spatial dimensions (Table 2).

Table 2: The Dimensions of Territorial Cooperation Supported under Interreg and its Spatial Aspects

Dimensions	Spatial emphasis	Integration	Stakeholder level
Cross-border	Proximity	Contiguity	Local, regional
Transnational	Cohesion	Planning	Regional, supraregional, national
Interregional	Networks	Interactions	Regional, supraregional, local

Source: (European Union 2015, p. 35).

It should be emphasized that the cohesion policy has become an instrument for the implementation of the Europe 2020 strategy, and therefore it should contribute to the realization of its three priorities for the development of smart, sustainable and inclusive growth, and to make better use of investments and increase their impact (http://ec.europa.eu/regional_policy/EN/policy/cooperation/european-territorial/). In the new programming period 2014-2020, ETC promotes the harmonious development of the territory through cross-border, transnational and interregional cooperation from the funds of the European Regional Development Fund (ERDF). As highlighted in the regulation, the aim of cross-border cooperation is to find joint solutions to the problems of the areas suitable for this kind of cooperation, i.e. the border regions that belong to at least two Member States separated with a border, or at least one Member State and a third country, as well as to support integrated regional development. The transnational cooperation implemented on the identified transnational territories leads to support for the projects aimed at integrated territorial development and linked to the priorities of cohesion policy. However, in the framework of interregional cooperation covering the entire territory of the Union, the exchange of experience between regions should lead to the improvement of the effectiveness of cohesion policy. This exchange of experience covers various areas, e.g. it is focused on thematic objectives, it refers to the exchange of experience in good practices in the field of sustainable rural development concerning the implementation of ETC programmes and the analysis of existing development trends with regard to the objectives of territorial cohesion (para. 5, 6 and 7; Art. 2, Regulation No. 1299/2013 of 17 December 2013). In the new programming period, as with other programmes, attention was drawn to thematic concentration. It was pointed out that at least 80% of the financial allocation from ERDF and transferred for cross-border and interregional cooperation will be allocated to up to four thematic objectives out of 11 (Art. 6, Regulation No 1299/2013 of 17 December 2013). The new regulation also indicates that, in addition to supporting the investment priorities set out in the general regulation, investment priorities for ETC are supported as well as specific areas of territorial cooperation. When it comes to cross-border cooperation, it refers to the promotion of quality of employment and labour mobility, promoting social inclusion, combating poverty and discrimination, through support for investment in the areas relating to education and training as well as improvement and strengthening of the institutional capacity of institutions, and the efficiency of public administration. This also applies to programmes for transnational and interregional cooperation (Art. 7, Regulation No 1299/2013 of 17 December 2013). What should be emphasized is that, in operations carried out under ETC programmes there is a leading beneficiary (if there are two or more beneficiaries in operations) responsible for the implementation of operations (Art. 13, Regulation No. 1299/2013 of 17 December 2013). ETC programmes implemented in the 2014-2020 perspective are shown in Table 3.

Table 3: European Territorial Cooperation Programmes 2014-2020 and the EU Financial Allocation

ETC programmes	Number of programmes	Size of allocation (EUR)
Cross-border cooperation	Interreg V-A - 60 programmes implemented on the internal borders	6.6 billion
	12 Instrument for Pre-Accession Assistance (IPA)* cross-border collaboration programmes (cooperation programmes outside the EU)	242 million
	16 European Neighbourhood Instrument (ENI)* cross-border collaboration programmes (cooperation programmes outside the EU)	634 million
Transnational cooperation	Interreg V-B, 15 cooperation programmes	2.1 billion
Interregional cooperation	<ul style="list-style-type: none"> - Interreg EUROPE - INTERACT III - URBACT III - ESPON 	500 million

Explanation: * the cross-border cooperation was supported under the programme.

Source: Prepared based on: (http://ec.europa.eu/regional_policy/pl/policy/cooperation/european-territorial/; http://ec.europa.eu/regional_policy/en/policy/cooperation/european-territorial/outside-the-eu/, 2016-03-02).

As part of Interreg V- B 2014-2020, 15 programmes of transnational cooperation are supported, while in the previous period there were 13 cooperation programmes of this type and the focus was put on such areas as innovation, environment, accessibility and sustainable development (http://ec.europa.eu/regional_policy/en/policy/cooperation/european-territorial/trans-national/). In the new programming period of 2014-2020 the volume of financial resources allocated to this kind of cooperation amounted to 10.1 billion euros out of 351.8 billion euro allocated to cohesion policy, representing 2.8% of the total budget of the policy (http://ec.europa.eu/regional_policy/pl/policy/cooperation/european-territorial/).

3.3 The Results of the Cooperation under the Interreg Programmes

Additional funds called up under the Interreg programme contribute to the intensification of territorial cooperation, because as shown by TERCO results, without financial support this kind of cooperation could not be taken very far; in particular, this is emphasized among the new Member States (TERCO, 2013 p. 22-23). The programmes contribute to the development of territorial integration by solving cross-border problems; in particular, such significance is attributed to the Interreg A programme, as well as to the cooperation between twinning cities. Networks of cities are being created, for example, the Network of Cities of the Carpathian Euroregion, and the WHO European Healthy Cities Network. As part of Interreg B, it was also reported that the projects have contributed to the intensification of cooperation (TERCO, 2013, p. 24). As is evident from the experiences of territorial cooperation, the added value achieved includes the following: greater economic opportunities through infrastructure development, greater cultural variety, acquisition of skills and knowledge and the transfer of knowledge. The shared cross-border cultural background is also emphasized. It is pointed out that various

programmes, regardless of their thematic scope and beneficiaries, contribute to the development of relationships at a less intense level, which then go to a higher level (TERCO, 2013, p. 30). The importance of territorial cooperation for the development of infrastructure is also emphasized, in particular with regard to non-member countries as well as the new Member States. On the other hand, in the old Member States the joint promotion of enterprises, technology transfer, social services and the use of complementary resources are indicated. Physical barriers between the regions in international terms have become an opportunity for this cooperation, as they provide a basis for the development of initiatives within the framework of territorial cooperation programmes (TERCO, 2013, pp. 34-35).

4. Conclusion

Currently, territorial cooperation is intensifying, and is effected by the programmes supported under cohesion policy, integrating different entities and communities located in specific areas. It certainly should contribute to the learning process, and also to the creation of networks and the development of economic cooperation. Economic cooperation within the framework of cross-border cooperation is clearly facilitated by geographical proximity between the territories. However, other existing distances do not promote such cooperation. Therefore, it is necessary to ensure proximity in various dimensions. It will be then possible to move to a higher level of socio-economic cooperation and intensify it for the development of a cross-border innovation system. Certainly, European Territorial Cooperation programmes should initiate a process to intensify this cooperation, to be subsequently continued by the entities and communities of different countries. The contribution of the European Territorial Cooperation programmes to ensure different types of proximity should be further discussed.

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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

Joanna Dzieńdziora¹, Małgorzata Smolarek²

The University of Dąbrowa Górnicza¹, Humanitas University²

Department of Management¹, Institute of Management and Economics²

Cieplaka Str. No 1c¹, Kilińskiego Str. No 43²

Dąbrowa Górnicza¹, Sosnowiec², Poland

e-mail: jdziendziora@wsb.edu.pl, malgorzata.smolarek@humanitas.edu.pl

Abstract

Effective human resources management is one of the key factors determining the company success or failure. In the conditions of the European integration, higher and higher requirements defined by various stakeholder's groups are formulated. The relationship between the human resources management process effectiveness and a company results also have a key significance in shaping the employees' behavior. Small and medium enterprises are very important for the economy. That is why the effectively selected instruments of human resources management constitute the crucial element of these companies functioning. The paper aims at defining features of selected human resources management instruments in small and medium enterprises as well as these instruments assessment in relation to the survey research.

Keywords: *Human Resources Management, Small and Medium Enterprises, European Integration*

JEL Classification: *M21, M50, M59*

1. Introduction

Small and medium enterprises are not miniatures of big organizations. These entities are governed by other action rules and they focus on other values responding to external stimuli in a different way (Sipa, 2012). The work process is usually determined by personal relationships and connections of company owners (Lemańska-Majdzik, 2013, p.55). These relations can (but not necessarily must) influence the improvement of the work atmosphere, employee's motivation and loyalty. In companies of this type, the rational employment and effective usage of a work force occur. Also, the effective wages and motivation systems are taken into account. Human resources management process is crucial for constructing the value of an organization. It is connected with the development and implementation of effective human resources instruments, which provide the competent and involved employees ready to achieve company intended goals.

The objective of the paper is to indicate modern challenges of human resources management in small and medium enterprises with special attention to instruments, which have been forced and implemented under the conditions of the European integration. The following assumption has been accepted: "human resources management in small and medium enterprises is characterized by simple procedures and the lack of complicated tools. Human resources management specificity depends on the company range of activities."

2. Essence of Human Resources Management in Small and Medium Enterprises

In Poland the small and medium enterprises sector is characterized by large heterogeneity. This makes that there are not organizations where the whole human resources management process would look exactly the same. It is worth underlying that these companies do not often have opportunities to introduce solutions that are considered as manifestations of the human resources management high quality. In this case, “the individual for every team and the naturally created special procedure in the scope of chosen human resources management functions” will have a significant meaning. The procedure will play the important role in the development of this type of companies. It is worth indicating that all applied procedures should be structured and at the same time logically coherent (Strużyna, 2002, p.92).

Human resources management includes personnel functions of companies where human resources are perceived as an element of company assets and as a source of competitiveness. The strategic integration of personnel issues with business matters as well as active role of line management in solving personnel issues have been postulated. It is also indicated that there exists the need of shaping the corporate culture, personnel processes integration and constructing the staff involvement that is considered as a tool for achieving company objectives (Pocztowski, 2003, p. 36). Therefore, human resources management is a strategic and coherent method of managing the most valuable company capital – people, who by means of using their individual and corporate efforts, contribute to the implementation of all assumed company goals, thereby, strengthen the company competitive advantage (Armstrong, 2010, p.14). Knowledge and skills of the human resources department staff are strengthening the personnel involvement, what in a large extent contributes to the organization effectiveness. The research shows that HR staff skills and competences strengthen the human resources management process and they can constitute the element of the company strategic decisions (Sheehan, De Cieri, Cooper, Brooks, 2016, pp.161-181).

Considering the specificity of human resources management in small and medium enterprises, the number of employees as well as resources, which a company can allocate to the implementation of the human resources policy, should be taken into account. Small and medium enterprises employ relatively small number of employees, what causes that the employed staff must perform many tasks, which in big companies are generally implemented by hired specialists. The attempts of defining the human resources management process in small and medium enterprises can only indicate some features or behaviors that are typical for these companies. As it is mentioned by T. Oleksyn, such a system is generally simple. Applied methods, procedures and tools are not too complicated. Usually this happens because there are observed the lack of time, knowledge or the need to implement the complex processes of human resources management. The characteristic feature is also the system’s centralization. In most SME companies, decisions concerning the personnel policy are made individually by a company owner or by one of shareholders who usually expresses predominant influence on a company structure. Depending on the owners’ competences, this influence can present various types. High competences can show positive sides. But usually the strong influence of one person means also weak influence of other people – employees. Their knowledge, skills, creativity etc. are not taken advantage of in full. This results in wasting the human potential and it is irrational. This also leads to the fact that the decision maker is overloaded with work. In such a case it is easy to make mistakes. But in the case of manager’s low competences, his aggression, anxiety and the lack of trust towards employees are expressed. Such a company has difficulties in functioning in a business environment (Oleksyn, 2014, pp.128-130).

Owners and management of small and medium enterprises are usually involved in direct executive activities what causes that they do not have enough time and even competences for effective company management. The development of leadership in small and medium enterprises requires connections with many instruments of human resources management. Then it affects the quality of personnel management, internal relations, work satisfaction and in consequence the staff fluctuation (Sheehan, 2014, p. 545).

The next characteristic feature of human resources management in small and medium enterprises is small formalization; in fact, it is forced by provisions of law. Activities flexibility causes that procedures are created and changed during the course of a company functioning. It is connected with the fact that the range of tasks implemented at different company positions is very broad. This wide range of tasks is associated with the requirement of focusing on those tasks that currently need to be done, regardless the employee's position in a company. Such a situation has two sides. On one hand, it can cause the overload of duties and the lack of professionalism connected with the lack of specialization, but on the other hand, it can provide a company the flexible and fast response to business environment changes as well as it can provide employees the opportunity to develop their competences (Sidor- Rządowska, 2010, p. 18).

Looking at the human resources management processes in small and medium enterprises from the view point of employees' behavior, it can be noted that the staff appropriate motivation is becoming a key element. However, behavior motivating is no doubt a difficult process. It results from the complexity of human behaviors and from the necessity of an individual approach, both to each employee and to every team working on a given task. Additional inconveniencies seem to be connected with a problem of foreseeing the results of undertaken innovation ventures as well as with the employees' behaviors referring to these ventures. But on the other hand, the ability to motivate the staff effectively to create and suggest new solutions can prove to be one of the most crucial factors of the company success (Sadkowska – Bień, 2006, p. 332). In order to inspire corporate behavior, it is not possible to motivate only and exclusively by means of financial resources. The non-material motivators are equally important. They can meet the needs of a higher order (for example: expressing appreciation for employees' activities, even in relation to the smallest achievements, making work more interesting, involving employees in various undertakings and supporting them in their personal development). Stimulating the personnel behavior through new ideas is one of the most effective motivators.

Summarizing the written above considerations, it is worth indicating that although it is possible to find various human resources management instruments in small and medium enterprises, the minimalistic instruments containing the radical reduction of the number of functions dominate. In most micro-companies and small businesses there are not employees at all or the number of them is limited. It results in a reduction of human resources management functions to the necessary minimum. Some authors, including T. Oleksyn, think that the notion: "human resources management" makes little sense (Oleksyn, 2014, pp. 126-127).

3. Methodology of Author's Own Research

The research results presented in this paper were obtained during the implementation of the project titled: "*New trends and challenges in human resources management in small and medium enterprises in the Silesia Province*". The main research objective was connected with preparing a diagnosis of human resources management in small and medium enterprises sector.

The research was connected with the attempt to answer the following questions¹⁰: What is the method of managing the human resources in SME? What barriers limit the implementation of functions referring to human resources management in SME? Which modern instruments in the scope of human resources management are the SME owners familiar with? Which modern instruments of human resources management are applied in practice in SME? The following research hypotheses were presented: 1. Human resources management in SME is characterized by the simplicity of procedures and the lack of complicated tools. 2. The lack of time, knowledge and limited financial means in SME enforce the minimization of human resources management functions.

The survey constructed on the basis of closed questions was used in the research. The survey was directed to 1500 small and medium enterprises and it was conducted in the period of March-May 2015. The research was carried out on the basis of the correspondence method (mail). The result of completed research was the return of surveys in the number of 297 copies. Next 288 fully completed surveys were selected for further analysis. In the next step, the feedback concerning the structure of a research sample was verified. This verification referred to the following basic features: company size and forms of business activities.

288 companies participated in the research. The biggest group were micro-companies, where the employment (including an owner) was from 1 to 9 people (83,7% of indications). Companies employing from 10 to 49 people were represented by 13% of respondents and companies employing from 50 to 259 people were represented by 2,4% of respondents. Average employment rate in a group of micro-companies equaled 3,4 people, in the group of small companies it was 19,7 people but in medium companies the employment was 121 people. Small companies offered various business branches. In 54,9% of cases, companies declared multi-discipline activities, in 45,1% of cases they offered a single line activity. The companies' characteristic feature (common feature) was the predominance of the production activity. Regarding the age of researched companies, the largest group was the group of companies established in the period of 1990-2000 (45,8%). Most companies were established in 1994 (dominant – 1994). In the period of 2001-2010, 30,6% of companies were established. In 1989 and earlier there were established 13,5% of companies but the rest 10,1% of companies appeared in 2011 and later. Among the researched companies there were 36,5% of those that were managed by women and 63,5% by men. The biggest group of companies' owners was constituted by entrepreneurs at the age of 40 to 49 years old – 43,8%. The smallest group was the group of businessmen at the age of 60 or more years old – 2,1%. There were 26,4% of entrepreneurs at the age of 30 to 39 years old, 19,4% at the age of 29 and less years old, the rest 8,3% belonged to the group of entrepreneurs of 50 to 59 years old. Entrepreneurs with secondary education degree (43,8%) and higher education degree (41,0%). were predominant. Basic vocational education degree was possessed by 15,3% of companies' owners.

4. Analysis of Human Resources Management Process in Small and Medium Enterprises in the Silesia Province

The research results indicate that in small and medium enterprises the specialists responsible for managing the human resources (46,5%), external companies providing the accounting and tax services (35,1%), a unit specializing, among others, in personnel issues (12,5%) and a unit specializing only in personnel issues (5,9%) should be appointed. The most commonly used

¹⁰ Due to the limited size of the paper, not all research assumptions have been indicated. Only the assumptions, which concentrate on problems of the present scientific description, have been mentioned.

function of human resources management in Silesian SME is the selection of workers (92,7%), the least frequently used function is planning the recruitment (13,2%), what is provided in the Table no 1. It should be noted that these procedures are not formalized. They are only applied and modified according to the company's needs and an owner's preferences.

Table 1: Procedures of Human Resources Management in Small and Medium Enterprises

	Total number of SME	
	Total number of indications	Total % of indications*
Planning the recruitment for at least 1 year	38	13,2
Selection of employees with the application of various methods	267	92,7
Employees motivation (system of rewards and punishments established by a company)	189	65,6
Training for employees (optional)	132	45,8
Employees periodic assessments	67	23,3
Using HR computer programs	44	15,3

* due to the fact that respondents could indicate more than 1 answer, the results do not add up to 100%

Source: own elaboration.

In the case of the recruitment planning, the respondents, who were familiar with this procedure and were implementing it for the period of at least 1 year, were asked whether this planning in run regularly. Among them only 23,7% of respondents declared regular recruitment planning, the rest 76,3% of respondents plan recruitment when there appears the need for such a procedure.

The basic recruitment sources were: The Internet (65,6%), press advertisements (61,8%), friends and family (45,5%) and very rarely: work references (19,4%), Labor Office (7,3%) and own data base (1,4%). The most frequently indicated process of the personnel selection with the application of various methods is implemented on the basis of the analysis of application documents (84,4%) and/or on the basis of an interview (73,3%). The competence tests are used very rarely in SME - (8,3%).

Among the motivational instruments applied in the research of SME there dominated mainly the financial motivators such as: base remuneration, appreciation bonuses, allowances, service premium, special duty allowances, free of expense company products, shopping vouchers, company cars, laptops and company mobile phones. The remuneration rate depended on: a position in a company (97,6%), seniority or length of service (65,6%), work results (42,7%), professional experience (34,7%) and education (34,4%).

Additional and not obligatory employee trainings, which were provided in 45,8% of researched companies, referred to the improvement of trading and managerial skills as well as to the operation of specialized computer programs used in a company. The determinant considered in the case of delegating an employee for training as well as the factor that joined the remuneration with a performed work should be the system of the employee assessment, which was applied very rarely (23,3%). Although, the formal system of the employee assessment did not exist, the company owners assessed their employees by means of the control of performed tasks, subordinate's work observation and his achievements.

Applied procedures and tools in SME were easy (92,7% of indications – respondents could select more than 1 characteristics) and they lacked the high level of complexity (90,6%). Abilities of using procedures and tools (44,4%), costs connected with the above mentioned procedures and tools (32,3%) and possibilities to change a procedure being in operation (19,1%) seemed to be important.

The respondents were also asked about the reasons of not using the formalized human resources management procedures (respondents could indicate more than 1 reason). The basic barriers, which were indicated, were the barriers resulting from the limited financial resources (79,5%), the lack of time (69,8%) and the lack of an owner's knowledge (61,1%). The lack of a HR specialist (31,9%), too complicated tools (24,7%), too complicated procedures (20,5%) and the lack of the need to use these procedures and tools in HRM (28,8%) were mentioned rarely. Other reasons were pointed by 10,8% of respondents.

Owners of researched companies were also asked whether the implementation of human resources management functions could influence the increase of a company development. This question was answered positively by 57,3% of respondents and negatively by 34,7% of respondents. The rest 8,0% of respondents did not have their own opinion. Similar answers were provided in the case of the following question: "Are you satisfied with the employees' work and is it important to you?" The positive answer was provided by 52,1% of all respondents (including the answers like: "definitely YES"-16,3%, and answers like: "rather YES"- 35,8%). Satisfaction with the employees' work did not have any significance for 40,6% of researched entrepreneurs (including the answers like: "definitely NO"-27,4% and answers like: "rather NO"- 13,2%). The answer like: "either YES, nor NO" was indicated by 4,9% of all respondents. The rest 2,4% of respondents did not have their own opinion. This can show the SME owners' change of perception of some human resources management functions. The development of workers and the owners' concern for employees' work satisfaction as a basic element of the personnel motivation starts gaining new significance.

5. Conclusion

The paper presents procedures of human resources management in the Silesian SME. The most frequently used HRM function is the selection of employees. In practice the procedures mainly provide the selection of employees and the system of rewards and punishments. These procedures are not formalized but. However, they are modified and changed according to the needs and company owner's preferences. The characteristic features of these procedures are their simplicity and the lack of complexity. Recruitment planning is the least frequently applied practice in Silesian SME. The recruitment planning procedures are conducted relatively rarely and irregularly. It is evidenced that Silesian SME usually search for new employees without any prepared before recruitment schedules and procedures. Searching for new workers is mainly based on informal relationships, friends and family. On one hand, it helps assess a job candidate better because usually an employer has been familiar with his skills and expectations before, but on the other hand, it can be controversial and can cause the negative influence on the work atmosphere in a company.

Creating and improving an effective management system is not an easy task. It is worth indicating that this system is one of the most important elements affecting the work effectiveness in a company. Modern SME often take advantage of the out-of-date human resources management tools, for example: staff motivation is incompetently joined with work results. It is a basic problem of most of managers and human resources specialists. The staff dissatisfaction is usually connected with these elements. The work atmosphere and relations

are interfered and work effects are decreased (Dzieńdziora, Smolarek, Lis 2014). In connection with the above, creating the human resources management process, which would be effective and which would affect the owners', managers' and employees' awareness is becoming more and more important. At the same time, it can contribute to the better work results, to the increase of these companies' effectiveness recognizable on the market and in consequence to their development in the future. The appropriate choice of instruments, which are not necessarily complicated but adjusted to the tasks and the staff value systems, may in consequence decide on the company market success.

Taking into consideration the specificity of human resources management in Silesian SME, the number of employed people and the financial means that a company can spend on the human resources policy implementation should be noted. In SME the human resources management procedures, which are considered as the evidence of the HRM high quality, do not have to be implemented by all means. Very often companies do not have such opportunities due to the lack of the objective HRM implementation procedures conditions. Despite this, especially when a company wants to move from the small scale of operation to the bigger one - what means the company development, the SME human resources management process, which puts stress on the staff development, is particularly crucial. The empirical research confirmed the hypothesis: 1. Human resources management in SME is characterized by the simplicity of procedures and the lack of complicated tools. Applied procedures and tools in Silesian SME were easy (92,7% of indications) and they lacked the high level of complexity (90,6%). It also confirmed the hypothesis: 2. The lack of time, knowledge and limited financial means in SME enforce the minimization of human resources management functions. Silesian SME not use the formalized human resources management procedures because have got the limited financial resources (79,5%), the lack of time (69,8%) and the lack of an owner's knowledge (61,1%).

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. However, the indicated concepts are implemented rarely in SME. However, these concepts implementation results would highlight the following issues: defining the job appropriate work standards, increasing the level of the staff satisfaction, increasing the staff position on the labor market (Filipowicz 2014, pp. 36-37), developing the staff potential and educating the future managers (Cannon and McGee, 2012, p. 26), delegating authorities to the company workers (Zeffane, 2012, p. 333), strengthening the staff autonomy and independence (Nauman, 2010, p. 640). All of these should result in the employees' deepened involvement in formulating and achieving objectives, both professional and organizational.

Summarizing, SME should draw more attention not only to the mentioned above concepts but also to the fact that combining the applied tools together i.e. work results with the staff assessment and motivation, may result in the increase of a company effectiveness and in the further perspective, in a company development.

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Restructuring of Small and Medium-Sized Enterprises – the European Perspective

Piotr Dziwiński

University of Bielsko-Biala

Management Department

Willowa 2

Bielsko-Biala, Poland

e-mail: pdziwinski@ath.bielsko.pl

Abstract

Restructuring of enterprises is one of major features of economic development in European Union. This is a complex process which includes a large number of economic, financial and legal solutions. Small and medium sized enterprises (SMEs) play significant role in this process as they constitute more than 99% of European enterprises and account for about 2/3 of private sector employment as well as 50% of the added value produced by business in European Union. The policy however is mainly focused on large enterprises while relatively less attention is paid to SMEs. The paper presents general characteristics of SMEs restructuring which takes place in European states. It aims to analyze the current situation in SMEs restructuring at European level, explores the main factors of restructuring as well as identifies trends in this regard.

Keywords: *European Union, Restructuring, Small and Medium Sized Enterprises*

JEL Classification: *G34, G32, G33, L1,*

1. Introduction

According to the European Union classification (European Commission [online], 2003) small and medium-sized enterprises are divided into three groups: medium-sized enterprises, employing less than 250 employees and with an annual turnover of less than 50 million euro, small enterprises employing less than 50 employees and with less than 10 million euro annual turnover, microenterprises, i.e. businesses employing up to 10 employees with an annual turnover of not more than 2 million euro (Lukacs, 2005). On 1st January 2005 the new European Commission recommendation of 6 May 2003 came into force which modified the recommendations of 1996 changing the concept of small and medium sized enterprises by introducing a definition of so called micro-enterprises or enterprises employing on average less than 10 people, assuming that the company's annual turnover does not exceed EUR 2 million. The main reason for the introduction of the new recommendations was the need to increase the circle of entrepreneurs, who may benefit from EU state aid. Analyzing these definitions, it is clear that the concept of small and medium-sized enterprises relates to companies which: have relatively little capital; employ low number of employees; have little share in the market; the owner is usually a managing person (or group of people) which eliminates extensive administrative and bureaucratic structure; they are financially and legally independent from other business entities. According to the information provided the term SME refers to companies that meet certain criteria. They are based on the assumption that certain features are unique to small and medium-sized businesses. However, due to the ambiguity of

the features describing the size of the company, it has been accepted in practice that the definition of small and medium – sized enterprises is most commonly expressed by quantitative criteria, i.e. the average number of employees, the average amount of income and the value of fixed assets. SMEs enterprises account for over 99% of European companies and provide around two-third of employment in the private sector, as well as contribute to the growth of more than 50% of gross added value of enterprises (Eurofound [online], 2013). These enterprises are the engine of economic growth, innovation and employment and contribute to the competitive position of the EU (Floyd, MacManus, 2005). Similarly to the enterprises performing on a much larger scale, they are forced to undertake restructuring actions to secure its survival in conditions of increased competition and to tackle the determinants of today's economy (Mulhern, 1995). SMEs help to create a healthy business environment and to increase market dynamics (Liedholm, Mead, 2013). They are generally considered to be a major factor in economic development, regardless of the economic advancement of the country (Štverková, Humlová, and Křibíková 2011). SMEs are permanently present in Europe's political agenda and it's not only since the adoption of the Small Business Act for Europe (European Commission, 2008). Numerous priority areas of the Small Business Act refer to restructuring and there is some progress observed in their implementation in the Member States. Restructuring is also the subject of policy debate both at European and national level, which has resulted in the introduction of several support measures, some also explicitly targeted at SMEs wishing to restructure. However further works are necessary as it has been expressed in the European Commission's Green Paper of 2012 on "Restructuring and anticipation of change: what lessons from recent experience?" (European Commission, [online], 2012). SMEs are also present in the European Union Financial Perspective 2014 – 2020 (Matejun, 2014). Despite of importance of SMEs for Europe's economy surprisingly the research on the restructuring of small and medium-sized enterprises is scattered and fragmented both at European and national levels. The paper attempts to define the concept of SMEs restructuring, presents the forms of SMEs restructuring and discusses basic factors of restructuring.

2. The Restructuring in SMEs

The restructuring is a regular part of economic development. It can be defined as a fundamental, systemic reorganization of the enterprise. It involves upgrading or modernizing or modifying of the organizational structure and rules of enterprise's functioning in a manner that facilitates its functioning in current economic reality. Restructuring is a complex and extended in time process (Dziwiński, 2015). In order to maintain a sustainable and competitive nature of the undertaking, modern enterprises need to adapt dynamically to increasingly difficult and complicated conditions of development, such as, among others increased aggressiveness, dynamic processes of globalization, complexity and intensity of business environmental and new competitive requirements. Premises of the restructuring success of the enterprise is to increase the value of the company as well as to enhance its competitiveness (Hisrich, 2002). The restructuring in the SME sector as a rule is carried out in an ad hoc and unplanned manner, without drawing up formal restructuring plans. The exceptions to this rule are the activities which require significant capital investments, including relocation of production and international expansion (beyond its export activities), as well as any other, where changes are associated with high costs. Restructuring processes in SMEs are often delayed or depart later than it would be desirable, but after they began the decisions are usually taken quickly and in a flexible manner (Eurofound [online], 2013). The owners, as well as those involved in the enterprise's management are usually highly motivated to improve the functioning of the enterprise and saving jobs and their actions are characterized by a significant

level of personal commitment (measured in terms of invested time, effort and financial resources).

The issue of restructuring in small and medium-sized enterprises should be considered if based on the cumulative presence of certain external and internal factors. External factors such as the increase in demand, the impact of public policies, globalization and technological progress are the same as those factors observed in the case of large enterprises, while internal factors affecting the SMEs are specific and can primarily consist of (Eurofound [online], 2013):

1. The ambitions of entrepreneurs in expanding their activities, diversification or internal reorganization;
2. Limited financial or personnel resources that enable taking actions related to outsourcing, cost containment and efficiency improvement;
3. Dependence on a limited number of customers or suppliers, which means that all changes made must comply with the requirements laid down by them;
4. The change in ownership, resulting in the adoption of a new approach to the management and implementation of new business solutions.

The key constraints and factors that determine the success can also be classified as internal and external which have an impact on the enterprise. Such factors have a cumulative impact on the effectiveness of restructuring. Internal factors include characteristics and skills of the owner or manager and staff members, adopted approach to management and organizational culture. External factors, in turn, involve the availability of adequate support, the level of administrative burdens, relationships with business partners and the general nature of the business and financial environment. Providing access to financing also plays a key role. This need can be met using internal or external resources. Restructuring of small and medium-sized enterprises leads to expanding or limitation of the scope of their activities and to changing the way of management (i.e. due to the professionalization of the structures and procedures). This may have an impact on the range of products, internal processes and cost structure. All these changes in strategy and in way of functioning of the enterprise influence its economic situation and competitiveness in the market (Floyd, MacManus, 2005). When it comes to employment, restructuring in SMEs mainly affects the number of employees and the quality of jobs, and partly the remuneration and the nature of work. The process of restructuring of small and medium-sized enterprises includes both constraints and opportunities of its effective implementation. Significant barriers are: financial constraints, weak management, low level of competence and expertise, the characteristics of the owner, as well as external business environment. In turn, the challenges faced by SMEs include: deepening knowledge about available methods of restructuring, a stronger orientation on development, building a competitive advantage based on quality, promotion and distribution, increasing competitiveness and innovation, the use of low-grade enterprise management formalization and bureaucracy. The entities included in the group of small and medium-sized enterprises 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. However, these are the enterprises with considerable sensitivity and vulnerability to external and internal conditions, so the restructuring of these units shows some special features (Dziwiński, 2015). These conditions allow SMEs to work actively and develop in market niches and markets with lower potential. Small and medium-sized companies have the greatest impact on building lasting foundations for economic growth, better adapt to the rapidly changing situation on the market, and are the most innovative, making better use of the means of production. Small and medium enterprises play a huge role in the economy, affecting economic growth, better equipment market in a diversified range of products and also helps in lowering the unemployment rate. Small and

medium-sized enterprises are therefore a kind of stimulus for the economy. On those grounds, the restructuring of the sector should be given more attention, notably by eliminating legal and economic barriers to their development as well as by providing accurate information on available tools for the sector's Restructuring (Dziwiński, 2015).

3. Forms of Restructuring in SMEs

According to The European Foundation for the Improvement of Living and Working Condition seven main types of restructuring can be distinguished (Eurofound [online], 2013):

1. Relocation occurs when the activity stays within the same company, but is relocated to another location within the same country.
2. Outsourcing occurs when the activity is subcontracted to another company within the same country.
3. Offshoring/delocalization occurs when the activity is relocated or outsourced outside of the country's borders.
4. Bankruptcy/closure occurs when an industrial site is closed or a company goes bankrupt for economic reasons not directly connected to relocation or outsourcing.
5. Merger/acquisition occurs when two companies merge or during an acquisition which then involves an internal restructuring program aimed at rationalizing organization by cutting personnel.
6. Internal restructuring occurs when the company undertakes a job-cutting plan which is not linked to another type of restructuring defined above. This type of restructuring, however, also refers to internal reorganization that not necessarily result in the reduction of the number of employees, such as business transfers and succession, reorientation of the business purpose, diversification resulting in redeployment of employees or similar.
7. Business expansion occurs when a company extends its business activities, hiring new workforce. This includes, for example, insourcing or internationalization.

The most common form of restructuring in the SME sector in Europe is the internal restructuring, which involves adjustment of procedures or internal structures and diversification or transfer of ownership in the enterprise. It is often accompanied by other types of restructuring, i.e. the extension of economic activity. Bankruptcies and closing of businesses are quite common too. The importance of outsourcing is constantly increasing but it still remains at a relatively low level. The number of available information on mergers and acquisitions as well as relocations cases related to European SMEs is very small. In case of production relocation and transfer of economic activity this may be due to the fact that these actions are largely insignificant for the SME sector, while the lack of information on mergers and acquisitions can be explained by the fact that SMEs do not exceed the statutorily defined thresholds for notification and registration of this type of transformation (Eurofound [online], 2013). The attention should also be paid to the issue of financial restructuring in the enterprise, which can be applied to small and medium-sized enterprises. The enterprise's financial restructuring can be made in the short and long term. The first is the action of an ad hoc basis, the second is a longer-term action, which the basis is a concrete action strategy, and the result will be an investment profit within the permanent restructuring program. The most frequently used actions in the short – term restructuring are: rationalization of employment, debt reduction, reduction of fixed costs and short-term cash flow forecast. The most common activities undertaken in the framework of a long-term restructuring include: implementation

of the financial restructuring plan, downsizing, and delay in the execution of commitments, outsourcing and conversion of debt (Dziwiński, 2015).

4. The Barriers of SMEs Restructuring

Small and medium-sized enterprises are the specific market participants and have a limited ability to influence the external environment however, any environmental changes play a special role in their functioning. SMEs are particularly vulnerable to the impact of negative factors (such as unstable law or the poor state of infrastructure) which is often an obstacle for them making impossible any further business activities. Barriers of development of small and medium - sized enterprises can be internal (resulting from the internal factors within the entity and the way it is organized) or external which are the same for all enterprises but having different impact on them. A particular limitation of the development of small and medium-sized businesses are their insufficient financial resources and the need to seek alternative sources of financing. The ability to obtain external capital are limited, since the activities of small and medium-sized companies are considered to be rather risky because of the high probability of their liquidation.

The internal barriers concern the weaknesses of the enterprise which are derived from the inside of the enterprise itself and they depend on factors such as the size, organizational structure, business strategy, capacity, financial resources, material and human resources, knowledge and technologies, skills and competencies of employees, etc. In contrast, external barriers are identified with hazards in the business environment, and their strength increases with increasing degree of uncertainty and complexity of the activities in the economy and a decrease in the enterprise's potential.

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. The simplicity of organizational structures, ownership management, limited capital resources and combining positions are just some of the features of these entities that cause that they are exposed to numerous barriers of development, both external and internal. The external barriers are the same for all enterprises but have different impact on them. The conditions in which the enterprise operates significantly affect its functioning - for example, lack of information limits the ability to introduce new solutions, unskilled human resources result in employment shortages, changes in legal regulations cause uncertainty among entrepreneurs and excessive bureaucracy, poor infrastructure prevents economic activity, while changes in economic policy can significantly affect the increase of mandatory financial burdens. The internal barriers in turn result from insufficient resources of human capital, funds, enterprise management, the use of factors of production and the size and location of the company. In order to reduce the negative impact of these restrictions various initiatives are undertaken. The capital barrier which is considered to be one of the major limitations of functioning and development can be counteracted by the use of external sources of financing (Irwin, Scott, 2010).

5. Conclusion

Not much attention has been paid to the issue of SMEs so far both at European and national level which is surprising as SMEs are commonly regarded to be the basis of Europe's economy. Although current projects attempt to perform systematic analysis of this issue as well as to characterize the general situation in this regard, it is necessary to conduct further investigations. Some general recommendations and conclusions can be

formulated for potential policy developments in this area which are as follows: The possibility of conducting information campaigns to encourage entrepreneurs, employees and business partners (including banks) can be considered in order to take activities related to the restructuring in the timely manner and based on the support; the establishment of service points coordinating the activities of the entities providing support and offering the possibility of use of integrated support packages, which could contribute to an increase in availability of external assistance; current support should be evaluated in order to determine what further support should be ensured to be able to offer targeted measures; provisions to ensure low level of bureaucracy and efficient procedures implementation procedures should be the element of legislation for SMEs restructuring; entrepreneurs running SMEs should have the ability to access trainings for development of management skills and should be offered support provided by private consultants in each case and not only in extraordinary situations; the possibility of access to financial support and support for enterprise development should be provided.

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Contradictions of Formation of the Global Economic Governance System

Nikolay Eletsky

Don State Technical University
World Economy Department
Gagarin sq., 1
Rostov-on-Don, Russia
e-mail : nde527@yandex.ru

Abstract

The reasons and the factors of the global economic governance formation became the urgent issues of modern economic theory and practice. Emerging mechanisms of global governance reflect the transitional nature of the present stage of civilization. Under modern conditions global ownership only begins to form, which inevitably involves the use of socio-economic shell of previous historical types of economic relations. This particularly reflected in the use of the worldwide ownership in private-sector interests and in application of the mechanisms of global governance to achieve the goals of individual states, corporations, financial-oligarchic clans and other private entities. Contradiction of genesis and evolution of the global ownership and control mechanisms of the world economic system get the essential problem of the international political economy.

Keywords: *Globalization, Global Property, Global Governance, Contradictions, Interests of States*

JEL Classification: *F02, F50, F52, F59*

1. Introduction

The development of modern world economy leads to the profound qualitative transformation of its essential parameters and structural organization. The most important factor of this change is the economic globalization that has affected all the main levels, forms and elements of the world economic system. Trends of globalization manifest themselves presently in the development of global productive forces, relations of ownership and control in the global market economic mechanism. During and as a result of globalization, the primary economic intrinsic regularities of the source are formed on such a planetary level, and then manifest themselves in relation to the economic systems of particular countries, sectors and companies (Ardalan, 2010; Ardalan, 2012; Wolf,2004).

The evolution of modern productive forces creates the objective need in the formation of the system of global economic governance. This system represents an attribute item, and, along with this, the condition of the further evolution of a new, global-informational technological mode of production. This mode of production, based on the informational resources and forms of wealth, is originally connected with the global scales and mechanisms of economic activity. Information factors of production and forms of wealth genetically embody a quality of universality, which receive organizational and economic form of embodiment in attribute to them mechanisms of global governance. However, the new mode of production cannot arise except on the basis of the preceding, and for quite a long historical interval coexists with it,

drawing on its resources and gradually subordinating and transforming previous technological and socio-economic elements, parameters and structure of the production process.

The predecessor of the global-informational mode of production is the industrial one, and the peculiar feature of modern productive forces has become the actualization of the need to form global economic governance as a result of unidirectional vectors of the current dynamics of genetically and functionally dissimilar production activities. They are based on the resources as of the traditional type (with progressive limitations), as on the information resources, which socio-economic nature is initially characterized by a quality of universality and unlimited reproducibility. The trends of global informatization and neoindustrialization are dialectically interrelated; it reflects the characteristics of the transition state of the productive forces, when the development of industrial technology in modern industries is possible only by means of globalizing informational and computer technologies and globalizing mechanisms of economic management. The globalization of economic governance reflects the contradictory interaction of innovative communication elements of the productive forces of the information society and the need (centralized in planetary scale) to regulate the use of dwindling traditional resources.

2. Content and Structure of Contradictions: Problem Formulation

We can assume, that the main contradictions of the emerging global economic governance are (in a reduced and schematized form) the following key interrelated contradictions:

- between the realization, in the process of global economic governance, of the interests of all mankind, on the one hand, and interests of top-down social structures (states, corporations, groups, etc.), on the other, and above all – between globalization and americanization;
- between the principle of universality of global governance and the principle of nation-state sovereignty (between globalization and "Westphalian system");
- between the two main models of global governance –
- "Global economic organizations as the world economic government" and "Government of the dominant power as the world government";
- between the objectives of financial and real sectors of world economy;
- between globalization and regionalization (the contradictions of "glocalization").

The first of these contradictions has the substantial and ontological nature and is due to the impossibility of "instantaneous" appearance of the social system in formed and expanded mode. New social phenomena in the process of their genesis and evolution arise and operate within and through previously existed, antecedent social shells and mechanisms. Universality of global governance is also obviously contrary to the principle of nation-state sovereignty (historically formed under conditions of the "Westphalian system"). Global governance implies the unification of economic interactions and procedures, while the existence of national borders contributes to the reproduction of the features of these interactions and reflects the continuing objective special interests of individual States.

This complex of contradictions most clearly manifests itself in the framework of the European Union. Being a regional integration groupment, the EU simultaneously acts as a global actor in the field of economic interactions and as vivid expression of the dialectic of "glocalization". "There is no other example in history of nation-states willing to pool so much sovereignty in some domains while at the same time retaining so much autonomy in others" (Navratil, 2015). The emergence, development and overcoming of conflicts between national states and supranational institutions of economic governance is taking place now in the context of the

contradictions between the financial and real sectors of the economy and in terms of solving the problems of re-industrialization. Institutions and mechanisms of economic governance, that have emerged within the EU, are at the same time a preliminary model, a prototype of the future system of global economic governance.

3. Relationship of the Contradictions of the Global Property and Global Governance

The formation of the global property and global governance is a long and controversial process, at each stage of which actors of the global interactions seek to protect their interests. At this there appears the relationship of the genesis of the global property and the formation of institutions and instruments of global economic governance. For nation States this is currently of particular importance with regard to possible ambiguous aspects of their integration into global processes (Kovarova, 2015).

3.1 Genesis of the Global Property Relations

The formation of a global property occurs through various mechanisms, procedures and methods. The most obvious of these mechanisms involve direct recognition of certain objects as property of all humanity and the legal sanctioning of such recognition in the form of a contract between the leading actors of global interactions, with simultaneous or subsequent accession to this agreement the majority of other subjects of international relations. The most famous examples of this mechanism are the system of agreements on use of common resources of the World Ocean, the Antarctic Treaty, the Outer Space Treaties. The subjects of such treaties or agreements usually are the States, while in some cases an additional factor of international legitimacy is the conclusion of treaties under the auspices or with the participation of recognized global organizations, primarily the UN.

Thus, in the Preamble of the UN Convention on the Law of the Sea it's directly defined, that "the area of the seabed and ocean floor and the subsoil thereof, beyond the limits of national jurisdiction, as well as its resources, are the common heritage of mankind, the exploration and exploitation of which shall be carried out for the benefit of mankind as a whole, irrespective of the geographical location of States". This provision is specified further in part VII ("High Seas") of the Convention, which fixes, that "the high seas are open to all States, both coastal and landlocked" (article 87, "Freedom of the high seas") and "no State may validly purport to subject any part of the high seas to its sovereignty" (article 89 "Invalidity of claims of sovereignty over the high seas") (UN, 1982). It is obvious that the wording means a direct legal fixation of the world ownership of objects and resources of a significant portion of the World Ocean and reflects the legal consolidation and the streamlining of previously established economic system of the actual realization of the world ownership of these objects.

The Antarctic Treaty and other related international legal instruments, which constitute the Antarctic Treaty System (ATS), reflects the characteristics of the initial stage of formation of the legal status of the world property through the signing of intergovernmental agreements. On the one hand, the requirement to demilitarizing the nature of the activity and the proclamation of the freedom of research, in fact, implies that Antarctica is considered as the world domain and this, in particular, directly reflects the wording of the Preamble of the Treaty: "it is in the best interests of all of mankind that Antarctica shall always continue for ever to be used exclusively for peaceful purposes and shall never become the scene or object of international discord"; "the establishment of a firm foundation for the continuation and development of such cooperation on the basis of freedom of scientific investigation in Antarctica... accords with

the interests of science and the progress of all mankind” (NSF, 1959). On the other hand, the Treaty does not deny the legitimacy of the territorial claims of individual States in Antarctica (“Nothing contained in the present Treaty shall be interpreted as... a renunciation by any Contracting Party of previously asserted rights of or claims to territorial sovereignty in Antarctica” (Ibid. A. IV, 1, a.)). As a result, to date it turned up the contradictory and uncertain situation: a number of States declared their territorial claims to large areas of the Antarctic, and in some cases on the same territory claimed by the several States (neither the U.S. nor Russia such claims do not make and claims of other States do not recognize). Note that the ice of Antarctica contains 80% of world volume of freshwater, and given the progressive scarcity of this resource, it will inevitably aggravate the problem of the proprietary status of its global stockpile.

With the expansion of outer space exploration there actualize the problems of the ownership of space objects. The peculiarity of the wording of the Outer Space Treaty is, on the one hand, clearly defining outer space and space objects as the domain of all mankind, and, on the other, reflecting the conditional nature of the application of property concepts to extraterrestrial objects. (“The exploration and use of outer space, including the moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind... Outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means” (Disarmament, 2016)). If the considered objects are not the objects of space origin (“celestial bodies”), but are the objects launched from Earth into outer space, these objects apply traditional norms of proprietary relations and entitlements, fixed by the “Convention on Registration of Objects Launched into Outer Space” (UN, 1974), with the amendment that defined in this Convention liability for damage caused by launched space objects, indirectly recognizes the space, including near-earth space, as object international proprietary relations.

Expansion of existing and emergence of new areas of activity related to the exploration of space and, especially, the use of funds of private individuals for this activity (launch of private spacecraft, the development of private space tourism, etc.), revealed the incompleteness of the modern system of space law, including, in the aspect of proprietary relations. Thus, the status of outer space and celestial bodies as domain of all humanity tied in existing international space treaties with the prohibition of distribution of sovereignty of individual States on these objects, without reference to the eligibility of individual persons, and it became the basis for active speculation on the part of individual entrepreneurial entities. Today, the “Lunar Embassy”, the sale of plots on the moon, Mars and other cosmic bodies can still be perceived as a curiosity and charlatanism, but in the foreseeable future specification proprietary powers relating to activities in outer space, can become an actual problem.

In contrast to the relations regulated by the international treaties, expressly define certain objects of global significance as a possession of all mankind, technically more complex and indirect mechanisms of formation of global property rights arise through agreements that have functional or branch specificity. So, as a mechanism for the institutionalization of the global property rights to the global atmospheric resources can be, for example, considered the international agreements under the Montreal and Kyoto protocols (“Montreal Protocol on Substances that Deplete the Ozone Layer”, 1987; “Kyoto Protocol to the United Nations Framework Convention on Climate Change”, 1997) and decisions of the United Nations Climate Change Conference (Paris, 2015). The definition of limit of global harmful emissions to the atmosphere through the establishment of quotas of individual States can be seen as a

consequence of actual recognition of the atmospheric air as the property of all mankind and the development of mechanisms for the use of this global resource by the entities of downstream social levels on the basis of the principles established and recognized at the global level. Failure to recognize these principles by some States reflects the gradual and contradictory process of formation of global property under preservation of not only differences, but also diverse variants of opposites of global interests to the interests of national states, and especially to the interests of private sector (Global Economic Governance Programme, 2016).

The quota arrangement of harmful emissions into the atmosphere is concurrently an indirect form of limiting production in the relevant industries. Such limitation can be carried out directly – that's what happens in global oil production in accordance with OPEC decisions. The activities of this organization as by setting quotas of oil production and, through this, – by regulation of oil prices and the income level of the participating countries – can also be seen in the context of the process of formation of global property for the oil resources. The mentioned mechanism, in essence, determines the global income in this industry, and appropriation of income from the operation of the factor of production serves as the main form of economic realization of ownership on this factor. Along the way, OPEC's activity shows the dynamics of the dialectics of formation of global property and mechanisms of its interaction, at the stage of formation, with other, preceding and socio-descending proprietary relationships: the elements of actual usage of the resource as a worldwide are difficultly combined with the assignment of revenues at public and private levels.

The manifestation of the transient nature of economic relations in the process of the formation of global property, it can be observed also in the activities of the largest TNCs, transforming into a global corporations (GC), as well as in activities of their alliances. These corporations carry out the assignment of certain types of resources and the production of certain products on a global scale; they also set world market prices and profitability criteria in their respective sectors and sub-sectors of the global economy, form a technological and consumer standard, conduct globally significant scientific research and determine strategic directions of development. However, these corporations assign income on the basis of traditional principles and mechanisms of private property; the processes of global and private-corporate appropriation of revenue be identified.

Emerging, as a result of activity of GCs, "world profit" reflects the economic parameters of operation of the respective sectors and subsectors at the global level. Although its volumes depend on the ongoing by monopolies "optimizing" of the prices, incomes, and tax payments through transfer pricing and movement of income to countries with a liberal tax regime ("tax havens") using a whole system of measures (non-residents dividends, interest of foreign lenders, royalties and lease payments, etc.), but the essence of problem is not in it, - it's in the new economic nature of world profit. It embodies the global nature of property relations formed on the basis of the GC activities and not reducible to state-discrete economic relationships. The task of determining the exact amount of income ledger, subject to tax in certain country, and "fair" (from the point of view of individual States), economically and legally correct fixation of the GCs tax base is unsolvable in principle - it is due to the fact that the world profit by its real economic nature is the phenomenon of global, rather than state-discrete character, and it really has a global integrative-systemic nature, not reducible to the formal sum of the profit received by the divisions of these corporations in different countries.

Therefore, in actual use in modern international practice the five basic methods of determining the profits of TNCs with regard of transfer pricing, there are suggestions about switching to

the method of “global formula apportionment” (GFA). This method involves calculating the global profit of TNCs and taxation with reference to the activities of all divisions on a global scale, with division of the taxable base for certain state jurisdictions through integrative coefficients, reflecting the proportion of the corresponding state (specifically – affiliates of TNCs operating in this state) in the main production and financial indicators of the Corporation (the amount of assets, sales, employment, etc.) (Lindsay, 2000). The concept and formulation of the method of global proportional distribution (GFA) embodies the idea of a political-economic nature of TNCs as subjects of global ownership, operating in the relic for them forms of discrete-state separation of global market.

Transitional nature, reflecting the process of establishment of the global proprietary relations, is manifested not only concerning the productive resources, but also towards other objects, such as objects of cultural heritage, defined as world possession. Located on the territory of particular States, such facilities are, however, subject to surveillance, monitoring and partial funding from international organizations. The transitional nature of the relationship is manifested in this case in a different aspect - objects of the world cultural heritage can also be seen as tourist resources used on the basis of traditional economic principles, and as the phenomena of non-economic, civilizational order with the increasing dominance of spiritual values criteria. It is obvious that in the future this domination will become predominant.

But the greatest prospects in the foreseeable future are inherent to the directions of development of world property due to the transition to a new, global-information mode of production. In the economic system of this mode of production the role of the main resources and the main forms of wealth goes to the phenomena of information nature; it's changing as object as subject structure of property relations. Herewith at the early stages of a new mode of production it remains the influence of traditional forms of property which existed in preceding ages, therefore, the mechanisms of ensure and protect the profits of information resources owners and, in particular, intellectual property rights become an important social problem. However, in process of the developing and strengthening of the role of information forms of wealth, qualitatively new social nature of these forms becomes increasingly evident. First of all, this relates to the nature of information as a universal resource and wealth, to the "all-pervasive" character of information, to the universality of its distribution, application and use. The monopolization of private appropriation of the universal resource is not only inadequate to the new principles of social interactions, but also, most importantly, it is technically impossible (and that is the most profound objective basis of those social contradictions that surfaced in the modern world, for example, in connection with attempts of practical implementation of the "anti-piracy" laws). The nowadays reality is the possibility of free use of enormous amounts of information contained in global information networks, and use free or for a nominal fee that reflects a new social phenomenon – the emergence of the system of the world ownership on information with the identification of all mankind and all the descending levels of social subjectivity, up to the individual person, as the subject of property.

3.2 Features of Models of Global Economic Governance

The analysis of globalization of productive forces and property relations allows to answer the question "why" there is an objective necessity of global economic governance. In turn, the answer to this question inevitably leads to logically following from it new questions: "who" "how" and "why". Who controls the global economic processes, who is the subject of managerial decision-making in the world economy? How, through what mechanisms is this governance realizing? And why, i.e. in whose interests is it carried out? In the last decades there arose, transformed, and interacted numerous "sprouts", the elements and institutions of

global governance; identified diverse aspects of their incompleteness, imperfection, and lack of effectiveness - but, at the same time, it became increasingly obvious inevitability of their future development, overcoming the typical for initial stage restrictions, the objective necessity of improving and strengthening the role of global governance structures in the regulation of planetary processes.

Because property is a social-economic form of appropriation and, in the first place - assigning of factors of production, so the contradictions of the genesis of global economic governance due to the contradictions of global property, in accordance with the general pattern of implementing the management as function of property. At the same time, on the other hand, the genesis of the global economic governance depends on mechanisms of global political governance, which formation occurred much faster and more intense due the social nature of politics as concentrated economics and the specifics of international military-political contradictions in the nuclear age. In this regard, it is quite natural that the leading institutions of global economic governance were created under the auspices of the UN - organization, initially oriented for regulation of military-political problems and disagreements. However, the apparent interconnectedness of political and economic regulation has led to the fact that at the stage of preliminary negotiations about the establishment of the UN key decisions concerning the global structure of postwar financial and monetary system (Bretton-Woods conference) were adopted, then there were rather quickly agreed the modified principles of international trade (GATT), and the UN integrated previously encountered globally significant economic organizations (ILO).

As a result, in the framework of ECOSOC it formed although organizationally amorphous, but functionally viable prototype, "a draft version" of the global economic government. The actions of that government had fragmented and situational character, were dispersed in separate, few agreed with each other industries and functional areas and projects, - but, nevertheless, the appearance and aging of the elements of global economic governance, particularly in the areas of international finance and international trade, had place. The contours of the typical algorithms of the Genesis of these elements were delineated in accordance with the law "the function creates the organ". As a rule, on the basis of international agreements there arose the institutions of implementation of these agreements and monitoring of their realizing, which, in a case of growth of objective global significance, transformed into the bodies of global governance. Similar mechanisms were observed in the activities of the GATT/WTO (Fojtikova L., 2015), IMF, WB, OECD, ILO, IAEA, OPEC and other organizations (as well as global governance in the sphere of political and legal relations - in the activity of UNSC, UNESCO, WHO, international courts, etc.). We can say that as a result of these processes such organizations as the IMF, WB, FSB have become in a number of aspects of their activities to acquire the functions of the divisions of the global Ministry of Finance, just as WTO, WCO, UNCTAD, UNCITRAL - functions of the divisions of the global Ministry of trade.

The tendency of transformation of the economic structures of the UN to the real world economic government was inhibited by the collapse of the bipolar world order. The UN ceased to be an instrument of balancing the interests of the two superpowers, and simultaneously there has been an overall decline of the global role of this organization. Another mechanism of global governance has come to the fore, and this was associated with the performance of global governance functions by the government of the strongest power. In these conditions the content of the work of many UN agencies has changed- retaining the shell of international organizations, they are, in fact, turned into instruments of realization of the United States

interests. The government of this power had exercised functions of global governance, seeking to subdue the course of global processes to its own purposes. The most obvious examples of this mechanism are embodied in the activities of such financial institutions as the IMF and the World Bank. Their status in the UN structure became more and more formal, while real activities, in cooperation with the functions of the Fed as the regulator of the global monetary and financial relations, turned into the elements of the dollar seigniorage mechanism, which provides US the possibility of consumption about 40% of the world's gross product, with percentage in its production about 20%. From time to time the United States show its dominance over international organizations (and not only economic), changing arbitrarily their leadership, "guilty" of real or imaginary attempts of independent policy-making - as it was, for example, against the heads of the IMF, FIFA and FIDE.

At the same time, the increasing role of global financial institutions under the auspices of the US reflected another key feature of recent decades - the growing importance of the financial sector of the global economy and its dominance over the real one. Individual industries and sectors of the world economy are subject to direct control by the globalizing TNCs and international organizations, while the world economy as whole is generally regulated indirectly, through the dollar mechanism of international payments and instruments of speculative-financial capital. The results of such regulation, from the point of view of the problem of world economy sustainable development, are contradictory: on the one hand, the insurance and reinsurance of risks in the real sector of the economy and hedging financial transactions, "spray" the risks and potential and actual loss of different etiology on the entire global economic network, minimizing them at the microlevel; on another hand - effect of the "inverted pyramid", due to the multiple excess of total derivatives over volume of the real trade of non-financial goods and services, creates instability and uncertainty of the status and development of the whole system of the world economy. For nearly a quarter of a century a number of eminent experts (including Nobel laureates in Economics), focusing on the first of the given phenomena, expressed the opinion that in modern conditions global economic crises are impossible.

However, the events of 2008-2009 (Dvoroková K., 2014) and the subsequent confusions of the global economy have discovered the falsity of this opinion; it was found that minimization of microrisks and their "dissolution" in the global economic-financial network are not identical to the strength of the network itself: it is prone to systemic global risks that are due to the sharp disproportionality of the speculative-financial and real sectors of the world economy and to the contradictoriness of functions of dollar as the world reserve currency, on the one hand, and national currency on another hand. The global financial and economic crisis has become a watershed event in the development of the system of global economic governance in two important aspects: firstly, it demonstrated the historical ultimacy of the unipolar management model; secondly, it revealed the inefficiency of the management of global economy on the basis of submission of real sector to the speculative-finance one. Both of these aspects are reflected in the "reformatting" of the system of international economic relations and management through the transition to a "multipolar" global governance and strengthen control over the activities of global financial institutions. Concrete manifestation of this tendency is found in the establishment of a new global status and a radical expansion of the functions of the "G-20" and in the dominant orientation of the managerial impacts of this group on the problems of global financial relations. In addition, it became noticeably manifest sharply growing global economic role of China, Newly Industrialized Countries, and new economic organizations and associations, such as the BRICS, SCO, AIIB, TPP. The urgent need for fundamental change of the nature of interrelations between real and financial sectors of the

world economy was clearly deceived also in connection with the task of re-industrialization of developed countries. There's obvious the USA's attempts to complicate the processes of re-industrialization in the EU and in Russia by diversion of their resources to military-political conflicts and the problem of migrants, as well as the USA's aspiration to retain the role of primary centre of global economic governance through the establishment of the proposed TTIP and especially ISDS mechanism in its framework (Vaničková R., Zeman R. and Bílek S., 2014).

The system of contradictions of global economic governance also includes the contradictions between TNCs and the principle of state sovereignty of individual countries. Especially sharply these contradictions are manifested in relation to small and medium-sized countries, unable to effectively defend its sovereignty in opposition to the GCs, primarily for economic reasons. It's known that the cost of products manufactured by ten largest GCs, exceeds the combined GDP of one hundred countries with small volumes of economy. To some extent these contradictions are also evident in the attitude of large countries, but in interactions with them GCs strive for the reconciliation of interests and the use of the military-political capacity of major powers as a tool to achieve their economic goals and to guarantee favourable conditions for the functioning. As a result, to date, formed a kind of symbiosis of the GCs and the military-political apparatus of the major powers in order to form a mutually beneficial mechanism of the global economic and political governance.

3.3 Actual Problems of Development of Financial and Informational Instruments of Global Economic Governance

To date, the mechanism of global governance generally and the mechanism of global economic governance particularly revealed the special role of informational and financial tools. The key importance of these instruments is due to the intrinsic internal characteristics of the present stage of economic civilization, whose technological side of the production method corresponds to the parameters of the information society, and socio-economic – to the global-financial stage of the capitalist socio-economic formation. Informational unity of the global social system, the material basis and prerequisite of which are elements of modern productive forces, embodied in information and communication technology (ICT), determines the role of information tools in the framework of global governance. A continuous flow of economic information reflects the results of the current state and prospects of development of world economy, as well as national and regional economic systems. Informatively significant trends of their evolution represented in widely available forecasts on short, medium and long term. Similar information is also continuously reproduced pertaining to busyness and financial units and complexes - firms, banks, MNCs, financial-industrial associations etc. Bourse, banking, insurance, rating and other information platforms conduct as ongoing monitoring, as extrapolation modeling of economic processes at the macro, meso and micro levels. Price information signals are of key importance for the market, and the world market system operates in a mode of continuous analysis of pricing information, including the financial markets quotes.

However, the movement of economic information, as well as all socially relevant information generally, by no means is the spontaneous process. Production, selection and dosage, grouping and summarizing, the hierarchy and outline, flow and interpretation of information are carried out consciously; they are performed by the subjects of global governance and act as implementation of their economic power mechanism. Not by chance this issue was in the spotlight in connection with the discussions of the causes of the global financial-economic crisis of 2008-2009, as well as in the context of searching for ways out of it and prevent similar upheavals in the future. The global crisis as a "crisis of confidence", the essential attributes of

modern global markets as markets of expectations and markets of risks are inseparable from the production of economic information and management of information. That is why at the meetings of the "G-20" the need of strengthening of control over the informational activities of rating agencies had highlighted as the urgent measure for the prevention of provoking crises. The global credit ratings` market has been formed as an oligopoly structure. The "big three" of the New-York agencies is its backbone. Standard & Poor's captured 40% of the global market, Moody's – also 40%, Fitch – 10%. Mentioned "big three" bears a significant share of responsibility for the "unwinding" of the global crisis and for provoking a number of other crises and some negative phenomena in the economy of many countries (including the United States). "Twenty" demanded to increase the information transparency of rating agencies, to disclose the methodology of their estimates, to resolve conflicts of interests, to tighten government regulation (registration, oversight), to reconsider model "The Issuer pays for the rating", the result of which often is bias estimates and projections, leading to economic losses of macro- and microeconomic subjects.

It is no secret the political engagement as mentioned, and other manufacturers of different kinds of ratings, including in scientific and educational spheres. Arbitrary and artificial criteria, that do not reflect the real situation in various spheres of economic and social life, become an instrument for inter-country and inter-firm competition and means of realizing the interests of the most powerful actors in global interactions, aggravating thereby the already acute contradictions of globalization. The reflection of these contradictions was expressed in the tendency of creation of national rating systems in various fields to promote national and state information and economic security and sovereignty (Honová I. and Hon M., 2014).

When the market-capitalist system reaches the stage of global finance capital, the global information management in the financial sector becomes the leading value in the mechanism of the information support of control actions on the economic processes. The subjects of the control over the movement of global financial flows have become key actors in the management of the world economy as a whole. Global finance capital is personified in a closely intertwined groups of world financial oligarchy, the representatives of which constitute the real global economic government. Furthermore, the leading actors of international economic interactions have reached agreement on strengthening the functions of the hardware structures of the G-20 in the regulation of global financial relations, in this connection the Forum for financial stability, established in 1999, was at the London summit (2009) transformed into the Financial Stability Board (FSB) with significantly enhanced functionality. The Board has subsequently included in its composition the Ministries of Finance and Treasuries of the countries of "twenty", their Central banks and regulators, and leading international economic and financial organizations (OECD, WB, IMF, BIS, ECB, European Commission) and international institutions settings standards (Basel Committee on banking supervision, the Committee on the global financial system, Committee on payment and settlement systems, International association of insurance supervisors, International Accounting Standards Committee, International organization of securities commissions). It's actively discussing the idea of concluding an international Treaty for a global legal institutionalization of the functions of the FSB to give it a supranational authority, the binding nature of its decisions to national jurisdictions and the corresponding transfer of part of the financial sovereignty of States. Such institutionalization, in case of its international-legal registration, would be a decisive step towards the legal recognition of the existence of a world economic government, or, at least, its financial unit, which, in cooperation with WTO and other global international organizations would be transformed into a real mechanism of control the world economy. The persistence of the current system, without giving FSB

supranational functions, is fraught, according to experts, with danger of fragmentation of the global financial system. Very likely becomes the reproduction of the risk of a new global crisis, the emergence and the "popping" of new financial bubbles and bankruptcy of the globally significant financial institutions (defined, from the point of view of the world economy's stability as "too-big-to-fall").

The contradictions of the "financial trilemma" (the simultaneous achievement of financial stability, development of financial integration and national financial policies), the difficulties of establishing a Single Supervisory Mechanism (SSM), pain and the asymmetry of gains and losses from the restriction of monetary sovereignty depending on the relative strength and weakness of the subjects of integration interaction – these and other contradictory factors act as objective constraints in the formation of mechanisms of global financial governance. Opposing impulses manifest themselves as trends of moving to national and regional currencies in bilateral and multilateral calculations. We must also take into account the role of political contradictions, which are the most important reason for the desire to create national payment systems in order to ensure national economic security

Considered processes are connected with the obvious fact that the performance of global governance functions requires adequate material and financial resources. In the model of "the government of the strongest power as world government" part of the global resources distributed through the financial mechanism for the United States, is used by the government of this State for the regulation of global processes. Global regulation undertaken by TNCs, is realized by financial means (more specifically – monopoly-high profit) of these corporations. Activities of international organizations, including management, are based on resources accumulated from the contributions of countries and organizations participating. Single (to authorized capital) and/or periodical contributions, in fact, become elements of an emerging system of global taxation. The diversity, fragmentation and uncertainty of the principles and mechanisms of these fees reflect the conditions of the initial stage of the emergence of this system, and the constant replay of certain elements and the emergence of new ones demonstrate the sustainability trends of its development and strengthening.

Noted mediated mechanisms of the actually encountered global taxation combined with a constant discussions of the proposals for the introduction of its open and direct forms – and, especially, in an embodiment of the percentage allocations of GDP on accounts of the specialized tax and financial departments of the UN. However, specific proposals on this issue triggered many objections from the participants of global economic interactions. Another widely discussed proposal is the concept of so-called extended "Tobin tax", under which, the objects of taxation are speculative financial transactions. Even with a minimal rate on the order of 0.1-0.25 per cent, making the tax almost imperceptible for participants of financial transaction, it would be currently worth more than a trillion dollars annually. Prospects as noted above, and other hypothetical models of direct global tax depend on the subsequent evolution of subjectivity of the planetary governance and resolution of related conflicts. Potential consent of globally important economic actors for the introduction of a system of permanent direct global taxes depends on their confidence about the fairness and effectiveness of the use of derived tax funds by world government.

4. Conclusion

The formation of the global property and governance is inherently an objective process, but its specific implementation may take various forms with different potential of contradictions. These contradictions reflect the transitional nature of the present stage of civilization. Abstract

definitions of global economic governance as a phenomenon designed to achieve the interests of all humankind, face with the practical impact of previous historical forms of private appropriation. The real transformation of planetary resources to being the domain of all mankind – is a matter for the future.

In addition, note that the formation of the global property and governance is a long historical process, during which there are possible changes, sometimes very significant, of position and role of individual actors of the world economy in its structure and hierarchy. In the last decades it was convincingly demonstrated, for example, by the NICs and, especially, by China. At each new stage of globalization, participants of international economic relations meet new challenges to improve the efficiency of integration into the world economic system, to strengthen international competitiveness and prospects for further development.

Various aspects of the contradictions of global economic governance constitute the object of study for such scientific disciplines as “world economics”, “international economic relations”, “geo-economics”, “economic globalistics” and several others. For each of these Sciences, the political-economic approach, identifying the content, role and contradictions of property relations, is the methodological-theoretical basis. At the same time, being allocated, generalized and systematized as a distinct research direction, this approach forms the subject of special branch of modern scientific knowledge – that`s the global political economy.

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Economic Activity and Economic Ethics in the Context of Globalization

Jaromír Feber¹, Jelena Petrucijová²

VŠB - Technical University Ostrava¹, University of Ostrava²

Department of Social Sciences¹, Faculty of Social Sciences²

17. listopadu 15/2172¹, F. Šramka 3

Ostrava, Czech Republic

e-mail: jaromir.feber@vsb.cz, jelena.petrucijova@osu.cz

Abstract

The article reflects the historical changes in the role of morality in the economic activity. 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. The economic ethics addresses the issue of what the economic activity should be like to contribute to the realization of the primary goal of humanism as all-European value. The main issue of economic ethics is solving the conflict between the internal logic of the economic activity, which is directed at making profits, and universal moral demands of a democratic society. The economic activity as a partial area of the society is assigned to the field of heteronomous morality, which formulates standards regulating conduct in a specific area. At the same time, however, the economic activity is analysed as a part of the general moral space in which universal autonomous morality should apply. Heteronomous morality is based on ethics of utilitarianism and autonomous morality on ethics of deontology. There are two basic directions of development of economic ethics: ethics of personal moral responsibility and institutional ethics. Economic activity rooted in economic ethics is seen as important but not sufficient precondition of the European integration. Its crucial prerequisite should be human-focused approach corresponding to arising of European demos sharing humanism as all-European value.

Keywords: *Autonomous Morality, Economic Ethics, Globalization, Heteronomous Morality*

JEL Classification: *A13, A14, B10.*

1. Introduction

European society is characterised by its social and cultural diversity, which gives us great strength but also presents challenges. European society can be seen as moving towards a belief in humanism and equality, linked to a desire to challenge and counter inequalities, to promote social cohesion, and to work for distributive justice. But diversity also means that there are inequalities and socially, economically and culturally disadvantaged groups and Europe is, to some extent, addressing these inequalities and injustice whilst also preserving its diversity. European social values are not in themselves unique and are shared by some other nations and regions of the world. But they are nevertheless a particular combination, articulated in a distinctive way. They also have a degree of fragility and need to be defended and extended, and we sometimes need to be better at putting them in practice. (Compare, Ross, 2008, pp. 41-42)

This paper aims to analyse the relationship of heteronomous (institutionalised, namely, professional ethics of economic conduct) and autonomous ethics (i.e. ethics of personal moral responsibility including the responsibility of economic agents) and its impact on humanism rated among universal ethical principles. Being a normative principle the human-focused approach of the society is considered as an essential precondition for promoting the idea of European integration, which can be seen as a step towards global integration. The applied line of reasoning has value character and relies on the development of the current economic ethics, which rejects the concept of emancipation of the economy from morality and promotes the idea of the necessity of moral regulating economic activity. A condition of the general humanist objective of creating a good society (human-focused) presupposes thinking and the application of general moral values forming a necessary prerequisite for the realization of integration processes of EU.

In our methodology the historical philosophical (ethical) approach is combined with analysis and interpretation of the political philosophical texts including their contextualisation to get beneath the surface meanings and examine more implicit social meanings.

2. The Concept of the Relation Between the Economy and Morality in the Traditional and Modern Society

Opinions on the role of morality in the economic activity has historically been changing. In the traditional society, morality was conceived as an important regulator of the economic activity. This view was also expressed in the works of classical philosophers. Plato, in *The Constitution* (2008), argued that the unlimited pursuit of wealth is the cause of all injustice and human vices. If we did not regulate the economic activity, we would jeopardize the functioning of the state. Aristotle, in *Nicomachean Ethics* (2000), analysed the conditions of fair exchange, and came to the conclusion that the exchange between the producer and the buyer is fair if it avoids extremes, which are the enrichment and the loss. In the Middle Ages, Thomas Aquinas, in the work *Summa Theologica* (1993), wrote that if the seller sells a thing for a higher price than it is worth, and the buyer buys it for a lower price than corresponds the value of the thing, then the sellers and buyers deceive each other. Moreover, in the Middle Ages, an exchange was considered fair if the material and social conditions of its participants were taken into account. The manifestation of moral good in economic relations, for instance, was when thing was sold for a lower price to a poor person than to a rich one.

In modern times, the economic activity has been autonomized. Already T. Hobbes, in *Leviathan* (2015), wrote that the value of goods is determined exclusively by mutual agreement and if this agreement is on a voluntary basis, the exchange is fair at the same time. A view has been developing that the economy is governed by its own rules, which transform actions of economic subjects into social good, i.e. increase in production efficiency and wealth, independent of the will of these economic subjects. This is obviously a sense of the metaphor by A. Smith on “the invisible hand of the market”. The market paradigm in the conception of the economic activity negates the issue of morality. The desire for wealth and the pursuit of the biggest possible profits, i.e. the motives that were not considered virtues in a traditional society, become respected and are recognized as essential movers of social prosperity. A. Smith, in *The Wealth of Nations*, concludes that good is achieved through monitoring market targets as a branch effect of egoistic motivations (Smith, [1776] 2015). It neutralizes the moral regulation.

In the Enlightenment philosophy, a model behaviour of a capitalist entrepreneur is described through the concept of rational egoism: while realizing his private interests, the entrepreneur realizes and social interests as well. Rationality lies in the fact that within the business activity focused on the profit, the entrepreneur is able to partially take into account the moral requirements, because he is aware that the order and stability of the society, which is supported by respect for morality, is also in his personal interest. In the post-Enlightenment period, K. Marx, in *Capital*, points to the dangerous nature of normatively unrestricted private interest and he claims that capital fears the absence of profit or too little profit in the same way as the nature is afraid of emptiness. To achieve an adequate profit, capital is willing to do almost anything. When it comes to the maximum profit, there is no crime he would not be willing to commit. If war brings profit, capital will pursue it.

The concept of emancipation of the economy from morality was expressed in the current economic neoliberalism. M. Friedman, in the work *Capitalism and Freedom* (2002), argues that the primary function of entrepreneurship is to ensure profit, and any other functions, including social responsibility, only diverts entrepreneurship from its main task. The position of radical neoliberalism was provocatively expressed by A. Carr in the article *Is Business Bluffing Ethical?* (1968). Based on the analysis of business practices, Carr comes to the conclusion that business ethics is combining two contradictory concepts (an oxymoron). Deception and a lie often results in winning in business. But since the business partners are aware of this, they consider it a normal part of the business practice, therefore, deception and a lie cease to be moral violations in their professional life. Deception and a lie remain moral violations exclusively in private life. In fact, Carr says that a good entrepreneur does not have to be a good person, i.e. a person who respects moral standards. "No one should think any the worse of the game of business because its standards of right and wrong differ from the prevailing traditions of morality in our society" (Ibid.).

The neoliberal economic theory is based on the concept of "rational man". The more man manages to exclude value preferences (including moral, cultural ones, etc.) from the professional activity, and focus on achieving goals, i.e. maximizing profit in the case of economic activity, the more rational he is. In the 1990s, some politicians in Eastern European countries that transitioned from socialism to capitalism advocated the view that a precondition needed for the successful development of capitalism is to free business from any restrictions. In our country, there is a metaphor that in the period of transformation, it is necessary "to turn off the lights", i.e. not to burden entrepreneurship with limiting considerations (including moral and even legal ones).

Absolutization of similar "rationalization" cannot be considered humanly acceptable. Thanks to the moral and legislative social context, rationalization of the economic activity is not complete.

3. The Idea of Democracy and Global Capitalism

The contemporary Western democratic societies are starting to promote the idea that the requirement of moral neutrality in the economic activity is not correct. There has been a renewed focus on economic ethics. In the second half of the twentieth century, the fundamental schools and directions of economic ethics were formed, the process of its institutionalization (Mongin, 2006).

In economic ethics, there is a plurality of approaches, which comes not only from different concepts of morality, but also from different concepts of ways to promote morality in the

economy. In principle, it is possible (A) to influence the moral consciousness of people involved in the economy or (B) to create institutional conditions that make people behave morally. This difference is the basis for distinguishing between the two main directions of economic ethics: ethics of personal moral responsibility and institutional ethics.

Justifying the role of morality (and also the need to develop economic ethics) is based on the assumption that the society as a whole cannot be reduced only to the economic system. This implies that the market is not a general regulator of social life and to maximize private profit is also not a general society-wide goal. The economy can be seen as a subsystem of the society that was created by man for man and whose function is purely service. The economy has no independent meaning, socially, it has a particular goal: to provide material conditions of human existence. Subsequently, the subject of economic ethics is addressing the issue of what the economic activity should be like to serve man best. A similar opinion is advocated, for example, by one of the founders of economic ethics, A. Rich, who considers humanism and justice the basic principles that should govern the organization of the economy (Rich, 1984).

The development of economic ethics was partly due to criticism of global capitalism. The concept of globalization in the broadest sense expresses the process of unification of humanity in one global unit. Originally, this process was driven primarily by economic interests. Through the disappearance of borders and unification, international market is forming to ensure the effective functioning of the world economy in order to maximize private economic profits.

In today's world, the globalization process is an objective factor that have no real alternatives, therefore, it is neutral in terms of value (including morality). Human culture has always contained a universal human element in itself, an element that is only radicalized by globalization. The process of globalization, however, is justifiably a cause for deep concern, because if it is not regulated, it creates conditions for the subordination of global companies to private interests of global businesses in the context of the existence of global capital. Without being proponents of undue moral enthusiasm, which hampers the development of the economy, we need, as a result of the awareness of this danger, to promote the necessity of moral regulation within the global society. The basic problem contemporary economic ethics has to solve is the contradiction between the internal logic of economic activity that is subject to maximizing of private profit, and moral demands that strive for common good.

The contradiction between economic efficiency and moral demands appears to be insurmountable just assuming that the economy is considered to be a fully autonomous (and therefore value-neutral) area of society. While the economy is only a subsystem of the society, and therefore the priorities of the economy, which are efficiency and profit, have to be subordinated to the interests of society as a whole. Subsequently, the task of economic ethics is justification of the priority of the general interest over the "purely" economic one, and considering the ways to achieve harmony of the economy and society as a whole.

The social ideal, which currently dominates in the Western cultural space, is the idea of *liberal* democracy, because in *liberal* democracy, democracy as the rule, which takes place with the consent of the people (practically expressed by the electoral act), was explicitly assigned a value dimension as well (Feber, 2015 p. 4-17). Liberal democracy is based on the values of justice, freedom, equality and solidarity, which its protagonists undertake to promote. The idea of democracy in the contemporary Western society has become a symbolic expression of the summary of values that should form the foundation for a constitutive ideal society. The initial consensus in the formulation of the fundamental values does not mean the complete

disappearance of ideological dispute. We want democracy, but the question remains how the idea of democracy should be politically and morally interpreted, and then how this idea is realistically achievable under the current conditions.

On the ideological arena, it is possible to single out two competing approaches to addressing the issue of democracy formulated in this way. On the one hand, an opinion is asserting that the idea of democracy found its adequate fulfilment in the contemporary Western society, and our task is simply to fine-tune minor flaws. On the other hand, a view is emerging that the values on which liberal democracy is based, not only are not fulfilled in the society, but they even cannot be fulfilled. F. Fukuyama and S. Žižka can be regarded as the best-known representatives of these ideological opposites.

F. Fukuyama, in his book *The End of History and the Last Man* (1992), proceeds from the assumption that capitalism as an economic system and democracy as a political system are not only compatible but even mutually dependent. The development of capitalism allows for democracy, which creates the ideal state of society in conjunction with capitalism. The previous history took place as competing alternatives, which grew out of social contradictions, this dialectic was the driving force of history. According to Fukuyama, however, this concept of history ended by the victory of liberal democracy and market economy (after the fall of communism), because it reached its ideal culmination, therefore, no more major changes will occur. In one of his last publications, Fukuyama promotes a less optimistic view of the contemporary political culture and democracy in the era of globalization. Drawing on Huntington, he reminds that „all political systems – past and present – are liable to decay“, e.g. the most advanced contemporary democracy, the US is also suffering the curse of all stable societies: capture by elites. Fukuyama writes about “repatrimonialisation”. It means that small groups and networks – families, corporations, select universities – use their inside knowledge of how power works to work it to their own advantage, i.e. the US may even be degenerating into a “neopatrimonial” society in which dynasties control blocks of votes and political insiders trade power for favours. In Fukuyama’s opinion, „political decay can take away the great advantages that political order has delivered: a stable, prosperous and harmonious society“ (Fukuyama, 2015). He even fears that America’s problems may increasingly come to characterize other liberal democracies as well, including those of Europe, where „the growth of the European Union and the shift of policy making away from national capitals to Brussels“ has made „the European system as a whole ...resemble that of the United States to an increasing degree“ (Snyder, J, 2015).

S. Žižek’s opinion is in escalated contrast to the capitalist apologetics. The main idea of his book *Once as Tragedy, for the Second Time as Farce or Why Utopia of Liberalism Had to Die Twice* (2009) could be summed up in lapidary statement: capitalism and democracy conceived as the realization of the values we mentioned are not compatible. Emancipatory program, which aspires to liberal democracy, is not feasible within the confines of capitalism, and also the restoration of capitalism in Central and Eastern Europe after 1989 did not represent any value progress, but as shown by the subsequent development, has meant a marked step back from “the egalitarian ideal of a just society”.

Not only that within the capitalist economy, it is not possible to realize the values of liberty, equality and justice, but also: “global capitalism produces antagonisms irreconcilable to the extent that it impossible for it to reproduce indefinitely. There are four such antagonisms: the immediate threat of ecological disaster, the incompatibility of the concept of private property with the concept of so-called intellectual property, social and ethical implications of scientific and technological innovations (particularly in the field of biogenetics), and finally, the

emergence of new forms of apartheid, new Walls” (Žižek, 2009, p. 118). However, the main flaw in terms of value, is the negative impact of capitalism on the majority of the society. There is still a more massive privatization process of commonly shared assets of our social life (i.e. the widely shared objects of culture – knowledge, language, means of communication, infrastructure..., commonly shared assets of external nature – threatened by industrial waste and pillage of natural resources, commonly shared assets of inner nature, i.e. biogenetic inheritance of the human race). The process of alienation is deepening. Man is alienating the necessary social conditions of his life. Although he is involved in their inception by his activities, and without them, full life as an autonomous personality is not possible for him, in the process of privatization, he is losing control over them because they cease to belong to him. Therefore, the process of privatization is a threat to our existence, because for most of us it means that we “become proletarians, reduced to subjectivity without substance... Today we are all potentially *homo sacer*”, says S. Žižek (Žižek, 2009, p. 120). We can understand this that in the broadest sense, we become individuals who are excluded from their socio-cultural space, which, however, represents the basis and a necessary condition for our existence. “The progressive curtailment of commonly shared assets concerns the people’s relationship to the objective conditions of their life processes, as well as the relationships between the people themselves: the commonly shared assets are privatized to the detriment of the majority who have become proletarians” (Žižek, 2009, p. 123).

The current global capitalism is ideologically supported by liberalism. The emphasis on individual freedom postulated by liberalism as a basic human value leads to the atomization of the society and consequently to the oppression of the majority. In the atomized society, only a handful of individuals wins in the competition, who then control the society and submit it to their particular interests. The defeated majority is almost powerless. The individual freedom is conceived primarily as the right to private property by liberalism. Hunt for private ownership inevitably leads to the concept of the society as a battlefield on which individuals confront each other in the pursuit of individual personal benefit. The fight of “all against all” necessarily leads to the differentiation of the society into winners and losers (the haves and have-nots), where the number of winners (the haves) inherently reduces (the law of capital accumulation). The atomized society thus becomes the arena where individual egoism interferes with individual helplessness. Žižek quotes Noam Chomsky pointing out that “only when the threat of people’s participation is averted, you can safely consider the emergence of democratic forces”, thereby challenging the idea of contemporary parliamentary democracy.

The contradiction between the capitalist economy and the efforts of democratic politics as a contradiction between the institutionalized selfishness and values of justice, equality, freedom and solidarity, which at the declarative level, legitimize Western democracy deepens.

4. Morality and European Integration

In our opinion, the process of European states and European nations arising run simultaneously. Unlike a national state the European Union is executed as a new form of political formation founded upon numerous treaties. Economic unity and common market was the essential precondition for its existence. But is there European demos? “If there is no demos, there can be no democracy” (Weiler, 1999, p. 337). Without demos, there is no confidence, recognition, solidarity, or reciprocal friendliness, which are all values that are essential for democratic coexistence. According to the dominant discourse about the absence of a European demos and the consequences of that absence, the democratic deficit does not stem from the EU’s institutional structures as much as from a dearth of certain social, historic, and cultural conditions that cannot be created or modified in a brief period of time. Therefore, the

developing of common European identity based on sharing of common values is a crucial challenge for the Member-States. Common values should be rooted in common morality.

Moralization of the economy (i.e. its anchoring in terms of value) can be viewed only as a hypocritical guise of enforcement entirely real interests (mainly economic and social), or as a sign of naivety based on a misunderstanding of the functioning of the society. However, we consider it necessary to defend the importance of ethics as an explicit expression of values and to emphasize its fundamental importance in a democratic society.

Morality is specifically human way of regulating life in the society. It does not have any instruments of power itself, but in the democratic society, it is becoming a defining force, because any use of power requires moral justification. Democratic governance, i.e. a policy that is derived from the will and interests of the people must prove that it seeks common good. To consider the rule or the state's interference in the lives of people democratic, it must be morally justified by reference to building of "a good society for all", or at least a better society than the existing one. The democratic policy gains legitimacy through the idea of "a good society".

Morality contains vital spiritual potential, because it encourages rising above particular differences and contradictions and assess the society in terms of universal values (intrinsic moral viewpoint). Moral action disregards differences and diversity of interests, does not promote one good against another good, but it rather seeks common good, which is, as a general category, posited in opposition to evil as a general category as well. The advantage of moral weapons thus becomes that their use is in everyone's interest if they are accompanied by joint effect of moral victory. Fundamentally, morality leads to the ideal of common good. Moral considerations about how it should be in the world reflect the essential meaning of freedom, to try to think and then to create a world in which we want to live together.

Control over universal forces that humanity has created requires universal cooperation. And that is why the issue of finding a formulation of human values that could become the basis for the necessary alliance of people is so timely and important. The priority of universal values is currently stressed by the growing global problems, which represent negative manifestation of increasing the integrity of the human world. Many global dangers are a symptom of the fact that mankind in its development has reached a stage where the search for universal values that would become the new regulative of social life has become a necessity.

Currently, the area of the universal has acquired empirically obvious character in the form of the system of generalized relationships and dependencies, both material and spiritual. Increasing the integrity of the human world, which is constituted on the basis of the universal nature of technology, economic relations and scientific knowledge is certainly a positive development, because it leads to the development of the knowledge, economy and ultimately to the growth of the living standard. However, positive integration processes are accompanied by growing danger that they will be subordinate to private, mainly economic, interests.

The intrinsic goals of the economic activity (wealth, profit, money, success in the competition), however, are strong enough motives, so their participants are exposed to a great temptation to sacrifice the general morality. Therefore, besides the purely moral sanctions, moral line of reasoning also has to be backed by force of law. Moral, ethical norms that regulate human behaviour inside relying on his conscience and goodwill, are not sufficient by themselves in the world in which individuals and entire nations defend their economic interests, which thereby leads to their conflict. Only a naive idealist could believe that just a moral way of regulation is sufficient. However, if the society is supposed to work harmoniously as a whole,

if problems of the whole are supposed to be tackled effectively and the general interests are supposed to be promoted, moral regulation must be accompanied by political regulation. In our opinion, this reflects the importance of European integration at the level of European political institutions. However, in the global world, this should be only a partial step towards the global integration.

The contemporary world is still a world of sovereign nation states. In the current economic conditions (when economic entities are transnational in character) it is becoming apparent that even the political and legal regulation must have a transnational character. The current requirement is therefore the creation of the general law, i.e. a system of enforceable legal standards.

It is obvious that there will always be some inconsistencies between legality (a legal system) and legitimacy (moral correctness). Therefore, the reasoning about moral values is important: we can only insist on their strict enforcement if we understand them adequately. The democratic society cannot openly reject their enforcement because, as already mentioned, the democratic political system derives its legitimacy from the commitment to promote the common values.

5. Morals and Principles of Humanism

Morality as a system of accepted values and standards of conduct is an important element of the social order that allows collective action. Every human action always follows a specific purpose and as such, it falls within the area of heteronomous morality, which formulates standards regulating conduct in a specific area. Moral space of heteronomous morality is determined and defined by the purpose of the particular action. This creates a relative moral space that has been singled out from the universal moral space through a partial purpose pursued by the specific area. However, each specialized action is also part of the moral space in which universal autonomous morality should apply. This is also true for the relationship between the economic activity and the society as a whole.

At the level of economic ethics, it is manifested in the investigation of two levels of morality. The issues that are most often addressed in economic ethics include, apart from the issues of social responsibility related to the addressing the issues of the place and the role of the economic activity in the society (which fall within the area of general morality), ethical issues related to activities within the economic sphere, such as ways of competing, moral issues related to partners and employees...

We believe that it is reasonable to underpin the economic activity by utilitarian ethics, because in partial activities, it is justified to apply certain to a certain extent the basic principle of utilitarianism, which is a rational calculus aimed at maximizing profit. However, rational calculation should not completely cancel the generally valid ethical principles, which autonomously conceived deontological ethics (ethics inspired by Kant's ethics of duty) should try to formulate. It should establish an insurmountable ethical basis, which is not subject to specific individual purposes, but it has an unconditional nature. Autonomous conception of morality is based primarily on the fact that "good" is not conceived only as something that serves a different purpose, it is not considered as a means for achieving a specific purpose, but it is viewed as common good, which is postulated as a higher value, which should be promoted by every good man. An attempt to connect universal value approach to the specifics of local cultures is challenging as well (Donaldson, 1985, p. 85-112).

Promoting purely heteronomous morality would ultimately lead to a denial of search for universal ethical principles, whose observance would always be morally binding in the society, regardless of any partial purpose. The danger of heteronomous morality lies in the phenomenon of “banality of evil” (Arendt, 1994). Full application of autonomous morality in specific areas of human activity is the main means of overcoming “banality” of evil, i.e. evil that arises when we abstract away from the universal moral space in a certain partial area. Consequently, it results in the inability to assess the specific situation in terms of autonomous morality. We often see that people behave badly because they separated their actions from the sphere of autonomous morality and focus their attention only on meeting partial goals. For example, although we recognize the worth of the individual in our culture, in professional life, instrumentalization of man often occurs, because an individual is often degraded into a means of achieving private profit.

Separation of economy from the universal moral space can also lead to the emergence of radical evil. Radical evil occurs assuming that, in the context of the capitalist system, evil cannot be articulated, so called “prohibition of possible sentences”, as J. F. Lyotard (Lyotard 1998, p. 227) observed in the spirit of the analytic tradition. As an example of radical evil, J. F. Lyotard mentioned exploitation of wage earners who cannot articulate their detriment within the capitalist system, because inside this system, work is defined only as a commodity. Lyotard summarizes: “This injustice arises from the fact that all sentence universes and all their continuations are, or may be, subjected to the finality of capital itself (however, does capital represent a discursive genre?), and judged accordingly. This finality claims universality because it takes possession, or may take possession of all sentences. Injustice caused by the capital to sentences would therefore be the universal injustice“(Lyotard 1998, p. 273).

The basis of autonomously conceived morality can be found in the principle of humanism. In accordance with the principle of humanism, we consider full-fledged and dignified human life the highest value, i.e. the value ultimately justifying morality of any act. Full-fledged life means that the society offers a decent standard of living, thus creating the conditions for individual self-fulfilment. The measure of the living standard developing a degree of satisfaction of material and spiritual needs subject to the company’s productivity, i.e. the ability of the society to produce material and spiritual values in the highest quantity and quality. Dignified life means that the society that is right morally, and the overall moral quality of the society is at a sufficient level.

In terms of the content, the sense of the principle of humanism can be expressed in three basic requirements: 1) Creation of social conditions that allow the development of the human personality and its fulfilment. 2) Guaranteeing fundamental human rights as a general condition of individual existence. 3) Charity to support and help others.

6. Conclusion

If we evaluate the overall state of our society, and if we compare it with the society under the previous regime, it can be concluded that, from a utilitarian point of view, a change in the political system meant some improvement of the society, which began generally fulfil its main purpose. By joining the Western capitalist Europe, our chances for a higher standard of living increased. And we cannot deny that our society has the basic elements of political freedom and in formal terms, it fulfils the ideal of the democratic rule. However, we are on the way to a truly just society in which the values of liberty, equality and fraternity are fully realized. Today, there is a majority view in Europe that the only proper functioning of the society is democracy.

We can even say that democracy has become the ethos of our times, the fundamental good we want to move closer to.

Democracy has to be considered primarily as a moral category, which is able to produce social innovations due to its normative power. The idea of democracy should therefore be utopian, i.e. it should indicate utopia in the original sense of the word as an indication of the place, which does not exist, but we would like it to exist. Only then can the idea of democracy function as a landmark that gives incentives for continuous creative improvement of the society. At the same time, the idea of democracy can serve as a timeless value criterion for assessing the contemporary social conditions only as an ideal that is never completely realized.

Seen as compatible and mutually dependent capitalism as an economic system and democracy as a political system are attributes of the European Union. Nevertheless, the success of the European integration is closely connected with conscious effort focused on the arising of the main democratic subject – European demos. 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.

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The Effects of ENP on Maghreb Sub-Regional Integration

Fátima Fernández

University of Santiago de Compostela, University Hassan II Casablanca
Group of Analysis and Modelization in Economy, Group of International Economics
and Development
13, rue Ezzohour
Casablanca, Morocco
e-mail: fatima.fernandez.fernandez@rai.usc.es

Abstract

Welfare effects of economic integration have been widely discussed from an inward perspective, while less attention is paid to its consequences for neighbouring countries remaining outside. This research, which assesses the influence of European integration on the Mediterranean regional structure, shows that the European Neighbourhood Policy has failed in its aim to promote sub-regional integration among Maghreb countries. In order to check whether the ENP (2004) has been relevant for this objective, four indicators proposed by the EU for measuring its performance are tested, as well as the evolution of Maghreb economic relationship with its main European partners (France, Germany, Italy and Spain) since the Barcelona Process (1995). Following a hybrid approach that combines descriptive institutional analysis and statistical work (with data from UNCTAD and IMF databases), this research reveals that none of the objectives has been reached and that Maghreb trade path obeys to international trends rather than to the entry into force of the ENP framework. Indeed, instead of boosting welfare through South-South integration, the ENP fosters a hub&spokes structure that widens horizontal and vertical asymmetries.

Keywords: *Barcelona Process, European Neighbourhood Policy, Maghreb, Regional Integration*

JEL Classification: *C1, F1, F5, F6*

1. EU's Approach towards the Maghreb Region

During the last decade, the EU has been particularly concerned with strengthening its hegemony beyond its borders. The promotion of a regionalist, neoliberal and constitutional model is identified as its hallmark as a Normative Power, i.e. a power that is able “to shape conceptions of the *normal*” (Manners 2002, p.239 cit p. Whitman, 2011, p.5) for others, which it exercises through a mechanism of rewards subject to conditionality¹¹. This is clear when it comes the European Neighbourhood Policy (ENP), which Haukkala (2011, p. 55) defines as “a third way; something to ease [the EU] out of the bind of having to choose between the ‘ins’ and ‘outs’”. To him, this policy is an attempt to try “new avenues through which the Union could preserve the legitimacy of its normative power and the consequent ability to project

¹¹According to Börzel and Risse (2009, p. 7), “in its attempt to induce other actors to accept and adopt its ideas, the EU and the member states have heavily relied on external incentives (conditionality)” which “tries to manipulate the cost-benefit calculations of target actors through creating positive and negative incentives”. This mechanism is widely known as “stick and carrot” approach (Thierry, 2005).

stability in its neighbourhood while also protecting its institutions, and budget, from an unacceptable overload”.

Since 2003 and through different economic and political means, the European Commission declared its commitment with “further regional and sub-regional cooperation and integration amongst the countries of the Southern Mediterranean” (EC, 2003, p.10). The events of 2011 reawakened EU’s interest in this issue. According to the European Commission, “the Arab Spring has highlighted the political, economic and social challenges that can only be dealt effectively at regional level” (EC, 2012, p.22). Moreover, it recognised the importance of supporting this process of sub-regional construction, by claiming that “the Maghreb as a sub-region could emerge as a front-runner in the Mediterranean area while maintaining consistency with wider approaches” (EC, 2012b, p.13).

It was this particular characteristic of the European targets regarding the application of ENP on its Southern neighbours what brought us to focus on the Mediterranean case and, more specifically, on Maghreb regional integration within the framework of ENP. In this sense, instead of asking for the general effects of integration on countries excluded from it, we have analysed its consequences at the level of sub-regional integration.

This paper is organised as follows: in this section we will briefly review the core turning points of Euro-Maghreb relations that will help to contextualise the institutional framework of our interest. In Section 2 we summarise the data and methodology used in our analysis. Section 3 corresponds to the empirical assessment of the four indicators proposed by the EU for assessing the success of this institutional framework. Finally, Section 4 draws some conclusions regarding the performance of the ENP for Maghreb integration and its general consequences for regional integration in the Global South.

1.1 From Enlargement to Neighbourhood

Until 1989, the European Community addressed Maghreb countries within the framework of bilateral agreements. However, the adhesion of Spain and Portugal (1986) and the fall of the Berlin Wall (1989) reshaped the European map and obligated the European Community to redefine its interests and targets concerning cross border policies. An increase in political and socioeconomic crises within the Maghreb region added up to this scenery calling for a political response. The EC decided then to review its Mediterranean policy, starting a process of reformulation that would last six years. It culminated in the creation of the Euromed Region through the Barcelona Process (1995), which aimed to foster a multilateral approach that could shape the Mediterranean as a truly regional space for cooperation and integration —though always modulated by the restrictions imposed from the northern shore—.

1.1.1 From EUROMED to the ENP

The eve of the great enlargement of 2004, which awoke the fear of hypertrophy within the EU, gave pace to the establishing of the European Neighbourhood Policy (ENP). This new foreign policy approach was born from the realization that the enlargement pushed European boundaries towards the East and brought to the scenery new neighbours without hope of accession. this framework would impel new -Eastern- and old -Southern- neighbours to adopt the normative principles of the EU as their own ones, without the incentive of eventually becoming members of the region (Haukkala, 2011; Schimmelfenning, 2007).

The logics of ENP would consist of offering to EU’s neighbours a high degree of integration, mainly by a rising participation in the regional market and a deepening of political, cultural

and social cooperation. The underlying idea was that the increase of political and economic interdependence could trigger stability, security and sustainable development in and out of the EU. This way, the new “ring of friends”¹² would contribute to create a space of prosperity and good neighbourhood characterised by close and peaceful relations based on cooperation. In return, the EU demanded for progresses regarding the “respect of common values” and the effective implementation of political, economic and institutional reforms, particularly concerning the alignment with the *acquis communautaire*. This would mean, as Romano Prodi put it, that if a country reached this level, it would have come “as close to the Union as it can be without being a member” (EC, 2003, p.11).

The divergences among European countries concerning the relative weight of Eastern and Southern neighbours, as well as the fear of Southern Mediterranean countries to be relegated to a back seat, provoked the enlargement to the Mediterranean basin of a policy that had been thought for Eastern EU’s neighbours, with no regional characteristics. Nevertheless, the superposition of the ENP over the already existing Euromed project—which did clearly deal with regional concerns—was defended by the EU as an effective means for indirect sub-regional integration through normative convergence. The originality of the new framework resided in a differentiated treatment adapted to the needs of each country, strengthened mechanisms of assistance and new funding sources. Notwithstanding, it maintained all the previous agreements between the EU and the partners in question, particularly of the Association Agreements (AAs).

In sum, the current foreign policy of the EU in the Mediterranean, which stems from the interweaving of two different approaches, highlights the communitarian duty to “promote regional and sub-regional cooperation and integration that are preconditions for political stability, economic development and the reduction of poverty and social divisions” in its shared environment (EC, 2003, p.3). Furthermore, the EU recognises that the “most important difference” between its Eastern and Southern partners is the “explicit regional dimension” of the latter, which encourages “the development of intra-regional initiatives and cooperation in a broad range of sectors” (EC, 2003, p.8).

2. ENP: which Effects for Maghreb Regional Integration?

The ENP, which was born with the ambitious purpose to manage different regional contexts through one institutional framework, intended to conciliate its new bilateral strategy with the already existing multilateral approach. Furthermore, it introduced the concept of “appropriation”, which aspired to attenuate the unilateral appearance of the initiative by negotiating with each country the scope and extent of reforms. This way, by the means of bilateral Action Plans between the EU and each ENP partner, an agenda of political and economic reforms would be set out with short and medium-term priorities of three to five years. In order to assess the performance of the measures implemented in this field, the EU itself proposed in 2004 three indicators that would allow quantifying the success of sub-regional integration:

1. The number of FTAs in force with trade volumes that allow for a truly liberalisation
2. A measurable increase in the level of economic integration and trade flows between

¹² Expression popularized by Romano Prodi in a speech delivered in 2002 that would become somehow the founding declaration of the new ENP. He affirmed then: “I want to see a ‘ring of friends’ surrounding the Union and its closest European neighbours, from Morocco to Russia and the Black Sea” (Prodi, 2002).

- countries participating in South-South FTAs
3. A measurable intensification of total inward FDI flows a few years after the entry into force of the above mentioned FTAs

In 2007, another one was added: by 2010, the South of the Mediterranean should be a regional FTA (RTA). Not only that, but it also trusted on the implementation of the Agadir Agreement. Nowadays, the threshold has been exceeded six years ago and none of these objectives has been reached.

2.1 Data and Methodology

In order to test the correspondence between EU declared aims and achieved results, we have analysed the evolution of interregional and intraregional trade and FDI in the Maghreb region with data from UNCTAD and IMF. By standardising time series from 1980 to 2012, we tried to observe whether the performance of bilateral and multilateral intraregional and interregional relations is somehow correlated to the implementation of EU's external policies. This is why we specially focused our attention on two important dates that set the framework of the Euro-Maghreb relations for the last two decades: the starting of the Barcelona Process (1995) and its 'completion' by the ENP (2004).

Our analysis examines firstly the evolution of the volume of trade between the two sides of the Mediterranean, as well as among Maghreb countries. We took into consideration the four Maghreb countries (Morocco, Algeria, Tunisia and Libya), and we compared each one of them with the evolution of the whole AMU (which includes also Mauritania) of, the EU, as well as the world trends. This method allowed us to grasp whether trade and FDI patterns in Maghreb countries are related to the changes in the European policy or rather to world trends. Secondly, we have studied the evolution of inter-regional relations by analysing the weight of the traditional and new partners of each Maghreb country here considered. The scope was to test where do Maghreb exchanges happen, in order to check the outcomes of the interweaving of post-colonial relations and globalisation since the eighties. Finally, we also analyse FDI in order to check whether the expected increase in foreign investment¹³ did really take place and how it evolved.

3. Trade and Investment within Spaghetti Bowl Regionalism

The number of integration projects involving individual Maghreb countries or all of them as a group, as well as the scarce performance shown by those states concerning both international and intraregional trade, are clear symptoms of a what Bhagwati would call the *spaghetti bowl* effect (Baldwin, 2006).

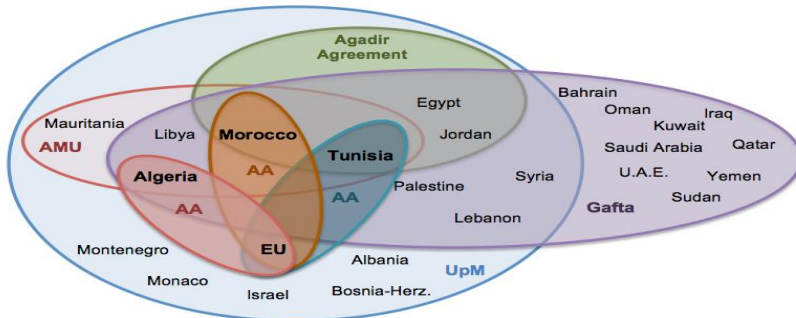
Not only have these projects shown not to be performant at all -if we consider that most of them aimed at creating free trade areas that were never fulfilled-, but they are also sometimes contradictory. South-South agreements proliferated since the wave of regional agreements arising at the end of the eighties, but they remained as little more than a few mediatic hand shakings.

When it comes to North-South agreements, they usually appeared rather as Southern

¹³ By the trade increases between partners, economic theory addresses several reasons why economic integration improves welfare. These reasons come from the static effects for the resources allocation and the dynamic effects - scale economies, pro-competitive effects, investment (national and FDI), innovation and other accumulation effects, which are more relevant in the case of intra-industrial specialization (Baldwin, Venables, 1995).

agreements with Northern impositions, since the terms of the dialogue are more than often set by the latter. Notwithstanding, even the numerous multilateral North-South agreements failed more than they succeeded. The only “FTA’s in force with trade volumes that allow for a truly liberalisation” -as the first indicator set by the EU claimed- are the bilateral Association Agreements that the EU has signed with some individual Mediterranean countries. However, the strong trade links that countries like Morocco and Tunisia maintain with the EU are more related to the post-colonial relations with France and Spain, than to the open access to the European market promoted by those agreements.

Figure 1: Regional and Bilateral Agreements Involving Maghreb Countries

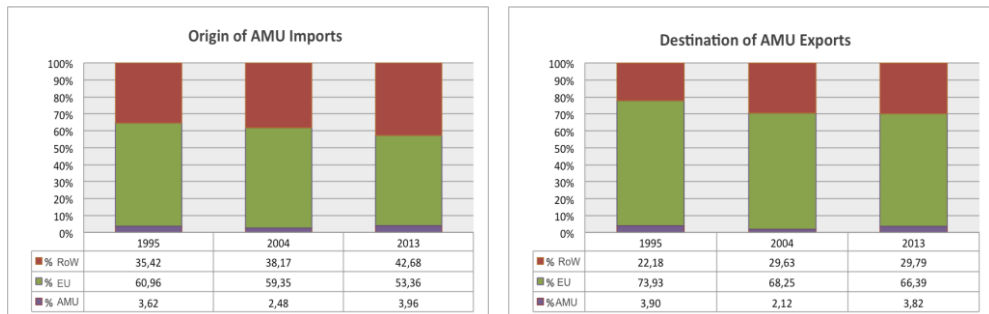


Source: author’s elaboration from European Commission, Gafta and AMU.

3.1 Performance of FTAs

Having analysed the volume EU-Maghreb inter-regional exchanges, as well as intra-regional ones among Morocco, Algeria, Tunisia and Libya, we observe that only vertical bilateral agreements involving the EU and each neighbour country (which does not include Libya) are performing in terms of trade, while intra-regional Maghreb trade stays below 4%.

Figure 2: Origin and Aestination of Maghrebin eExchanges



Source: Author’s calculations with trade data from UNCTAD

The promotion of appropriation and bilateral negotiation have fostered a vertical economic pattern in which each neighbour country is placed in a different row depending on its level of proximity to the *acquis communautaire*. From this situation emerges that, while Morocco and Tunisia negotiate for Deep and Comprehensive Free Trade Agreements (DCFTA) that include services and investments, the former having even signed an Advanced Statute (2007) and obtained in 2014 a moderated — almost symbolic — facilitation of visas to enter the

community, Algeria and Libya are still not part of the WTO.

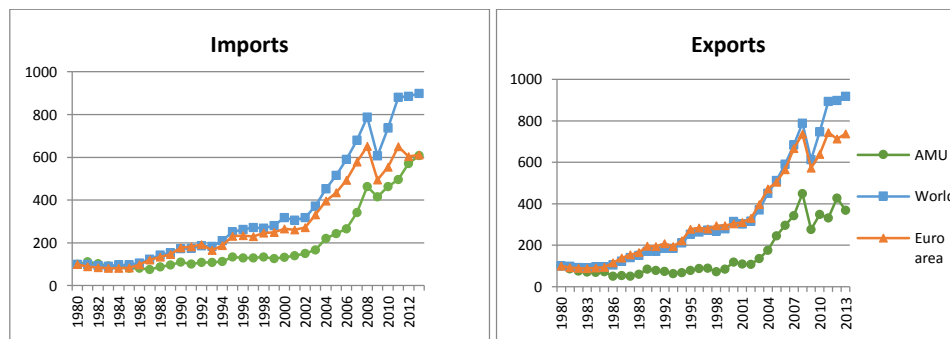
Regarding multilateral South-South agreements, to the already existing — and scarcely performing— UMA and Gafta, it was added in 2004 the Agadir Agreement. Signed by Morocco, Tunisia, Jordan and Egypt and firmly supported by the EU, it entails not only the removal of all tariffs to trade between them and the harmonization of their legislation on standards and customs procedures, but also the assumption of the *acquis communautaire* in order to favour the PanEuroMed system of rules of origin. However, nor has this agreement attained the expected results (Zouiri, 2010; Moisseron, 2013). Concerning other initiatives, we should highlight the UpM (2008) as an attempt to reassess the Mediterranean specificity as a quasi-independent sub region from the EU. It was this very premise what brought the initiative to a relative failure¹⁴. The UpM was finally extended to all European countries and remained a technocratic organisation whose missions overlap with those of already existing institutional frameworks.

3.2 Trade and FDI

In terms of trade, the evolution of Maghreb countries and of the UMA as a whole from the 80's follows a similar path to that of the rest of the world, which suggests that the performance of trade in the Maghreb region obeys to international trends and path dependency (North, 1990) rather than to the performance of ENP.

Regarding international integration, despite an absolute growth of commercial transactions, their relative weight has decreased (from 2% in 1980 to 0,8% in 2012), which suggests that the expected outcomes in terms of its position within global trade did not occur either. When it comes to FDI, although inward flows have gained importance (from 0,3% of the world in 1990 to 1,7% in 2013), they remain volatile because subjected to oil resources and political instability.

Figure 3: Standardised Trade Evolution 1980-2013 (Index, 1980=100)



Source: Author's calculations with data from UNCTAD

In any case, the weight of Maghreb in international trade of goods and capital has not grown, evidencing the failure of the ENP — and of all the other initiatives for liberalization born aside

¹⁴ In the words of Brözel and Risse, “not only are its financial basis and organizational format still unclear and subject to disputes among the EU member states (no additional funding) and its Mediterranean Partners (an Israeli presidency). There simply is no Mediterranean region the way the EU would like to see it.” (Brözel and Brisse, 2009, p.17).

— in its endeavour to create a strong regional bloc able to take advantage of static and dynamic effects of integration. In this sense, not only intraregional integration has not risen up after the release of the ENP, but its dependency from its northern partners continue to be evident. Indeed, while France, Spain and Italy count for more than 60% of the exchanges of Maghreb partners, the latter represent just 1% of European commerce.

4. Conclusion

The results of this research suggest that the new differentiated profile of ENP has contributed to widen, instead of mitigating, the structure of *hub & spokes* resulting from the power exercised by the EU on each single country. The ENP seems to have spurred a race between neighbours for the rewards of vertical integration, whose benefits are dubious in the long term. Thus, the main conclusions of our research could be summarised as follows:

- The ENP has not fostered sub-regional integration in the Maghreb region.
- The negative¹⁵ model of integration has not favoured diversification or structural change in Maghreb economies either.
- The bilateral approach of ENP has deepened a structure of hub & spokes in EU-Maghreb relations.
- The path followed by the external sector of Maghreb region obeys to international trends rather than to the institutional framework implemented by the UE.
- The structure of economic exchanges and institutional empowerment perpetuate a pattern of South-North dependency.

In sum, through mechanisms of conditionality, the EU boosts a sort of competition among Maghreb countries to become the privileged pupil, at the expense of the dynamics of cooperation and complementarity that favour sub-regional integration. Consequently, we should question the pertinence for Maghreb, not of integration itself, but of *this kind* of integration, institutionally shallow (Dreyer, 2012) and geopolitically vertical. In a region formed by two pairs of competing economies that share a considerable number of challenges regarding socioeconomic development, the implemented recipe served only to preserve a status-quo that deepens the structure of *hub & spokes* that eases South-North dependency.

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¹⁵ Tinbergen (1954) distinguished between negative and positive integration, the former meaning “the removal of discriminatory and restrictive institutions and the introduction of freedom for economic transactions”, while the latter implies “the adjustment of existing and the establishment of new policies and institutions endowed with coercive powers” (Jovanovic, 2005, p.16).

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Trade in Value Added and Its Impact on the Czech Foreign Trade

Lenka Fojtíková, Bohdan Vahalík

VŠB - Technical University of Ostrava

Faculty of Economics, Department of European Integration

Sokolská třída 33

Ostrava, Czech Republic

e-mail: lenka.fojtikova@vsb.cz, bohdan.vahalik.st@vsb.cz

Abstract

The Czech Republic is a small, open and significantly integrated economy with the European Union (EU). Currently, trade and investment activities are very often carried out within multinational firms that develop their activities across the national borders. Thus 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. The object of the paper is to show the development of trade and investment activities in the Czech economy in the period 2005–2014 based on two different statistical approaches. The results of the analysis showed large differences in trade data. While the Czech Republic recorded trade surpluses in the monitored period in methodology based on the cross-border concept, trade statistics based on the national concept showed trade surpluses, but also deficits in some years.

Keywords: *Cross-border Concept, National Concept, Trade Balance, Value-added*

JEL Classification: *F14, F15, F62, F63*

1. Introduction

A combination of new technologies, social adaptation, trade liberalisation and innovations led to intensified economic, social and political interdependence among nations. An important source of technological progress, innovations and the initiator of trade liberalisation have been multinational enterprises (MNEs) or transnational corporations (TNCs) that develop their production and sale activities across different countries worldwide. Although the history of these global value chains dates back to the 1950s, i.e. during the second wave of globalisation, they have strengthened their position in the world and the main objective of transnational corporations (Navrátil, 2015), i.e. the maximisation of profits and the achievement of a high rate of return of the invested capital, has remained the same until now.

Although the Czech Republic does not belong to the main investors and exporters in the world, there can be found foreign affiliates of some MNEs from developed, usually European economies. Thus the Czech firms are also included in the global value chains. It brings economic advantages, but also new challenges. It is especially demanding to revise the dates regarding trade development in order to obtain a clearer picture about value added created by domestic and foreign firms. The object of the paper is to show how different statistical approaches can give us different results about the development of the Czech merchandise trade and what the development of the Czech economy in the area of trade and investment in the period 2005–2014 was. The structure of the paper is as follows: firstly, the formulation of the issue is introduced and the methodology and data are presented. Secondly, the analysis of trade

and investment flows in the Czech Republic is carried out. Finally, the results of the analysis are summarised in the conclusion.

2. Problem Formulation

International trade means the exchange of finished products between countries based on comparative advantage (Ricardo's theory of comparative advantage), as determined by differences in technology or differences in factor endowments (the Heckscher-Ohlin model). The extensive intra-industry trade (developed in the New Trade Theory and New Economic Geography of Paul Krugman) was explained by the fact that participation in international markets provided firms with an opportunity to achieve economies of scale. The intra-industry trade includes the sale and purchase of parts and components by firms located in different countries. These activities are usually carried-out within the so-called "global value chains" (GVCs), otherwise called supply chains, multinational corporations, transnational corporations, etc. They are very heterogeneous across industries, companies, products and services. The principle of GVCs is international production fragmentation, in which manufacturing or services activities done at home are combined with those performed abroad (Park, Nayyar, Low, 2013). The activities within GVCs can be undertaken by a single company or divided among several firms (production sharing, outsourcing, offshoring). Officially, the UNCTAD states that "*transnational corporations (TNCs) are incorporated or unincorporated enterprises comprising parent enterprises and their foreign affiliates. A parent enterprise is defined as an enterprise that controls the assets of other entities in countries other than its home country, usually by owing a certain equity capital stake*" (UNCTAD, 2016). The specialisation and division of labour within several firms enables to achieve economies of scale through lower input costs (when a firm buys inputs in a large amount), costly inputs (such as research and development, advertising, managerial expertise, skilled labour, etc.), specialised inputs (better qualified workers for a specific job), techniques and organisation inputs and also learning inputs.

Global value chains or TNCs have a long tradition especially among developed countries. Most global supply chains were driven by firm-level specialisation and excellence. For example, Swedish, Italian, German and other automobile firms in developed countries could each produce their own air conditioners. However, economies of scale and the learning by doing effect meant that it was cheaper for them to import this car equipment from France (Baldwin, 2013). Nowadays, many economists have argued that the international fragmentation of production should bring significant benefits to developing countries. When the production of a type of goods is split globally, tasks within the supply chain are dispersed across countries based on comparative advantage. This should promote trade between industrial and developing countries. The gains from trade should increase for all countries, since the tasks within the production process are allocated more efficiently (Dean, 2012). This thesis is also confirmed by the increasing share of the "North-South" trade in the total world trade. While the share of trade among developed and developing countries (the "North-South" trade) in the world increased from 33 per cent in 1990 to 38 per cent in 2011, the share of the "North-North" trade (trade among developed countries) declined from 56 per cent to 36 per cent at the same time (WTO, 2013a).

Elms and Low (2013) show the revealed stark asymmetries in the global supply chains. One of them is the fact that there are "headquarter" economies (whose exports contain relatively little imported intermediates) and "factory" economies, whose exports contain a large share of imported intermediates. For example, the dependence of Mexico on the import of intermediates was 65 per cent in 2007, but the dependence of all advanced technology nations

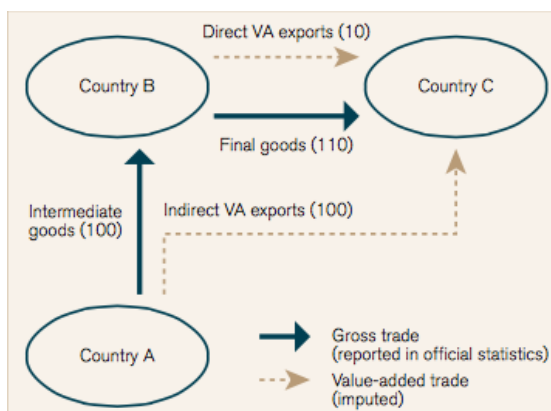
was under 20 per cent. Another important fact is that supply chains are not very global, but regional.¹⁶ Thus all firms located in the same area can benefit from lower transportation costs and skilled labour force (based on the idea of Krugman's theory of New Economic Geography).

Trade within GVCs can be carried out through arm's length contracts¹⁷ between firms in different countries, through foreign direct investment (FDI) or through a range of intermediate arrangements that combine the two. In the case of FDI, investors such as multinational firms, with their headquarters based in one country, will establish operations under their ownership and managerial control in another country. A large part of this "vertical" FDI is represented by investment by advanced economies' firms in developing countries (Park, Nayyar, Low, 2013). However, globalisation has changed the world. While the "South-South" trade covered the total world trade by 8 per cent in 1990, it increased to 24 per cent in 2011 (WTO, 2013a). Similarly, the "South-South" FDI flows, including intra-regional flows, have intensified in recent years. FDI from developing countries has grown significantly over the last decade and now constitutes over a third of global flows (UNCTAD, 2015a). A country with important influence on this development was China and its policy of the "open door". The changing patterns of inward and outward FDI in the world are sometimes connected with the activities of multinational firms. In 2012, nine firms from developing countries, namely from China (including Hong Kong and Taiwan), Mexico, Brazil, Russia and Malaysia, were among the world's top 100 non-financial transnational corporations (UNCTAD, 2013).

2.1 Methodology and Data

The fragmentation of production within multinational firms brings a false or distorted picture about real trade flows. While in gross terms manufacturing dominates in the structure of world exports, in added-value terms the main part of the world export belongs to services (WTO, 2013b). Thus, exploring trade data is currently the subject of serious political debate. The principle of the difference between gross and value-added trade is obvious from Figure 1.

Figure 5 Comparison of Gross and Value-Added Trade



Source: WTO (2013b)

¹⁶Elms and Low (2013) use the idiom Factory Asia, Factory North America, and Factory Europe.

¹⁷The term "arm's length contracts" expresses a transaction in which the buyers and sellers of a product act independently and have no relationship to each other (Goode, 2003).

Figure 1 indicates exports among three countries totalling 210, whereas only 110 of value-added has actually been generated. Conventional measures also show that *C* has a trade deficit of 110 with *B*, and no trade at all with *A*. If we include value-added content, the trade deficit of *C* with *B* is reduced to 10 and it now runs a deficit of 100 with *A*.

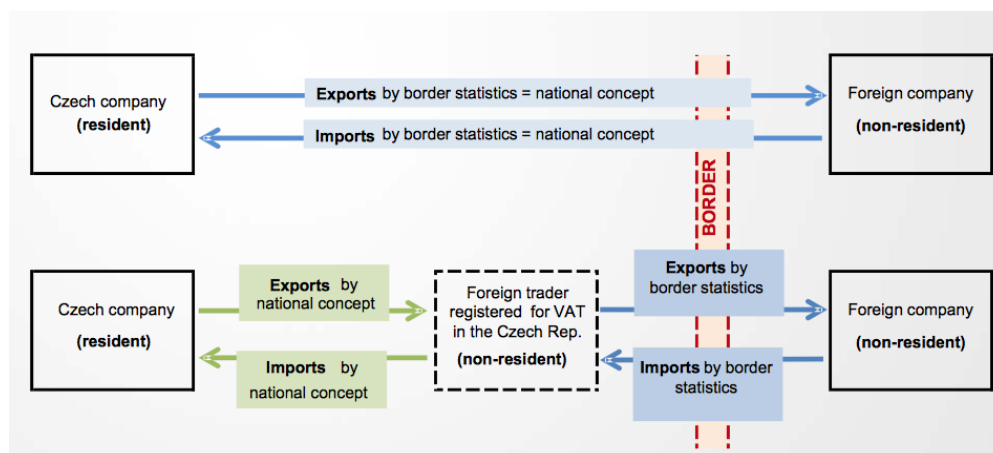
There is an intention to find the correct statistical approach that would take into account the different statistical frameworks and national accounting systems to ensure that the international interactions resulting from globalisation are properly reflected. One of these initiatives is represented by the Trade in Value Added (TiVA) database that was created by joint OECD-WTO work. The aim of the database is to allow better tracking of global production networks and supply chains than is possible with conventional trade statistics. The TiVA database contains a range of indicators measuring the value added content of international trade flows and final demand. The indicators are derived from the 2015 version of OECD's Inter-Country Input-Output (ICIO) Database (OECD, 2015). The data are accessible from OECD.Stat for the period 1995–2011.

2.1.1 Methodology Approach to External Trade in the Czech Republic

The effort to refine data about trade flows in the Czech Republic is based on the concept of change in ownership between residents and non-residents. The approximation of the change in ownership by crossing the state borders ceases to work when capital flows are liberalised, there are supranational groups of companies, and goods move across borders without any change in ownership. For this reason, there is an acute need to have data not only in traditional transborder statistics, but also in the national concept that reflects the actual changes in ownership. In principle, the cross-border concept of external trade reflects only the physical movements of goods across the border regardless of whether trade between the Czech and foreign entities occurs. The national concept of external trade reflects the export and import performance of the Czech economy, i.e. the external trade balance of the Czech Republic as well. It measures real trade in goods carried out between Czech and foreign entities, i.e. the change of ownership between residents and non-residents (CZSO, 2016).

Foreign entities, which are residents of the Czech Republic, have a registered office in the Czech Republic, an organisation ID number, and they pay income tax from their activities on the territory of the Czech Republic. Conversely, the non-residents of the Czech Republic are payers of value added tax (VAT), but they do not pay income tax in the Czech Republic and do not even have a branch on the territory of the Czech Republic. Thus the imbalance in between the real economy and financial flows as well as the imbalance in between the side of sources and the use of GDP are the main reasons for the creation of the new national concept of external trade in goods in the Czech Republic.

However, the national concept does not allow to compare trade data internationally. Thus the analysis can be carried out only in time for the Czech Republic. The Czech Statistical Office (CZSO) has been publishing the trade data in two concepts since 2005. Both of them record external trade in goods, i.e. without services. The differences between the cross-border concept and the national concept of external trade are graphically shown in Figure 2.

Figure 6: Differences between Transborder Statistics and the National Concept of External Trade

Source: CZSO (2011)

3. Global Value Chains and Trade in the Czech Republic

Although the Czech Republic is not on the list of countries with the world top multilateral enterprises, its producers cooperate with firms from Germany, France, Italy and other countries that play an important role in this area. This production and trade cooperation has been supported by foreign direct investment (FDI). While the average annual value of the cross-border merger and acquisition during the last three years reached 574 million USD in the Czech Republic, the greenfield investment projects reached on average 3307 million USD in 2012–2014. In comparison with this, the investments of the Czech firms abroad were several times lower. The total level of the FDI stock as well as flows in 2005–2014 is shown in Table 1.

Table 4: Foreign Direct Investment in the Czech Republic in 2005–2014 (Millions of USD and % of GDP)

	2005-2007	2012	2013	2014
FDI flows (mill. of USD)				
- Inward	9 187	7 984	3 639	5 909
- Outward	1 023	1 790	4 019	-529
FDI stock (% of GDP)				
- Inward	12.3	66.0	64.2	59.1
- Outward	0.6	8.4	9.9	9.3

Source: UNCTAD (2015b)

While the average share of inward investments in GDP reached about 12 % annually in 2005–2007, it increased significantly during the last three years. Real estate and manufacturing have been the hottest areas to invest in the Czech Republic. Currently, the Czech government supports especially investment in hi-tech manufacturing sectors, nanotechnology, aerospace, automotive industry, energy, electronics, etc. Strategic services, such as headquarters operations, customer contact centres, shared service centres, research and development

centres, software development, etc. are other important investment areas in the Czech Republic. From this aspect, Prague and the Czech Republic are considered as a hub of business services in the Central Eastern Europe (CEE) region. However, some other sectors, such as financial services, tourism and telecommunication are also interesting areas for investment in this country. The intensification of investment activities was obvious also on the side of outward FDI in the monitored period, although their share in the Czech GDP is not as significant as in the case of inward FDI.

The high level of connectedness of the Czech economy with the external environment is also documented by the share of foreign value added in the Czech gross exports in Table 2. In 2005–2011, the share of foreign value added in gross exports of the Czech Republic increased from almost 43 % to more than 45 %. A similar situation was recorded in some other EU member countries, such as the Slovak Republic, Hungary, Ireland, but also Luxembourg. It is also interesting to note that the share of foreign value added in gross exports in China reached about 44 % in 2011. In comparison with this, the share of foreign value added in gross exports of most developed countries, such as France, Germany, Japan, the United Kingdom and the USA, was lower by about a half than in the Czech Republic. The foreign content of the Czech gross exports was obvious especially in manufacturing, namely transport equipment, motor vehicles, computer, electronic and optical instruments, etc. (OECD, 2015).

Table 5: Foreign Value Added Share of Gross Exports in the Czech Republic in 2005–2011 (%)

	2005	2008	2009	2010	2011
Foreign value added	42.6	42.3	40.2	44.1	45.3

Source: OECD (2015)

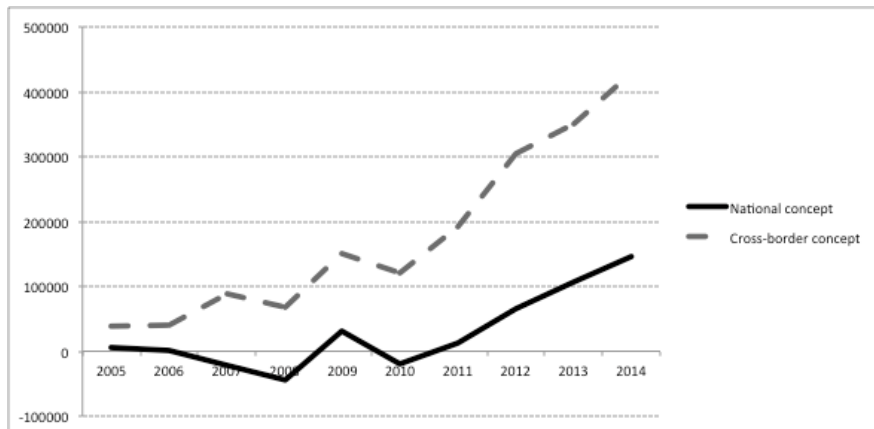
The analysis of exports and imports data in the Czech Republic by using two different statistical approaches confirmed predictable results about overestimated trade in using the cross-border concept. It has influenced the value of the Czech trade balance. Figure 3 shows the differences in the Czech trade balance that were recorded by two statistical concepts. This means that while the trade balance in the cross-border concept (i.e. transborder statistics) achieved positive values for the entire period and trade surpluses were usually growing, trade surpluses in the national concept were lower than in the cross-national concept and the Czech Republic also recorded trade deficits in 2007, 2008 and 2010. The highest difference in trade balance, as the result of using two statistical approaches, was in 2014 and reached more than 283 billion CZK. In exports, the total difference in between the national approach of external trade and transborder statistics was almost -480 billion CZK in 2014, which is 13.2 % of transborder trade. Since 2011, the differences on the exports side have been growing and reached more than 10 % of transborder trade. In imports, the highest difference was also recorded in 2014 and reached -196 billion CZK, i.e. 6.5 % of transborder trade. Differences in the values of trade were higher in exports than in imports for the whole time.

The differences among the values of export and import in the national concept in contrast to transborder statistics arise as the result of two factors. The first of them is the so-called quasi-transit,¹⁸ the second factor is trade between residents and non-residents carried out on the EU's

¹⁸ “Quasi-transit” represents transactions that are not connected with any trade among residents and non-residents. A non-resident proves import across the borders to the Czech Republic, the goods are stocked in the Czech Republic and then exported abroad at usually a higher price than the price at import. These

internal market (Kučera, 2013). In the cross-border concept, a non-resident imports goods to the Czech Republic with a value that is recorded in statistics as import value, but the imported goods are sold within the EU's internal market with a higher value. In the national concept, the import of the Czech Republic is the value of trade on the EU's internal market. Similarly, on the export side, in the cross-border concept the value of export in the border often includes the trade margin of a non-resident, but in the national concept, the export value equals the value of trade on the internal market. Based on these rules, the lower value of imports in the national concept in the period 2005–2014, with the exception of 2005 and 2009, can be explained by the fact that the goods were imported to the Czech Republic (crossed the border), but it was not predominantly sold to residents. Thus the goods imported to the Czech Republic by non-residents probably remained in stocks. On the export side, the same factors had an impact on the lower value of export in the national concept against the cross-border concept, but differently. There is a growing influence of non-residents in data about trade flows across the national border and the increase of quasi-transitive trade that is connected with the overestimation of imported goods in stocks before their export to the final consumers abroad.

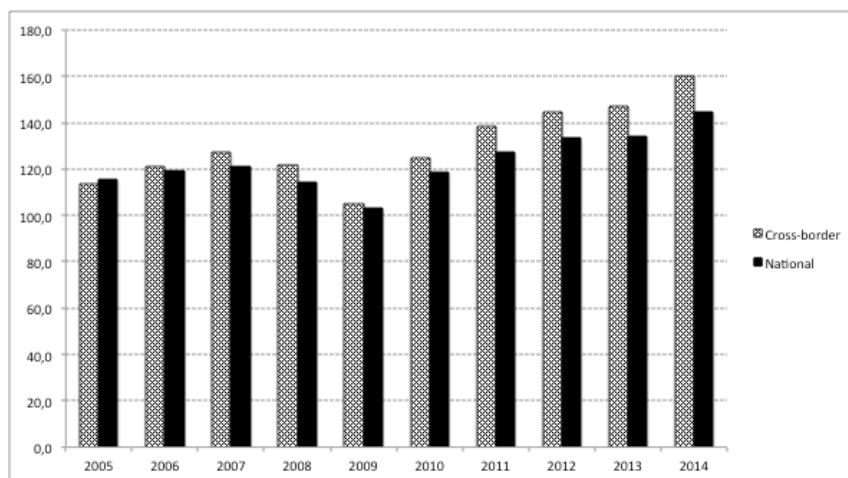
Figure 7: Trade Balance of the Czech Republic in the National and Cross-Border Concepts in 2005-2014 (Mil. of CZK)



Source: CZSO (2016), own creation

If the values of export and import are statistically overestimated in the cross-border concept in contrast to the national concept, it logically has an impact not only on the value of trade balance, but also on the other economic indicators, such as export performance, economic openness, etc. Figure 4 shows the development of trade openness of the Czech Republic in 2005–2014. Although the trade openness of the Czech Republic was growing in both concepts, its value in transborder statistics was 160 % and only 144 % in the national concept.

transactions are recorded in the cross-border concept as export and import and significantly overestimate the trade balance in the cross-border statistics.

Figure 8: Trade Openness of the Czech Republic in 2005–2014 (%)

Source: CZSO (2016), own creation

4. Conclusion

The analysis in this paper confirmed that the Czech Republic is an open economy. The high level of trade and investment connectedness of the Czech economy with the other economies in Europe and the EU respectively is the result of the political, social and economic development in this country after its entrance into the EU in May 2004. Statistical data for the period 2005-2014 confirmed that the Czech Republic participated in the world globalisation processes. The investments of foreign companies in the Czech Republic were carried out hand in hand with the fragmentation of production, especially in the automotive sector and car industry. The high level of the share of foreign value added in gross exports showed the fact that only about a half of exports were actually Czech value added. The domestic value added of exports is the value added to the Czech economy in the form of wages and profits to the Czech workers and investors. Although foreign trade contributes to economic growth, the improvement of statistics methods and approaches is also important. However, seeking new methods that should be recorded economic processes more accurate is also obvious from the other areas, such as regional development or competitiveness, etc.¹⁹ In this paper, we discovered that the positive influence of the Czech merchandise trade on the efficiency of the domestic economy according to the national concept of external trade was significantly lower than the data resulting from the transborder statistics showed. These differences in data can have a negative influence on making serious political decisions and the creation of long-term economic strategies.

Acknowledgements

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¹⁹ For example, Melecký and Staničková (2014) proposed the way how to choose an optimal number of groups coming to empirical analysis of the NUTS 2 regions classification. They compared the cluster analysis and DEA method.

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Instruments for Innovation Support and Their Classification: an Example of Instruments used in European Countries

Šárka Fránková

Masaryk University

Faculty of Economics and Administration

Department of Regional Economics and Administration

Lipová 41a

Brno, Czech Republic

e-mail: frankova.sarka@mail.muni.cz

Abstract

In the present time it is already clear that innovation is going to play a bigger and bigger role in the national and regional development. Both scholars and governments agree that innovation needs to be supported by the public sector and innovation policy becomes one of the most important public policies. There is however a discussion about the best way of creating and implementing innovation policy. Across countries and regions there are a great number of instruments for innovation support and new ones are still emerging. It is important to summarize and classify them in order to further use them as inspiration for policy makers. The aim of this paper is to make such a summarization. It presents a classification of innovation instruments where several viewpoints were considered. It also shows an example of concrete instruments often used in European countries categorized in accordance with the used classification.

Keywords: *Innovation, Innovation Tools, Regional Development, Regional Innovation System*

JEL Classification: *R1, R5, M2, H2, H710*

1. Introduction

In recent times, innovation has become more and more popular in literature and development theories. Knowledge economy and knowledge-based development are terms often used in development strategies of regions and countries.

1.1 Innovation and Innovation Policy of the EU

Also the European Union pays a big attention to research, development, and innovation. It is believed that through 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. In the current globalised 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 economic development of regions. Support for research, development, and innovation therefore seems to be the best way to achieve cohesion of European countries and gradual European integration.

Innovation policy has undergone a long evolution since the first findings about the importance of knowledge and innovation emerged. Lundvall and Borrás (2005) argued that innovation policy covers a wide complex of initiatives and political instruments. In order to give a

structure to this complex they divide the development of innovation policy into three periods. The first one, called science policy, was implemented mainly in the post-war era. Intensive support for research and development, establishing research institutions and laboratories are the main goals of science policy. The second one, technology policy, moves its interest to fast growing technology sectors (nuclear energy, space exploring, ICT) and pays attention to their support. The last one, innovation policy, aims to connect all elements of the system and support them to create and share knowledge.

We are currently at the stage of innovation policy, it is however important to realize that science, technology and innovation policy can never be strictly separated. So in the innovation policy there are elements of all of them.

While looking for the most effective way of implementing innovation policy, the concept of regional innovation systems was created (Cooke et al., 1997, Asheim, Isaksen, 2002, Metcalfe, Ramlogan, 2008). This concept pays attention to connecting all parts of the system, supporting different actors of the innovation process to collaborate and to learn from each other (Lundvall et al., 2002, Doloreux, 2002). In the concept of innovation system the role of public policy is setting conditions in the economy to motivate firms, institutions and all elements of the system to share knowledge. According to Doloreux (2002), an innovation system should consist of four main parts: firms, institutions, knowledge infrastructure, and public policies. There is also one factor playing a crucial role in the innovation system – proximity (Boschma, 2005, Rallet, Torre, 2005). Local, cultural and social proximity significantly increases mutual trust and the probability of collaboration (Doloreux, 2002, Ludnvall et al., 2002).

An important specific of innovation policy is that it has different impact across areas because each area has its own special characteristics. It can easily happen that the same impulse can launch growth and development in one region and create barriers in another region at the same time. This together with the importance of local proximity makes the main argument for implementing innovation policy at the regional level (Howells, 2005, Tödting, Tripl, 2005, Flanagan et al, 2011, McCann, Ortega-Argilés, 2013). This approach only provides framework conditions set at the national level while the specific steps in the innovation policy are made at the regional and local levels of governance because only these levels can truly follow specifics of the given area.

1.2 Rationales for Public Support for Innovation

Economic theories offer several rationales for public interventions into the economic system. Such interventions are justified in cases where economic system does not work properly itself (Woeckener, 1993, Stiglitz, 1997).

An existence of externalities (positive or negative) is a typical case of market failure and market failure is the first and the best known rationale for public policy. Research and development activities generate significant positive externalities, since new knowledge and technologies have properties of public goods (Takalo, 2013). That is why knowledge created by firms within their research and development activities brings benefits other subjects and their social profit is higher than private profit going to the firms. Market failure allows public policy to intervene. The difference between marginal social and marginal private profit of innovation can be compensated by subsidies for firms doing research and contributing to development which can lead to socially effective equilibrium on the market (Stiglitz, 1997).

The concept of market failure defined by the classic microeconomic theory can be broadened by the so called systemic or network failure which has its roots in the institutional economy

(Laranja et al., 2008, Chaminade, Edquist, 2006, Woolthuis et al, 2005). Systemic failure happens when the connections and linkages within the economic system are too weak or not conductive enough, which makes the system work improperly. These failures can have different forms and different reasons.

Legendijk (2005) found another rationale for public innovation policy in the problem of path dependency and lock-in situations. Regions in their natural development often do not head towards equilibrium. A much more probable scenario is that economics follow a specific trajectory which leads to the regions' specialization in the fields where competitive advantages can be used best. Thanks to the specialization, specific technologies and economic activities embedded in the place develop in the region. Although such a development has a lot of positive effects at the beginning, it can also cause a lot of problems once the regional specialization stops bringing prosperity. A concept of lock-in describes a situation of a region which is closely specialized in the field whose economic importance starts to decline. The region locks itself and cannot develop anymore.

Legendijk (2005) and Flanagan et al (2008) believed that innovation policy can ensure knowledge diversity and prevent the risk of lock-in.

1.3 Instruments for Support in the Frame of Innovation Policy

In connection with innovation policy and regional innovation systems the policy mix is often referred to (Flanagan et al., 2011, Uyarra, 2010, Smits, Kuhlmann, 2004). This term represents a complex of political instruments for research, development, and innovation support specially tailored to regional needs. Instruments used in the mix should have theoretical rationales, but they should also react to regional specifics and needs (Flanagan et al., 2011). It is necessary to pay careful attention to constructing the policy mix and the whole process should not be rushed because effects of some instruments can show after delay. That is why incorrectly chosen instruments could have a long-time negative impact on the region. The current situation of the region should be evaluated carefully; key support areas should be identified and the main problems should be named (Borrás, Edquist, 2013). According to Falagan et al (2011), all actors of innovation process should compose the policy mix together because it is not possible to create a high-quality policy mix only at the top political level.

Many authors deal with the question which instruments should be chosen to bring the biggest effect for the economy (McCann, Ortega-Argilés, 2013, Tödting, Tripl, 2005, Asheim, Nauwelaers, 2003, Laranja et al, 2008). However, there is no definite answer. Because of regional specifics it is not possible to use one-size-fits-all model and from best practice we can learn only limitedly. Some authors yet created recommendations for different types of regions on the basis of case studies. McCann and Ortega-Argilés (2013), for example, suggest an instrumental mix for regions according to their level of development and their specialization. Tödting and Tripl (2005) focus on problematic areas.

2. Problem Formulation and Methodology

There is a great amount of instruments for innovation support and it is often quite difficult to find a way through them. It is however very important for policy makers to have a summary of the instruments because it can make it significantly easier to create innovation policy and choose the suitable policy mix. For this purpose, instruments can be divided into groups and categories based on various characteristics.

The aim of this paper is to present several possible classifications of political instruments used for research, development, and innovation support. The main systematization method is to divide innovation instruments into groups based on different points of view. These groups are created with consideration of several viewpoints that are important in the process of creation of the innovation mix. The classification is afterwards illustrated with examples of specific innovation instruments.

3. Problem Solution

There is a wide range of innovation support instruments and, because of common conviction of innovation importance for economic development, new ones are still emerging. For the classification of the instruments several points of view were taken into account. First of all, the recipient of the support differs among instruments. Then the form of the support and the aim of the support were considered. Finally, it is also interesting to look at the instruments from the point of view of the phase of the innovation process.

1. Classification based on the support recipient

This classification divides innovation instruments according to the entity for which they are aimed. Innovation instruments are always created in order to help entities to successfully go through the innovation process. There are instruments aimed for:

- **Public institutions** (research organization and universities)
- **Private firms** (all innovative firms)
- **Start-ups**
- **Individuals**

2. Classification based on the support form

The form of the support means the way used for delivering the support to the recipient. Innovation instruments are very diverse and can acquire many forms.

- **Finances** include different financial instruments as subsidies, advantaged loans, capital funds, and venture capital. These instruments are aimed for specific recipients who often have to fulfil some requirements.
- **Tangible goods** include provision of buildings, offices, infrastructure, laboratories, etc. Also these instruments are aimed for specific recipients.
- **Services or soft instruments** form a wide group of instruments which have in common that while implementing them nothing tangible arises. It is support provided in the form of lectures, conferences, advisories, trainings, etc.
- **Rules of the game** represent instruments of indirect innovation support. These instruments are used for making good conditions for conducting research, development, and innovation. These instruments are not directed to specific recipients because they are aimed to the whole economic milieu. The advantage of this group of instruments is therefore the non-discriminatory implementation.

3. Classification based on the support aim

This classification simply divides instruments according to the aim that should be reached through them.

- **Research and development** is the first step of the innovation process. Conducting high quality research and development is therefore an important goal of many innovative firms and public institutions.
- **Cooperation** between firms or cooperation between public organizations and firms is almost necessary for the successful innovation process. Through cooperation actors can share knowledge, learn from each other and reach significant positive effects.
- **Infrastructure** for doing research and development or for starting innovative business is often too expensive for firms and organizations to acquire. Instruments aimed to infrastructure can help them to start the business or realize innovative ideas.
- **Consultancy** as a soft instrument can be often crucial for the success of innovation. Consultancy can be provided by experts or by specialized organizations and can help innovative entities to achieve goals they set.
- **Human resources development** is necessary for both firms and research institutions, but first of all, it is an important goal of the whole society.
- **Protection** means patents and any other way of intellectual property protection.
- **Implementation** of an innovation means starting to produce the innovation and releasing it into the market.

4. Classification based on the phase of the innovation process

This classification comes from the literature (for example Skokan, 2004) and divides innovation instruments according to the stage of the process they are at.

- **Invention** covers basic, applied, and experimental research and development. Invention means making a discovery of something new. It is the beginning of the innovation process.
- **Adoption** is the first commercial usage of the invention. It requires organizational and investment activities connected with releasing the innovation into the market.
- **Diffusion** of an innovation is the last phase of the innovation process. It covers knowledge sharing and common learning of entities inside the innovation system.

The classification can be presented on examples of well-known innovation instruments often used while realizing innovation policy in European countries. Each instrument is categorized according to the classification above. Table 1 shows the summary.

Table 1: The Use of the Presented Classification

Business incubators			
recipient	form	aim	phase
start-ups	finances, tangible goods	infrastructure, consultancy, implementation	adoption
Science parks			
recipient	form	aim	phase
private firms, start-ups, public institutions	tangible goods	infrastructure, cooperation	diffusion
Cluster initiatives			
recipient	form	aim	phase
private firms, start-ups	tangible goods, services	cooperation, infrastructure	diffusion
Centers of excellence			
recipient	form	aim	phase
public institutions	tangible goods, finances	research and development, human resources, cooperation	invention
Micro loans			
recipient	form	aim	phase
start-ups	finances	implementation, protection	adoption
Patent and license funds			
recipient	form	aim	phase
start-ups	finances, services	protection, consultancy	adoption
Seed funds			
recipient	form	aim	phase
start-ups	finances	implementation	adoption
Business angels			
recipient	form	aim	phase
start-ups	finances, services	implementation, consultancy	adoption
Innovation vouchers			
recipient	form	aim	phase
private firms, public institutions	finances	cooperation	invention, adoption

Source: author's elaboration

4. Conclusion

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.

Submitted paper deals with innovation policy and instruments used for its implementation. Because of quick development of innovation policy there is a big amount of innovation instruments. They vary a lot but have some common features at the same time. For policy makers it is important to have a lucid summary of the used innovation instruments in order to

create a matching policy mix for particular regions. The paper offers four possible classifications of innovation instruments and illustrates the classifications with examples of well known innovation instruments.

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EU Integration for a Successful Eastern Partnership: Trade and Sustainability

Patrizia Gazzola¹, Eka Sepashvili², Antonio Lo Parco³

University of Insubria¹, Tbilisi State University², Delegation of the European Union to Georgia³

Department of Economics¹, Faculty of Economics and Business²

71, Montegeneroso Street¹; 2, University Street², 38 Nino Chkheidze St³
Varese, Italy¹, Tbilisi, Georgia^{2,3}

e-mail: patrizia.gazzola@uninsurbria.it, eka.sepashvili@tsu.ge, Antonio.lo-parco@eeas.europa.eu

Abstract

The aim of the paper is to understand the process of European integration taking place in Georgia, one of the Eastern neighbour countries of the European Union (EU): The cooperation within the EU initiative Eastern Partnership (EaP) and the implementation of Association Agreement and Deep and Comprehensive Free Trade Area (DCFTA) as part of it. The DCFTA, will substantially eradicate technical and non tariff trade barriers, in the trade of industrial and agricultural production between EU and some of the EaP countries, it has the potential to open new opportunities for further diversifying and developing foreign trade of Georgia and increasing its gains. Trade liberalisation is very important but can have also negative effects on sustainable development. Attention must be given to enhancing the contribution of the multilateral trading system to sustainable development.

Keywords: *European Integration, Eastern Partnership, Georgian European Integration, Sustainability, Trade*

JEL Classification: *F15, Q01, Q56*

1. Introduction

The process of integration of European nations begun in the beginning of 20th century and went through several legislative agreements and by the beginning of 21st century turn into one of the major player of the global system, which dictates further development and trends of evolution of surrounding area (Sepashvili, 2013). Due to the fact that towards the end of XX century the process of globalization has gained the new stage of development, the EU took additional steps and in 2004 enlargement of the EU occurred. Over the history of its existence the EU went through deepening the integration from Free Trade up to Single Market and Common currency and five stages of enlargement beginning with 6 states and ending so far with 28 states. Despite the crisis of 2008 and scepticism arising in the EU on its further expansion, economic pragmatism does dictate that expansion of the EU is to be continued. Number of Politicians from member states argues that best reaction to the crisis is to pursue further and deeper economic integration (Cameron, 2010). The EU actively tries to establish harmonized space on its borders for long-term goal of expansion. The policy tends to transform partner countries through its foreign political instrument: intergovernmental agreements, common strategies and joint actions. Recently, European Commission issued joint consultation paper "Toward a new European Neighbourhood Policy" (European Commission [online],

2015b) debating the lessons learned and prospects for further advancement of more tailored cooperation to cope with raised challenges and move forward. Theoretically, implementation of the intergovernmental agreements, that EU offers, might enable any country to achieve such level of development that it would be enough to become the member of the EU. In early 90th number of so-called European agreements were signed with central and Eastern European countries. The articles of these agreements proved the EU aspiration to prepare these countries for membership. 2004 year was marked by great enlargement when 10 CEE countries became the member of the EU, and later in the beginning of 2007 two more countries joined the big family of Europe, and just recently in July, 28th, 2014 one more member was joined the Union. Nowadays, the process has been weakened but not stopped: the EU actively continues working on more cooperation and deeper integration with surrounded neighbourhood, which appeared to be divided by two clusters of countries, Mediterranean and Eastern regions.

In 1999 the European Union has concluded nine partnership and cooperation agreements with countries of Eastern Europe and Central Asia signing Partnership and Cooperation Agreement (PCA) (Eastern Partnership [online], 2015) which represented the basis for relations with the EU and separate countries. The other and stronger instrument for creation fertile environment around the EU for enlargement, though in long-term future, is European Neighbourhood Policy (ENP), that the EU offers its neighbour countries. ENP covers 16 countries, which were separated into two big regions: Mediterranean and Eastern in order to better tailor approaches and face the challenges of differentiation. This format of cooperation for Eastern Region countries was reinforced in 2009, adopting Joint Declaration at the Prague Summit on May 7 the EU's new initiative, Eastern Partnership, was launched. Initiative represents eastern dimension of the ENP, where six eastern European neighbours of the EU: Armenia, Azerbaijan, Belarus, Moldova, Georgia and Ukraine, are participating. This new partnership is intended to turn into an effective mechanism bringing Eastern European countries to functional arrangements with the EU in all directions based on tailor-made approaches and ensuring the possible highest degree of integration with the EU (Coleman and Underhill, 1998).

The main principles and perspectives offered by the initiative for Georgia, which are reflected in the Commission Communication on EaP (December 3, 2008) and EaP Joint Declaration (May 7, 2009) as well as Warsaw Joint Declaration in 2011 and Vilnius Summit Joint Declaration are mainly not only in line with Georgia's priorities but with other partners needs and goals. Eastern Partnership's bilateral format defines concrete goals for partner countries: conclusion of an Association Agreement (European Union's [online]), creation of a free trade area, gradual visa liberalization, energy security, economic and social convergence with the EU and etc. Meanwhile multilateral format of cooperation within EaP offers participant countries different mechanism, such as thematic platforms, panels, and different Flagship initiatives, to develop joint projects affecting regional development. Despite the fact that over the past decades significant political and economic development take place in the region leading to more turbulences and instability, EaP managed to meet some of its goals: three countries (Moldova, Georgia and Ukraine) out of six signed Associate Agreements with the EU and thus, created realistic prospects for free trade in the region; Mobility Partnerships with Georgia, Moldova, Armenia, Azerbaijan, Ukraine are in place alongside with visa free regime with Moldova and visa liberalization dialog with Georgia and Ukraine.

2. Problem Formulation and Methodology

Nowadays the key words are the interdependence of nations and the imperatives that a global system imposes on national economies. The main problem is that majority of states are focused on national interests' strategies caused by country's social-economic needs. However, ignorance of globalization or not adequate recognition of its importance is likely to lead to missing the chance of participation via international relations in globalized economy and gain profits. Globalization of the world economy often goes through regional integration, which used to be started with broader and deeper economic relations. Today the EU remains a "classic model" of successful regional integration, which positively influences the economic development of the member-states as well as neighbouring countries. The primary objectives of regional policy are to reduce negative phenomena arising from natural conditions, geographical location or economic processes, and to create as favourable conditions as possible for closing the development gap and for encouraging innovative economic activity (Liargovas, 2013).

The new regionalism is quite different from the process-taking place in 50-60th of XX century. Contemporary regionalism includes economic, political, social and cultural aspects, and goes far beyond the free trade. All EaP partner countries are actively involved in this process. They are in dual transition towards the development and enhancement of democracy and establishment of a market economy to create a basis for self-sustained economic, social and sustainable growth. Trade liberalisation is very important but can have also negative effects on sustainable development. Attention must be given to enhancing the contribution of the multilateral trading system to sustainable development (Baker, 2007) Problem is that export opportunities on the one hand are fundamental on the other hand they may foster unsustainable development. The world as a whole uses its ecological capital in an unsustainable way. However, even though rich countries consume more resources, the most acute environmental problems seem to be concentrated in the poor countries (Gazzola, Dymchenko and Panova, 2014). Since the DCFTA is expected to have a positive impact on output of the Georgian economy air emissions of other pollutants are expected to rise by up to 3.1 %, translating into associated total external costs of the DCFTA to the tune of EUR 20 million for Georgia.

The paper is descriptive. In the first part we analyze the situation of trade in the EaP partner countries in particular in Georgia that is one of the six Eap partner countries. The total goods trade of EU trade flows is shown with the dates of the import and export of goods from Georgia to EU countries and from EU countries to Georgia to show the importance of trade with EU countries. In the second part we explain the risks or the expansion of the trade and we highlight the importance of sustainable development to reach the medium/long term development goals (Gazzola, 2014). In the last part two examples of best practices of trade with sustainable development are presented: Ferrero with hazelnuts trade and Badagoni with wine trade.

3. Discussion and Problem Solution

The EU actively tries to establish harmonized space on borders for long-term goal of extension. The policy tends to transform partner countries through its foreign political instrument: intergovernmental agreements, common strategies and joint actions (Cameron, 2010, p.3). The Eastern Partnership region countries: Azerbaijan, Armenia, Belarus, Moldova, Georgia and Ukraine have to become the part of global society. Nowadays major players of the world focus rather on regions than single countries. After the gaining independence all these six countries began to build new political and economic relations with each other and surrounding world, becoming the members of various international or regional organizations. In this context, the

moving of the region towards the Europe seems quite natural. All six countries took similar steps to get closer to the EU.

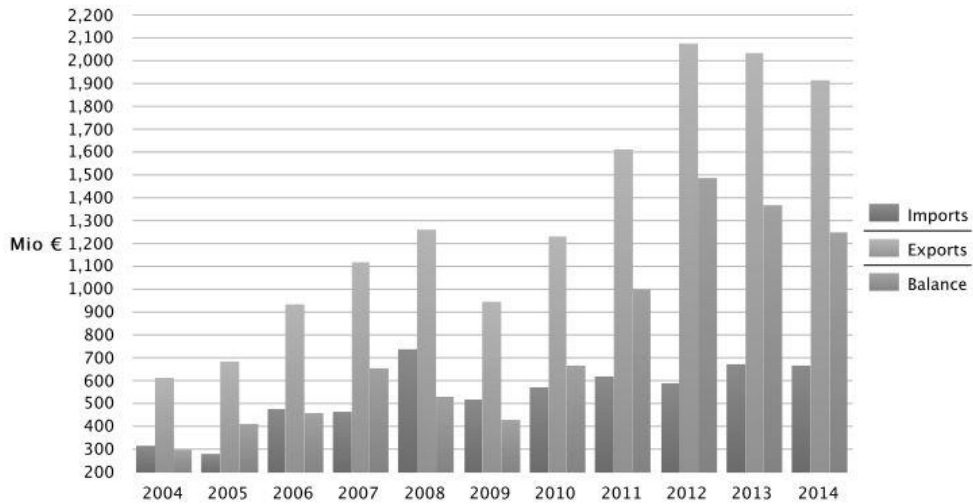
The civil society developed a tool to monitor the process of European integration for EaP countries: the European Integration Index for EaP Countries (EaP Index [online], 2015). The index measures countries' track towards the EU integration. It contains on three main dimensions: deep and sustainable democracy, cross-sector picture of a country in a comparative manner and independent analysis on country report. The Index 2013 shows the positive advancement of all six EaP countries towards the European Union, with a few exceptions. The countries rank did not change in 2013 and 2014 and were as follow: Moldova, Georgia, Ukraine, Armenia, Azerbaijan and Belarus.

The one of significant indicators of changes in regional organization levels are statistical data on countries' export. Export indicators are fairly used to estimate regional organization level. They strongly reflect the reconstruction-taking place among countries. Export indicators exactly show economic aspects of regional level changes (Ruggie, 1993). It is regarded, that how much more is the value of interregional export, the better relations are established among neighbour countries, and consequently, the level of organization is growing. The showings on EaP countries' trade data evidently confirm the changes and growing dynamics. The obvious increasing tendency of trade volumes predicts for further success in the future after the DC FTAs are enacted fully for some countries and/or other trade facilitation measures are utilized fully for others (European Commission Trade [online], 2015). EU trade arrangements with the neighbouring countries differ from the general framework of the EU regional trade agreements (RTAs) to the EU Free Trade Agreements (FTAs). However, in EaP region the EU negotiated new generation of trade agreements known as Deep and Comprehensive Free Trade agreements, but only with some countries, namely Ukraine, Moldova and Georgia. Growing benefits, which are anticipated after DC FTAs will fully realized, are assessed and significant growth or GDP and welfare level is researched (Ecorys Case [online], 2012).

Georgia is still in period of a great political and economic transformation. The country faces numerous sources of challenges and uncertainties. Thus, to rely on above-mention new paradigm some sort of cooperation among challenging sides has become necessary to utilize the economic opportunities (Takalandze, 2013). In this regard Georgia's integration into the huge region of Europe is very important (Sepashvili, 2014). Sides should try to find common interests and thus, gain maximum profit from the cooperation. In the figure 1 the EU Trade flows and balance with Georgia, annual data 2005 – 2014 are shown. The EU is the main trade partner of Georgia. 26.1% of its trade takes place with the EU, followed by Turkey (17.2%) and Azerbaijan (10.3%). For the EU, trade with Georgia accounts for 0.1% of its total trade, with a total turnover of EUR 2.6 billion in 2014. EU exports to Georgia amounted in 2014 to EUR 1.91 billion. The key export products are mineral products, machinery and appliances, chemical products and transport equipment. The EU imports from Georgia focus on mineral products, agricultural products (such as hazelnuts), base metals and chemical products. In 2014, the EU imported from Georgia goods to the value of EUR 657 million (European Commission [online], 2015a). The Government of Georgia implemented reforms in tariff policy as well as in technical regulations sphere. As a result, nowadays Georgia has one of the most liberal foreign trade policies in the world, which implies the facilitated foreign trade regimes and customs procedures, low import tariffs and minimal non-tariff regulations. The DCFTA is expected to encourage a more effective implementation of international environmental agreements in Georgia that should also contribute to solving some of the outstanding environmental challenges facing the country. This mechanism may prove

important in greening economic growth in Georgia. It's easy to recognize that international trade and investment offers opportunities, but it's necessary to remember that they require complementary actions at the national level. The strengthening of domestic environments, the implementation of sound domestic policies and reforms drive to the realization of the potential of trade for inclusive growth and sustainable development.

Figure 1: Total Goods EU Trade Flows and Aalance with Georgia, Annual Aata 2005 - 2014



Source: European Commission [online], 2015a

The EU is Georgia's most important trading partner, accounting for more than a quarter of Georgia's total trade. Since September 2014, when a free trade area was set up, both partners can trade freely with each other. The free trade area (DCFTA) was set up as part of the Association Agreement between the EU and Georgia and aims to gradually integrate Georgia's economy with the European economy. The path to closer integration includes through more trade and investment but the key is the reform of Georgia's economy. Georgian exports to the EU rose by 12% in the first six months of the free trade agreement. Exports of some Georgian products doubled or even tripled in the first six months of DCFTA, for example hazelnuts, copper, petroleum oils. According to Directorate-General for Trade (DG Trade) the contribution of trade to the goal of sustainable development in its economic, social and environmental dimensions is fundamental. It means that the goals are:

- Recognise the beneficial role that core labour standards and decent work can have on economic efficiency, innovation and productivity and shall seek greater policy coherence between trade policies, on the one hand, and labour policies on the other.
- Strive to facilitate and promote trade and investment in environmental goods and services, including through addressing related non-tariff barriers.
- Facilitate the removal of obstacles to trade or investment concerning goods and services of particular relevance to climate change mitigation, such as sustainable renewable energy and energy efficient products and services (Gazzola, Mella, 2015). This may include the adoption of appropriate technologies and the promotion of standards that respond to environmental and economic needs and minimise technical obstacles to trade.

- Promote trade in goods that contribute to enhanced social conditions and environmentally sound practices, including goods that are the subject of voluntary sustainability assurance schemes such as fair and ethical trade schemes and eco-labels.
- Promote corporate social responsibility, including through exchange of information and best practices.

4. Two Best Practices: Ferrero and Badagoni

In 2007, an Italian company, Ferrero, entered the Georgian market. The company purchased 3,000 hectares of land to grow hazelnuts and built two hazelnut-processing plants. Ferrero uses 18,700 tons of hazelnuts annually in the production of its hazelnut chocolate spread Nutella. Georgia is well known as one of most favourable regions for hazelnut growing, but for years the Georgian population failed to export the product because it lacked the knowledge, advanced technologies and standards of growing and processing hazelnuts, which rendered the product uncompetitive. In Georgia, through a project with USAID (the United States Agency for International Development), called EPI (Economic Prosperity Initiative), Ferrero has already developed local training initiatives, which reached 2,000 farmers. The training course in hazelnut cultivation for Georgian farmers (Agrigeorgia Ferrero, 2014) is structured as follows:

- Participation of differently sized agricultural enterprises: from a few to hundreds of hectares; selection of the farmers taking part in the course, giving precedence to those who have already cultivated hazelnuts as their main source of income;
- Activating the micro-credit system at subsidised interest rates for farmers for purchase of machinery; starting the training of specialist technicians who in turn will train the farmers.

The EPI training programme puts the hazelnuts farmer at the centre of the local agricultural system, thereby improving professionalism and motivation. This has enabled: an improvement in the quality of the hazelnuts, by introducing modern techniques of cultivation; the development of initiatives for farmers to join together in the facilitated purchase of instruments and products to be used in cultivation.

Another good example is an Italian wine firm, Badagoni, which owns a certain amount of Georgian vineyards (badagoni [online], 2016). In London, Badagoni's dry red wine "Alaverdi Tradition" received the premier prize, Grand Gold, at the Decanter World Wine Awards in 2010. Winning the Central and Eastern European regional trophy in the category of red wines priced over £10 a bottle was a great result because no Georgian wine had ever received such a prize before. According to information from Badagoni, the Kakhetian Noble and Trioni white wines that were also sent to the Decanter World Wine Awards each received bronze medals and certificates of acknowledgment. In addition to their core activities, these companies make contributions to the construction of bridges, roads and the restoration of churches in Georgia. Badagoni is one of the first companies through which the world learned about Georgia as an ancient wine producing country.

Both companies employ up to 1,000 local residents. They have already invested up to 100 million Euros in these businesses. These companies promote Georgian traditions, culture and history throughout the world. They are improving the trade and the sustainability.

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European Integration of Moldova – Opportunities and Threats

Sergiu Gherbovet

University of Academy of Sciences of Moldova

National Institute for Economic Research

Ion Creanga, 45 street

Chişinău, Republic of Moldova

sergh27@gmail.com

Abstract

Today, the EU is preoccupied with its internal refugee and migration problem, but another crisis is unfolding on its borders, in Moldova. The financial disaster, caused by the theft from the country's banks, dragged Moldovan nation into a political crisis. Recently, Moldova signed an agreement with the EU and as a consequence, Moscow banned imports of Moldovan wines and agriculture products - the stalwarts of the Moldovan economy. In this context, the debate between moving towards Europe or Russia was one of the major factor dividing the main parties and society. This is the first times in the history of Moldova when political crisis comes from inside of the country, stuck up between European Integration challenges and Russian sanctions. To resume, Moldovan financial crisis caused economic depression, which transformed into political disaster.

Keywords: *Financial, Economic and Political Crisis, Moldova, European Integration, Sanctions*

JEL Classification: *G01, E58, F24*

1. Introduction

Nowadays, the EU is preoccupied with its internal refugee and migration problems, but another crisis is unfolding on its borders, in Moldova. European Integration of Moldova implies different opportunities and threats. EU's increasingly close relationship with the Republic of Moldova goes beyond cooperation, encompassing gradual economic integration and deeper political cooperation. The 2 parties signed an Association Agreement, including the Deep and Comprehensive Free Trade Area (DCFTA), in the margins of the EU summit held in 2014, on June 27. Moldova ratified promptly the Agreement on July 2nd, and both sides have completed the necessary formalities. Most of the DCFTA section provisions were applied starting from September 1st 2014. In the same time, this agreement has a big impact on Moldovan economy, which is not easy to adjust.

As a consequence of the EU agreement signature, Russia banned imports of Moldovan economy stalwarts: wine and agriculture products. In this way, the country remains stuck between to Big Powers and the debate about moving towards Europe or Russia is one of the major issues dividing the main parties and society.

At the same time using data from two expert surveys conducted in 2007–2008 and 2013 in 24 European democracies, the response of political parties—especially mainstream ones—across the European Union to the growth in public European Union-skepticism since the onset of the financial crisis as in Moldova for democratic parties. Mainstream parties respond fairly little over time and that this has left a representational opening for extreme parties, which is

especially filled by new European Union-skeptic parties. (Rohrschneider, R , Whitefield, S, 2016, p. 138-161).

People realize that EU is not perfect. It is noteworthy to remember the history of the country. Moldova took part of a very unequal Soviet Union and the fear of a similar organism is still present in society spirit. In the same time, the opportunity of solving some problems together with other European countries cannot be neglected. In a period when Moldova is facing external instability sparked by Russian and Ukrainian economic crises as well as increased volatility in global financial markets, is the first time in the history of Moldova when the crisis comes mostly from inside the country and not only from external sanctions.

The tension of Moldova situation comes not only from global macroeconomic circumstances as sanctions, but also from poor corporate governance and fraud, misalignment of interests, and inefficient oversight. Of course, Moldova is a small actor influenced by global economics and financial environment, but the impact of sanctions was not as destructive as banking fraud, some companies being diversified enough to overpass sanctions.

At the same time, no efficient work has been done on EU association agreement. Moldova did not adjust to EU standards. For instance, in 2015 no foreign investment has been made in Moldova and no serious plan of action has been proposed to deal with Transnistria conflict. Export declines and import declines even more. The country flow of money is maintained due to different production and services activities including remittances. A lot of money in the state budget come from import taxation, thus making state budget becomes problematically, and will be necessary to increase taxes. In this difficult context, International Monetary Fund (IMF), World Bank (WB), European Union (EU), Romania and other international donors suspended any loan and any financial support to Moldova.

The presented article analyse Moldovan crisis and Moldova EU integration. It is focused on Moldovan unclear decisions and highlight links between economics events.

2. Financial Instability as Integration Problem

Even the information about events in Moldova are not yet in scientific papers, because of television are a lot of open and available information in Moldova. Sometimes contradictory information and lack of exact data, making impossible exact scientific analysis. Financial crisis was caused by banking frauds that could be avoided. Based on the evidence reviewed to date from the Speaker of the Parliament of Moldova, Andrian Candu to people, during the period from August 17, 2012 to November 30, 2014 Unibank, Banca Sociala and Banca de Economii, the three banks involved in the theft, were consecutively subject to significant shareholder changes. In this way, ownership was transferred to a series of apparently unconnected individuals and entities. Thereafter and without any exception, each bank entered into a set of irrational transactions and ultimately resulted in a significant deterioration of their balance sheets. Within a short period of time, during a change in their ownership structure, banks appeared to have coordinated to maximise available liquidity, in order to facilitate a massive increase in lending. When banks, one systemic and two smaller, gathering a big amount of national currency bought a big amount of foreign currency taken out abroad, a big depreciation of Moldova currency in comparison with foreign currency occurred. As is not available information yet in scientific papers, but from big debates and scandals of authorities on television an information provided by pressure to population . The situation that was happened suggests a coordinated effort within the banks to deliberately disguise the true nature of the transactions and their beneficiaries. This is further supported by the fact that subsequent

to multiple bank owner changes and gives the impression of an orchestrated attempt to coordinate their activities.

2.1 Supply and Demand Rule

Earlier Moldovan economy was composed of a certain amount of currency. Currency constantly comes in from exports, remittances and assistance received from foreign donors and out of the country. The flow of currency and the amount kept in the country obviously varied, but variations were insignificant and slow. Suddenly, a significant part of the currency had been removed from the country. Although during some time imports have remained about the same level, the amount of foreign exchange to importers was much smaller. Obviously, the law of supply and demand, if we have a good (in our case, foreign currency) in less quantity, its price will increase. In the new situation, the equilibrium price of the dollar or euro against the lei (national currency) is no longer at the same level, but much higher. To restore balance, the amount of currency in circulation on the market could be increased. In order to solve the problem, the National Bank of Moldova (NBM) interferes in the market by selling its currency reserves. However, to cover a lack of one billion in three banks, another billion from National Bank was required. Thus, in few weeks over a quarter of the country's foreign currency reserves were spent, and after NBM has realized that this does not help and stopped. In order to gather money NBM increased the interest rates on loans and deposits, which reduced the volume of lending. Banks required reserves were also raised in several stages. Thus, in the future, banks will be obliged to retain more money in their accounts, which again will decrease the number of lei in circulation.

2.2 Central Bank as the Regulator in the Banking Sector

In general, Central Bank is looking at the entire financial system to look for risks and threats to overall financial stability. Central Bank is the regulator in the banking sector. When there are big transactions Central bank have all the information and deliver an approval. Central Bank and National Anticorruption Centre have a lot of power in Moldova to block transactions that seem suspicious. The transactions causing this financial crisis were about hundreds of millions of US dollars. Big amounts of money changed hands in a short period of time, going from one fake entity to another. Have it make any suspicions? Could these transactions be blocked? When you see entities that have no other purposes that only to move the money from one to another entity is it not possible to be blocked? For this big fraud, a lot of questions could be put to the National Anticorruption Centre. Was all possible done by this organization? Apparently everything was done by letters of law, but the results are disastrous. Unfolding financial crisis that threatens the stability of Moldova, spurred a popular panic and mass withdrawals of deposits in the banks concerned. Under pressure, authorities tried to do something. Even if the last Basel rules are not implemented in Moldova yet, Central Bank is supposed to have a lot of scenarios in order to overpass this type of situation, like cooperation with another central banks and international institutions. The bad management of the crisis has results in moral hazard. In such a situation usually government helps, but unclear official declarations and decisions of authorities resulted in emission of money (this conclusion comes from comparison of amount of money that banks was helped with monetary aggregates) with the guarantee from the government. Apparently the moment solutions was not the worst, but is not clear if the Central Bank has done all the possible. Central Bank was pushed to act with this fraud. On one hand it offered with government guarantees, on another one it recover a lot of money from bank operations. As a result of this actions, a significant drop in exchange rates, growth in public debt, two digits inflation, a very high rates of credits and decline in GDP growth were observed. Financial crises are associated with high entropy values, which arise

from significant movements in foreign exchange rates. During periods of crises, bubbles are formed from increasing and decreasing trends in entropy. These bubbles have similar amplitudes and periods across different exchange rates, but their peaks differ significantly (Stosic, D, Stosic, D, Ludermir, T, de Oliveira, W, Stosic, T, 2016, p. 233-239).

This is when the main objective of a Central Bank is to maintain price stability. Moldova is experiencing today a notable pick-up in inflation caused, to a large extent, by the Moldovan currency devaluation. Monetary policy tightening helped to reduce devaluation pressures, maintain banking deposits in the national currency and reduce overall liquidity pressure, but increased the cost of credits for national economy and treasury. The disinflation policy should continue, while seeking the exit from high-interest-rates phase through skilful exchange rate policy as well as minimum reserves and capital requirements regulation. Without prejudice to the objective of price stability, the Central Bank as independent institution shall support the general economic policies of a country. Central Banks in different countries have similarity and differences in activity (e.g. not all of them will use Quantitative Easing). In their macroeconomic stability usually all Central Banks strive for low and stable inflation, most also try to promote stable growth in output and employment, and financial stability. Central Banks try to ensure that the nation's financial system function properly, try to prevent financial panics or crisis, lender of last resort. Is clear that it is easy to make recommendations afterwards, but without authorities help such a big amount of money could not be lost. Several transactions were done just before parliamentary elections and after to try to get back money from other jurisdictions. In this specific Moldovan case, an over-the-counter or off-exchange trading was not conceivable. In world history was situation when was closed markets temporarily. It seems more that an absolutely unclear cooperation of authorities allowed an unprecedented banks fraud.

2.3 Foreign Reserves of Moldova and Remittance

The foreign reserves was obtained despite this critical situation from grants and management of foreign reserves or by buying currency from market. The official reserve assets, identical with international gross reserves, are available at any time and managed by the National Bank of Moldova aiming of direct financing of the balance of payments imbalances, indirect adjustment of balance of payments disequilibrium through interventions on foreign exchange market by monetary and foreign exchange policy implementation. Is impossible to find in Moldova a commercial bank or a company with 1 billion USD real money, without no assets as buildings, computers etc. Banking system remains weak. For instance, deposits insurance in Moldova is about 400 Euros, when in the EU it is about 100 000 Euros. One of the result of this bad management of crisis in Moldova is a big discrepancy in economy when banks credits goes to governmental bonds and not to real sector of the economy. Some free information is available from National Bank of Moldova showing that there is not a good trend of money transfers from abroad. Even more, it is very difficult to predict the amount of transfers using today econometric and advanced statistical tools. Moreover, a lot of this transfers are from Russian Federations and recently ruble loose purchasing power. According to economic multiplier effect, remittance flows have fed a long-standing debate on their advantages for the economy. Some studies have pointed out how remittances have hurt the receiving economy by cultivating a culture of dependency that reduces labor supply and promotes conspicuous consumption. At a macro-economic level, remittances have been found to hurt exchange rates and the export sector through the so-called Dutch disease. When the Central Bank deal with currency buying and sterilizations, rate of credits grow. Thus, higher rate of credits than in other countries make more difficult to do business, despite another facts as laws, risks,

infrastructure, geopolitical locations and lack of natural resources etc. Moreover, monetary policy became less accurate when remittance is a big percent from GDP. Persons are going to work outside of the country in hard conditions spending the money in the country where they work, losing relatives and dealing with difficulties as strangers. When they want to come back in their native country with their money they meet unsolved problems and prefer to leave the country once again. At the same time, these flows of big amounts of money can greatly improve the livelihoods of receiving households by promoting education, health and capital investments. At an aggregate level, positive effects include economic stability, improved creditworthiness, and greater access to foreign capital that can boost economic growth. The empirical evidence remains mixed.

A lot of speculation exists that IMF will solve all the country problems. But, sometimes IMF can have a bad impact for a country. Using data available on IMF sit and analyzing Moldovan Transactions with the Fund from May 1st, 1984 to January 31, 2016. It can be observed that amounts of money that came from IMF and after return are less important that the drop in foreign reserves of Moldova from almost 3 billions to 1.7 billions in a very short period of time.

Despite using deep econometric models, historical approach can be used and we can see that NBM in June 4, 1991 has no capital or any fund in reserve, not even national currency, there were no qualified specialists in the field of macroeconomics or econometric analysis or another type of modeling. Moldova had no money in capital and zero dollar in foreign reserves, but over some time foreign reserves was enough for three months of import. The problem of deep models is that they are not real and threats can come from easy things (e. g. suspicions transactions). Researchers, experts and different persons tried to make forecast in various fields. There are several approaches to forecast. One of the tools for forecasting is econometrics models. Different experts in econometrics participated to the implementation of analytical and decision making processes in the Central Bank of Moldova. But in fact, the deep analysis of econometric models shows that, despite recent advances, econometric forecasting cannot be achieved with a satisfactory degree of certainty. Accurate forecasting is difficult and today we don't have enough instruments to make exact forecast. Even that econometric solutions is not perfect is one of the tools that can be used to forecast.

3. Supervision Framework in Moldova

From information that is not yet available in scientific papers, from Speaker of the Parliament of Moldova, Andrian Candu, the review of the balance sheets for each of the three banks shows extremely significant increases in special in customer's loans and deposits in a short period of time. An economic bubble is a trade in an asset at a price or price range that strongly deviates from the corresponding asset's intrinsic value. It could also be described as a situation in which asset prices appear to be based on implausible or inconsistent views about the future. Because it is often difficult to observe intrinsic values in real-life markets, bubbles are often identified only retrospectively, when a sudden drop in prices appears. Such a drop is known as a crash or a bubble burst. Prices in an economic bubble can fluctuate erratically, and become impossible to predict only from supply and demand. While some economists deny that bubbles occur, the cause of bubbles remains disputed by those who are convinced that asset prices often deviate strongly from intrinsic values. For example, while Eugene Fama has repeatedly expressed his discontent with the notion of an irrational bubble, he has never publicly expressed his opinion on rational bubbles. On empirical grounds Fama rejects bubbles by referring to the lack of reliable evidence that price declines are predictable. However, this argument cannot be used to rule out rational bubbles because such bubbles do not necessarily

imply return predictability, and return predictability of the kind documented by Fama does not rule out rational bubbles. (Engsted, T., 2016, p. 370-376). Even Nobel Memorial Prize in Economic Sciences for 2013 was awarded to Eugene Fama, Lars Peter Hansen, and Robert Shiller for their contributions to the empirical study of asset pricing. Some observers have found it hard to understand the common elements of the laureates' research, preferring to highlight areas of disagreement among them. (Campbell, JY, 2014, p.593-634). Broadly speaking, Fama believes that asset price movements can be understood using economic models with rational investors, whereas Shiller does not.

One important institution who deals with this problem is Central Bank. How should monetary policy should answer to real estate bubbles? There is no consensus on this, some bubbles can cause crisis some not. The evidence are mixed, some evidence suggest otherwise. International comparison: For example the UK had a housing price boom during the 2000s despite tighter monetary policy than the USA. Another example is Germany and Spain share the euro, they have the same central bank, the same monetary policy. Germany housing prices remain absolutely flat throughout the entire crisis. Spain had an enormous house price increase considerably larger than USA. So the monetary policy did not play the most important role in raising house prices. Economists continue to debate this issue. According to speeches of Ben S. Bernanke, the problem with monetary policy to perceived bubbles and asset prices is that bubbles are in a sector of economy, while interest rates are dedicated to achieving overall economic stability. But this doesn't mean you should ignore financial imbalances. The first line of defense again should be regulatory supervision.

A first reason for regulation is that financial institutions are highly interconnected, through complex, often short-term, borrowing and lending arrangements. When a single large financial institution goes bankrupt, insolvency may therefore quickly spread to other financial institutions in a systemic financial crisis with immense negative consequences for the economy, such as the one that followed the Lehman failure in 2008. A second reason is that many de facto lenders to financial institutions are ordinary consumers and households, e.g., through deposits and pension savings. Since households may not have sufficient information to evaluate and monitor the health of the banks where they keep their deposits, consumers can suffer severe consequences when a financial institution fails. This lack of information can also trigger financial panics where many individuals "run" to withdraw their deposits from a bank that is rumored to be failing (even if the rumor happens to be false), effectively then causing the bank to fail. For these reasons, the government needs to be able to rescue — "bail out" — failing institutions to avoid systemic crises and bank runs, and to protect consumers. But when failing financial institutions are bailed out, this may lead to moral hazard, as bank managers have incentives to take on higher financial risk than otherwise. A regulator may therefore need to restrict leverage and risk-taking at financial institutions, such as through minimum requirements on bank equity capital and liquidity, intervening to avoid systemic crises, mitigating the moral-hazard problems that produce the prospect of crises to begin with. (Encaoua, D., 2015, p. 1-76). But if regulatory and other types of intervention don't achieve the stability and financial system is needed, as a last resort monetary policy might. But monetary policy is such a blunt tool which affects all asset prices and affects the entire economy. Some results show that the conclusion about the fact that the Central Bank should not react to asset price remains as in the case of a closed economy model, and that small open economies are more vulnerable to asset price bubbles due to capital inflows and the exchange rate mechanism of the monetary policy. Therefore in small open economies the business cycle is deeper. Finally, in the face of a boom followed by a bust in an asset price bubble,

macroeconomic volatility would be dampened if the monetary authority focuses only on inflation. (López, Martha, 2015, p. 93-102).

The 2014 massive bank fraud revealed the insufficiency of the NBM supervision framework as well as its ineffective interaction with the political and judicial authorities. EU agreement comes with opportunities and threats, and relative recent project started. Over the past few years the National Bank of Moldova (NBM) has benefited from assistance from international financial institutions, foreign central banks, and other development partners. The fields covered by the technical assistance are consistent with the priorities and medium-term strategic development objectives of the NBM. International Monetary Fund and World Bank are the two main actors that provide support in the key areas of the NBM's activity. Enhancing the efficiency of monetary policy and financial management, strengthening institutional and structural policies, development and proper functioning of the payment system are listed among the objectives of the technical assistance provided by these institutions. The European Commission's support is provided to the NBM as a follow-up to the commitments undertaken by the Republic of Moldova in the context of European integration process. The assistance from the European Union is granted by transferring knowledge through Twinning, TAIEX. Since July 1st, 2015, the NBM has benefited from the assistance offered by the European Union through the Twinning instrument. This assistance is directed towards strengthening the NBM's capacity in the field of banking regulation and supervision in the context of EU requirements. Some negative experiences in EU policies could be already identified in the world. Of course, the results of the agreement with EU and the hard adjustment to the standards are not the only causes of crisis in Moldova, but, maybe, it's better to learn from history and experience and try to not repeat them. At least, sanctions from Russian Federations could be anticipated.

Political aftershocks of financial crises can be severe, so stability threats can come from another side deeper analysis could be needed. It is evident that there have been crises and fraud before and in many countries. So, one could learn from others crises, mistakes and success. Econometric models, good tools for analysis, have proven to be not perfect in predicting. Therefore, alternative approaches (historic, behavior approach, theoretical models, system dynamics models, analysis, experiences, policies etc.) are also needed. Sometimes, threats can be avoid in a simpler manner, by stopping extremely suspicions transactions. In extreme situations, national interest are more important than laws. A veritable independence of the National Bank must also be ensured and the relevant public institutions have to assure their part on the legislative and judicial fronts. Now, the Moldovan banking system are in a deep reputational and financial distress, which in combination with the political uncertainty and the spillovers from the regional crisis have a severe adverse effect on the national economy, public finances, and ultimately on the wellbeing of the population. To overcome this state of affairs in the banking sector, to reinstate its stability and credibility is required to mix radical and decisive actions by the Central Bank and all relevant public institutions. For example, improvement can be done in the directions of the approval and implementation of the necessary set of legislation which will underpin NBM independence and eliminate legal bottlenecks that hinder its ability to ensure banks shareholding and operational transparency, to enforce accountability and sound corporate governance in the sector.

4. Conclusion

Despite the fact that econometrics and mathematical models are very good tool for economic analysis and must be done, for example in identifying bubbles procedure that is straightforward because bubbles are detected, dated, and estimated simultaneously in a coherent framework

(Shi, S, P, Song, Y, 2016, p. 159-184), but sometimes are lack of exact data. Even if the data is perfect, but usually it is not, predictions that uses such data is highly mathematical, it makes an assumption that if we have some condition, we have results. But if conditions change unexpectedly, as sanctions or frauds, these methods become less accurate. Economists using statistical analysis can come to opposite conclusions than analysts using cause-and-effect methods. Forecasting is not very accurate and so we have to provisionally keep looking at what's happening and making our adjustments as we go along. Mathematical models are needed but have proven not perfect in predicting and solving financial crises, therefore, alternative approaches (theoretical and system dynamics models, history and behavioral approach, experiences, etc) are also needed. Econometric analysis is mandatory, but must be used with precautions in predictions. Economics is not only mathematical models.

The EU agreement with Moldova involves in opportunities and threats. In comparison to Romania, economic situation was better, because reforms were done earlier by the pressure of EU, USA. For Moldova, the situation is different. International cooperation should be reinforced in order to strengthen anti-fraud cross-border controls and intelligence sharing. Putting the banking system on a sounder basis is undoubtedly necessary but not sufficient in order to restore the public confidence. Dealing with banking problems is one of pre-requisites of the IMF and other international and bilateral donors in order to resume lending and cooperation. It is very important to work with international institution or another countries help, but some limits should be respected about how deep outside help can change or help Moldova inside. Government's domestic policy efforts should also promote structural reforms and restore the credibility of its pro-European agenda. The fraud investigation must continue until full completion in order to identify all responsible parties, fraud schemes and available means to recover misappropriated assets, but it is better to avoid a fraud than to deal with its consequences.

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Rating of European Housing Markets by Multi-Objective Evaluation Method

Iwona Gorzeń-Mitka, Andrzej Skibiński, Anna Lemańska-Majdzik

Czestochowa University of Technology

Faculty of Management

Armii Krajowej Av. 19

Czestochowa, Poland

e-mail: iwona.mitka@zim.pcz.pl, skibinskia@tlen.pl, lemanska@zim.pcz.pl

Abstract

This paper examines the changes in the European housing market between 2009 and 2014. Using Multimooora analysis, we have made a rating for this market over 5 years. Based on key indicators for housing markets, such as overcrowding rates, severe housing deprivation rates, roundtrip-costs, housing cost overburden rates, and others, we indicate changes of direction in the condition of the European housing market. A ranking index shows early warning signs of trends in the European housing market.

Keywords: European Union, Housing Markets, MULTIMOORA Method

JEL Classification: R31, F63, C10

1. Introduction

Specificity of real estate markets, including housing, is broadly discussed in literature (Boissel, Ch. et al. 2015; Case, K. E. 2005; Dieci and Westerhoff 2015; Gorzeń-Mitka, I. 2015; Kuty, N. K. 2005; Lemańska-Majdzik A. 2014; Nuuter, T., Lill, I. and Tupenaite L. 2015). A home is considered to be the most valuable asset of a household and a fundamental part of its portfolio. In the analysis of a selected housing market in the context of other economies, one should stress that such markets' operations vary in each country due to such factors as different legal or economic regulations. However, a range of common features can be defined which allow for creating a comparative area. The housing market has important macroeconomic implications for a variety of reasons. Housing prices affect residential investment as well as perceived wealth, and therefore influence consumption expenditures and aggregate demand.

The housing markets are very heterogeneous, making it very difficult to propose a one size fits all approach to housing markets and housing policy from the European Union level. The best way, indeed, to observe the markets is at national and even regional level, since the needs of the metropolitan areas, which become increasingly dense, differ a lot from the ones of the rural areas (The State of Housing in the EU, 2015). The degree of European real estate market integration is dependent on a variety of macroeconomic and financial factors that affect real estate prices: (1) macroeconomic factors, such as real GDP growth, employment, inflation, monetary policies, and fiscal policies; (2) microeconomic / financial factors, including rental costs as well as real property financing, construction, and transaction costs; and (3) regulatory factors, such as property laws, tax rules and other regulations associated with real estate (Yang et al., 2005).

EU integration greatly influences on policy-making at the national level. Most of the conditions governing the economic and business environment for European companies and consumers - including the real estate markets - are decided at the European level.

As indicated by Gorzeń-Mitka (2015) the multiplicity of variables needed for making an assessment in the case of such decisions is an incentive to seek methods that could optimise such decisions and thus reduce the level of related risk. One of the methods which allows for taking into consideration multiple decision criteria simultaneously is the MULTIMOORA method, which is an extension of Multi-Objective Optimisation on the basis of Ratio Analysis (MOORA) by Brauers and Zavadskas (2006).

The main objectives of the study are as follows: to identify indicators which have a positive and negative effect on the housing market by using the MULTIMOORA method to evaluate a condition market index for each EU country, rank it, and analyse the results.

In the article, the condition of 28 European housing markets was assessed, based on 9 of their characteristics, using the MULTIMOORA method. The article consists of, firstly the introduction and, secondly, a discussion of indicators defining the specificity of the housing market. The third part discusses the MULTIMOORA method and, in the final section we present the results of the housing market analysis based on this method.

2. European Housing Markets Indicators - Theoretical Background

There are manifold reasons for analysis of developments in housing markets. The researchers indicate, for example (Structural Factors in the EU Housing Markets, 2003) housing wealth, inter-relationships between the mortgage and housing markets, and transaction costs in housing markets. Housing wealth is an important part of the net worth of the private sector and housing-related expenses (e.g. mortgage payments or rent) represent a major part of household expenditure (Case K.E. et al. 2005). Thus, changes in residential property prices (hereinafter referred to as "house prices"), rent and mortgage interest rates may have a significant impact on aggregate demand and inflation, and also play an important role in the transmission mechanism of monetary policy. Understanding the factors that drive house prices and rent is crucial for understanding the role housing markets play in the overall economy. Next, understanding the inter-relationships between the mortgage and housing markets is important in analysis of the implications of price fluctuations on financial stability (Nuuter, T. 2015; Luciani, M. 2015). Also important, is the analysis of transaction costs; high transaction costs in housing markets and the existence of (non-portable) housing-related benefits hinder labour mobility across and within EU countries (Boissel, Ch., et al. 2015).

According Dieci and Westerhoff (Dieci, R. and Westerhoff, F. 2015), a large body of economic literature has accepted the view that housing market dynamics depend, at least partially, on some kind of bounded rationality and on the behavioural heterogeneity of housing market investors.

A very important element in housing market analysis is assessing the quality of housing. One of the key dimensions in assessing the quality of housing is the availability of sufficient space within a dwelling. The overcrowding rate describes the proportion of people living in an overcrowded dwelling, as defined by the number of rooms available to the household, the household's size, as well as its members' ages and their family situation.

In housing market analysis, many researchers provide indicators for risk of poverty and selected aspects of housing deprivation. Risk of poverty measures the percentage of people

living in households where equivalised disposable income per person was below 60 % of the national median.

In addition to overcrowding, some other aspects of housing deprivation (such as the lack of a bath or toilet, a leaking roof in the dwelling etc.) are taken into account to build a more complete indicator of housing quality. The severe housing deprivation rate is defined as the proportion of persons living in a dwelling which is considered as being overcrowded while having, at the same time, at least one of these aforementioned housing deprivation measures.

Finally, a commonly used indicator in housing market analysis is housing affordability (Pittini, A. 2012). Typically, this concept is generally defined as housing that is available for purchase or rent at a market value affordable to the majority of the population. In particular, the term is used to describe housing provided at sub-market prices to households on low incomes (Kutty, N. K. 2005).

Based on these findings, and more detailed literature review in earlier author's studies, we selected 9 indicators desirable for analysis of the condition of housing markets (see Table 1).

Table 1: Housing Market Indicators

	Indicators	Description	Desirable values
x1	Overcrowding rate (% of total population)	The overcrowding rate is defined as the percentage of the population living in an overcrowded household. A person is considered as living in an overcrowded household if the household does not have at its disposal a minimum number of rooms equal to: <ul style="list-style-type: none"> •one room for the household; •one room per couple in the household; •one room for each single person aged 18 or more; •one room per pair of single people of the same gender between 12 and 17 years of age; •one room for each single person between 12 and 17 years of age and not included in the previous category; •one room per pair of children under 12 years of age. 	Min
x2	Severe housing deprivation rate (% of total population)	Severe housing deprivation rate is defined as the percentage of population living in the dwelling which is considered as overcrowded, while also exhibiting at least one of the housing deprivation measures.	Min
x3	Housing cost overburden rate - % of median equivalised income (% of total population)	The housing cost overburden rate is the percentage of the population living in households where the total housing costs ('net' of housing allowances) represent more than 40 % of disposable income ('net' of housing allowances).	Min
x4	Roundtrip-cost	Round trip transaction costs (%). The total cost of buying and then re-selling a residential property, including all costs (except the sale price itself), expressed as percentage of the property value.	Min

x5	GDP-per-capita	The gross domestic product (GDP) per capita is the national output, divided by the population, expressed in U.S dollars per person.	Max
x6	Price/GDP -per-capita	House price to income ratio. The house price to income ratio is the ratio of the cost of a typical upscale housing unit of 100 square metres, compared to the countries Normally this ratio will be much higher in low income countries than in high income countries	Min
x7	Economic-freedom	Scores are from 0 to 100, higher scores are more desirable i.e. more conducive to economic growth. The lower the score, the greater the level of government interference in the economy and the less economic freedom a country enjoys	Max
x8	Competitiveness	The Growth Competitiveness Index (GCI), aims to quantify the quality of the macroeconomic environment, the state of a countrys public institutions, and its level of technological readiness	Max
x9	Property-rights-index	A subcomponent of the Index of Economic Freedom, the property rights index measures the degree to which a countrys laws protect private property rights, and the degree to which its government enforces those laws. Higher scores are more desirable, i.e. property rights are better protected. Scores are from 0 to 100	Max

Source: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary>;
<http://www.globalpropertyguide.com/faq>

By indicators from Table 1, we evaluate changes in the housing market in 2009-2014 by MULTIMOORA method.

3. Problem Formulation and Methodology

Many researches (Lemańska-Majdzik A. 2014; Okręglicka, M. 2016; Podaras A. 2015; Sipa M. 2013; Mesjasz-Lech, A. 2012; Skibiński A. 2011; Zavadskas, E. K. and Viltienė, T. 2006) have pointed out that decision-making in real estate market it is essential to be able to take into account the impacts of many factors (e.g. cultural, social, moral, legislative, demographic, economic). Therefore evaluation of markets based on multi-attributes is becoming more popular. One of the most popular is the MULTIMOORA (Multi-Objective Optimization by Ratio Analysis plus the Full Multiplicative From) method. It has been studied and applied in a wide range of problems (Chakraborty, S. 2011; Karande, P. and Chakraborty, S. 2012; Gorzeń-Mitka I. 2013; Gorzeń-Mitka I. 2015). In this case, the MULTIMOORA is applied for assessment changes in the European housing markets during 2009-2014. In this research as alternatives will be used member states of the European Union (UE-28 countries) and as objects—different parameters of housing market. Later, by using Ratio System and Reference Point methods (MULTIMOORA method elements), ranks for each alternative for particular objective should be calculated. For calculating MULTIMOORA first of all it is necessary to collect raw data, which will represent specific alternatives for selected objectives. This research will use data only from reliable sources, such as EUROSTAT, Global Property Guide and others.

3.1 Method

The MULTIMOORA method is originated from MOORA (Multi-Objective Optimization by Ratio Analysis). MULTIMOORA was introduced for the first time by Brauers and Zavadskas in *Control and Cybernetics* in 2006 [2]. Because description MULTIMOORA method we can find in many studies (Stankevičienė, J., and Rosov, S. 2013; Brauers, W. K. M. and Zavadskas, E. K. 2006; Brauers, W. K. M et al. 2008; Chakraborty, S. 2011; Gorzeń-Mitka I. 2015; Karande, P. and Chakraborty, S. 2012) we give up from detailed presented of this method.

3.2 Data

With the use of the MULTIMOORA method, as described previously, a decision matrix (Table 2) was created which presents the data for the markets we analysed with reference to the indicators we selected (description of indicators see Table 1).

Table 2: European Housing Market Indicators - Initial Data (Decision Matrix) (2014)

Indicator Country	x1	x2	x3	x4	x5	x6	x7	x8	x9
Austria	15,3	3,7	6,6	11,82	50 504,00	13,02	72,40	5,14	90
Belgium	2,0	0,9	10,4	19,1	48 110,10	8,51	69,90	5,20	80
Bulgaria	43,3	12,9	12,9	10,3	7 242,92	19,43	65,70	4,16	30
Croatia	bd	7,8	7,5	21,93	14 529,00	18,32	60,40	4,08	40
Cyprus	2,2	1,5	4,0	16	31 435,10	9,89	67,60	4,36	70
Czech Repub.	19,9	3,5	10,5	9,2	20 925,40	23,55	72,20	4,52	70
Denmark	8,1	2,3	15,6	3,04	63 003,00	8,13	76,10	5,40	90
Estonia	14,2	3,9	8,3	5,59	16 880,20	15,94	75,90	4,62	90
Finland	7,0	0,7	5,1	10,25	50 090,00	18,05	73,40	5,47	90
France	7,1	2,3	5,1	16,3	44 400,80	32,97	63,50	5,14	80
Germany	6,6	1,9	15,9	14,84	44 555,70	9,64	73,40	5,41	90
Greece	27,4	6,0	40,7	14,96	27 875,40	16,74	55,70	3,92	40
Hungary	44,6	18,1	11,4	14,21	14 808,10	16,17	67,00	4,36	60
Ireland	3,6	1,2	5,5	9,15	48 517,00	10,26	76,20	4,77	90
Italy	27,2	9,5	8,5	22,6	37 046,30	22,17	60,90	4,43	50
Latvia	39,8	16,6	9,6	7,12	12 226,50	22,98	68,70	4,24	50
Lithuania	28,3	10,1	7,1	3,45	13 190,40	19,89	73,00	4,41	60
Luxembourg	6,7	1,6	6,8	14,31	122 272,00	6,03	74,20	5,03	90
Malta	4,0	1,3	1,6	16,13	22 057,80	16,34	66,40	4,33	75
Netherlands	3,5	0,6	15,4	12,16	51 409,50	10,6	74,20	5,41	90
Poland	44,2	9,1	9,6	6,61	13 966,80	29,15	67,00	4,46	60
Portugal	10,3	5,5	9,2	14,42	22 698,80	10,29	63,50	4,40	70
Romania	52,3	21,4	14,9	7,58	8 665,80	35,6	65,50	4,08	40
Slovakia	38,6	4,3	9,0	3,1	17 888,70	15,86	66,40	4,19	50
Slovenia	14,8	6,5	6,4	6,92	25 939,30	12,64	62,70	4,30	60
Spain	5,3	1,7	10,9	13,5	33 297,50	14	67,20	4,54	70
Sweden	10,7	1,6	7,8	6,54	61 098,30	15,56	73,10	5,61	90
United King.	7,2	2,4	12,1	8,07	39 604,30	80,05	74,90	5,39	90

Indicators description as in the table 1; bd - data deficiency.

Source: author's selection based on Eurostat and www.globalpropertyguide.com/Europe/

3.3 Results

In Table 3 we presented results of MULTIMOORA analysis of European housing market-the benefit, cost, and composite scores are listed for all alternatives.

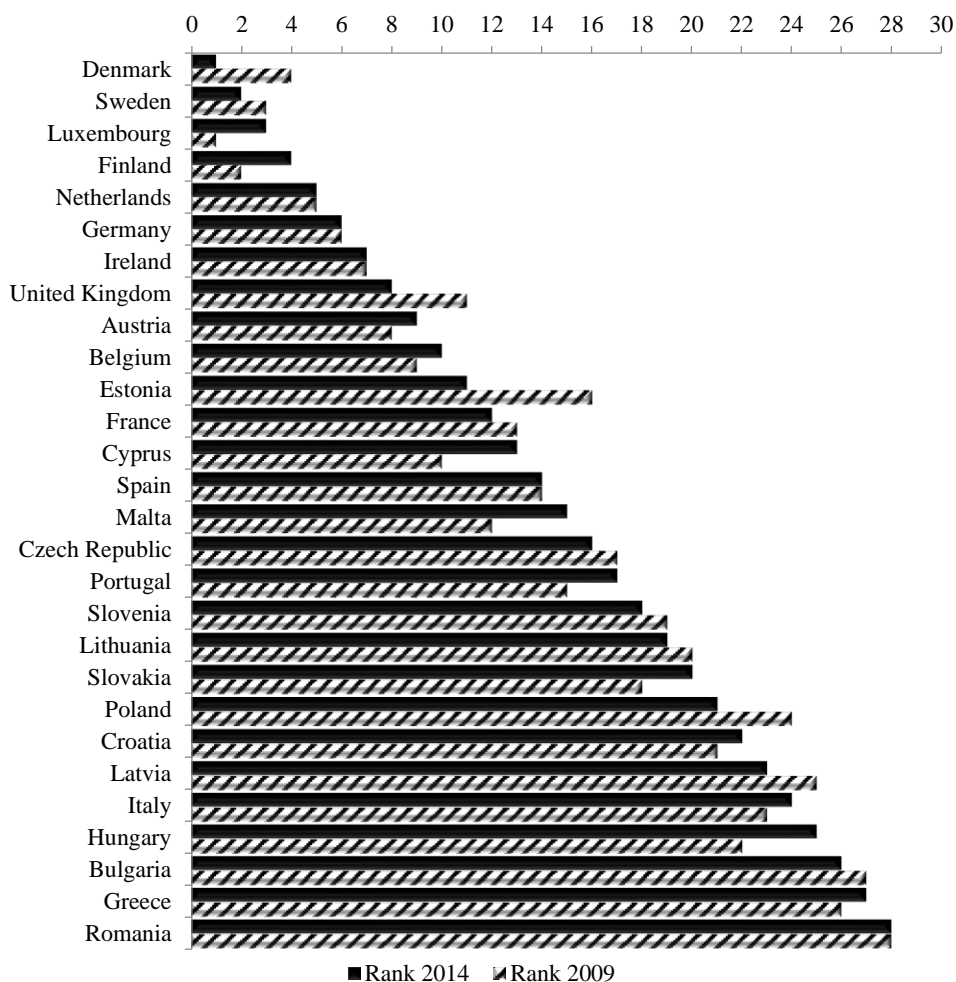
Table 3: European Housing Market - Ranking of the 28 European Housing Markets by MOORA Method (2014)

Country	Criteria	Benefit criteria	Non-benefit criteria	Composite score	RANK
Austria		0,3507979349	0,1342901655	0,21650776938	9
Belgium		0,3174335875	0,1154704455	0,20196314201	10
Bulgaria		0,0723856011	0,2971600918	-0,22477449072	26
Croatia		0,0656382368	0,1748828755	-0,10924463865	22
Cyprus		0,2062607516	0,0905294015	0,11573135008	13
Czech Republic		0,2353669158	0,1533591834	0,08200773241	16
Denmark		0,3999822387	0,0606341488	0,33934808990	1
Estonia		0,2520504692	0,1011296108	0,15092085834	11
Finland		0,3808769025	0,0807651776	0,30011172491	4
France		0,2753851814	0,1414227118	0,13396246968	12
Germany		0,3721537110	0,1244730531	0,24768065791	6
Greece		0,0381340434	0,2787504276	-0,24061638417	27
Hungary		0,1679008420	0,3470382761	-0,17913743410	25
Ireland		0,2775911806	0,0570227438	0,22056843679	7
Italy		0,1343908869	0,2863981965	-0,15200730961	24
Latvia		0,1435499669	0,2834444318	-0,13989446491	23
Lithuania		0,2029969343	0,1760807443	0,02691618999	19
Luxembourg		0,4064842219	0,0988328821	0,30765133976	3
Malta		0,2016645618	0,0991061243	0,10255843747	15
Netherlands		0,3816725163	0,0903281487	0,29134436756	5
Poland		0,1748313649	0,2620477039	-0,08721633896	21
Portugal		0,1804509476	0,1431771458	0,03727380189	17
Romania		0,0888616232	0,3818413119	-0,29297968875	28
Slovakia		0,1315747322	0,1792438638	-0,04766913158	20
Slovenia		0,1484576994	0,1182287673	0,03022893211	18
Spain		0,2191190910	0,1058630201	0,11325607092	14
Sweden		0,3981642126	0,0799330079	0,31823120474	2
United Kingdom		0,3750316258	0,1577596589	0,21727196690	8

Source: author's calculations

A ranking of housing markets, created as a result of the analysis conducted, was compared with an European housing markets ranking. Figure 1 shows this comparison.

Figure 1: European Housing Market Condition by MOORA Ranking (2009 Versus 2014)



Source: author’s calculations

A comparative analysis of the rankings yielded the following conclusions:

- of 28 markets analysed, 11 were classified in higher positions in the ranking in 2009 than in 2014; 12 markets were classified in lower positions;
- the largest rating deterioration was observed for the housing market in Estonia (5 positions up), Denmark (3 positions up), United Kingdom (3 positions up), and Poland (3 positions up);
- the largest rating improvement was observed for the housing markets in Cyprus, Malta, and Hungary (all 3 positions down);
- rating remained on the same level for 5 housing markets, Netherlands, Germany, Ireland, Spain, and Romania;
- Denmark had the best position in the ratings, Romania had the worst.

Considering the above, one can state that the use of multi-criteria analysis allows support of the assessment processes (in this case housing markets) while taking into account an individual set of variables. This allows for comparing the results obtained with similar sets of data in the area of interest to us.

4. Conclusion

Condition of European housing markets is very heterogeneous. How we can read in report *The State of Housing in the EU 2015 (A Housing Europe Review, 2015)* the overall state of housing in the EU remains unstable and have two very alarming issues: increase the number of people without a home and there are not enough affordable homes available in most European countries to meet the increasing demand. This study examines the impact of selected indicators on the condition of the European housing market between 2009-2014. Using a selected data set of 28 countries and 9 indicators, over a period of 5 years, allows for preparation of specific ratings. We indicate that it is possible to use MULTIMOORA methodology in order to rank countries by their housing market condition, and enable a broader analysis of this market by taking into account a number of variables.

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Interpretation of Precautionary Principle in Trade Disputes between the EU and the US

Nicole Grmelová

University of Economics, Prague, Faculty of International Relations

Department of Business and European Laws

Nám. W. Churchilla 4

Prague, Czech Republic

e-mail: grmelova@vse.cz

Abstract

The understanding of two different approaches to the interpretation of precautionary principle is crucial for the negotiation of the Transatlantic Trade and Investment Partnership (TTIP) to avoid possible trade disputes between the European Union and the United States in the future. In the past, the European Union lost its case on the defence of “its precautionary principle” against the United States in a trade dispute resolved by the World Trade Organization’s Dispute Settlement Body concerning genetically modified organisms. The aim of this paper is to clarify the understanding of precautionary principle on both sides of the Atlantic, analysing and comparing both, the case-law of the World Trade Organization’s Dispute Settlement Body (adopting the United States’ approach) and that of the Court of Justice of the European Union.

Keywords: *Dispute Settlement Body, European Union, Precautionary Principle, Transatlantic Trade and Investment Partnership, United States*

JEL Classification: *D81, K23, K33, K42*

1. Introduction

At present, the EU is negotiating the Transatlantic Trade and Investment Partnership agreement with the US which is going to create a huge free trade area encompassing over 850 million consumers. The establishment of a dispute settlement mechanism is crucial for the future effective enforcement of the treaty, therefore if modeled on the WTO dispute settlement procedure, the negotiations should strive to avoid some of the pitfalls of the WTO dispute settlement system with respect to the interpretation of precautionary principle in relation to GMOs. The procedure to have GMOs authorized in the US largely differs from that in the EU, as in the US GMOs are considered as essentially equivalent to conventional produce and hence safe. On the contrary, the EU requires a separate safety assessment for each single genetically engineered product which is to be authorized for free circulation within the territory of its Member States, thus creating a more bureaucratic and time consuming procedure for businesses marketing GMOs. It was precisely the delays in authorization procedures as well as bans to circulation of GMOs in the EU which were at the root of a high profile dispute between the US and the EU concerning genetically engineered products in 2003.

The aim of this paper is to clarify the understanding of precautionary principle on both sides of the Atlantic, analyzing and comparing both, the case-law of the WTO’s Dispute Settlement Body (DSB) adopting the US approach to precaution and that of the Court of Justice of the European Union (CJEU).

2. Dispute Settlement Procedure under WTO Rules

As the EU is a member of the WTO it has accepted the jurisdiction of its DSB should another WTO Member sue it for the breach of WTO rules. “*The WTO's basic assumption is that free trade is good for the world, so no product ought to be excluded from free circulation unless proven dangerous through a risk assessment with scientific evidence. Hence trade disputes constitute a key arena for analyzing how the WTO jointly establishes global legal norms and what counts as relevant knowledge*” (Levidow, 2014).

The dispute settlement procedure within the WTO is governed by the Dispute Settlement Understanding which prefers an extrajudicial resolution of trade disputes. Should the extrajudicial resolution of disputes prove impossible, a quasi-judicial procedure is put in place, consisting of two instances. The first instance involves setting up a panel of three “judges” (economists and/or trade lawyers) who issue a report that can be appealed before the Appellate Body consisting of seven “judges”²⁰. Once approved by the DSB, the Panel/Appellate Body report becomes binding for the parties to the dispute. The Dispute Settlement Understanding sets a specific time frame for a dispute to be resolved. The quasi-judicial procedure should not exceed 15 months (including the appeals procedure). Yet, this ideal period for dispute resolution may be extended, if the panel uses the possibility of making recourse to experts, whose scientific knowledge is required to decide on the case. It was precisely the panel’s requirement to have expert opinions available before drafting a report which made the GMO dispute between the US and the EU take almost three years to complete, even though the panel report had not been appealed.

2.1 Background of the GMO Dispute before a WTO Panel

In 2003 three plaintiffs, the US, Canada and Argentina asked for the establishment of a panel to resolve their dispute over GMOs with the EU following the failure of mutual negotiations between the parties involved. Once the panel has been constituted, it was not clear what the legal basis of the dispute would be, since both the plaintiffs and the defendant alleged the application of different WTO rules. Whereas the US alleged the breach of the WTO’s Sanitary and Phytosanitary Agreement (SPS Agreement), the EU was convinced that the panel should examine the compliance of its trade practices with the Technical Barriers to Trade Agreement (TBT Agreement) and the Cartagena Protocol on Biosafety of January 2000 attached to the 1992 Convention on Biological Diversity, since the latter leaves more room for the application of EU’s precautionary principle (Barrett and Lee, 2003). In 2006, the panel adopted the US view to apply the SPS Agreement to the case, while making a novel qualification of GMOs to fit into the scope of SPS Agreement which specifies rules for food safety (Peel, 2006).

The Panel opined that the threats posed by GMOs to biodiversity fall under the scope of SPS Agreement category of risks to ‘animal and plant life or health’ (WTO, 2006: para. 7.219). Also, the panel found that GMOs represent SPS agents, having defined genetically engineered products as ‘pests’, whereby the transgene escape accounted for the ‘pest effect’ or as ‘invasive species’. Transgenes were classified as ‘food additives’, while GM pollen became a kind of ‘animal feed’ because it could be ingested by bees (Levidow, 2014). To fit the frame

²⁰ In this context, Read criticizes the composition of WTO panels which do not rely on professional panelists, but on part time experts. The European Union proposed the creation of a standing body of qualified and professional panelists, but this proposal hasn’t prospered so far (Read, 2005). At present, the EU is attempting to introduce a permanent court in the framework of the TTIP Agreement to resolve trade disputes between the US and the EU resulting from the application of that agreement.

of the SPS Agreement the panel qualified EU rules governing genetically engineered organisms as SPS measures applied to protect human life or health from risks arising indirectly from the entry, establishment or spread of weeds via 'pests' (WTO, 2006, para 7.360).

2.2 Precautionary Principle in the SPS Agreement

The EU, being represented by the European Commission Legal Service, invoked the precautionary principle as a defense of the EU's reluctant stance to GMOs. The precautionary principle found its way into EU law via the German "Vorsorgeprinzip". Since there is no clear definition of the principle, its critics say it is a vague term serving as a defense for barriers to trade. On the other hand, even the SPS Agreement makes room for precautionary approach in its Article 5.7., which reads as follows:

"In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time" (WTO, 1994).

Barrett and Lee argue that the SPS Agreement makes a very weak reference to the precautionary principle insofar as it considers scientific uncertainties as temporary gaps to be bridged by further research, requiring the parties concerned to take an active approach in seeking new scientific evidence (Barrett and Lee, 2003).

Indeed, the panel's reading of Article 5.7 of the SPS Agreement coincides with a very narrow concept of the precautionary principle, akin to the US and Canadian science-based approach, in which a lack of evidence of safety hazards implies safety. The panel argued that a recourse to Article 5.7 can only be made, if there is insufficient scientific evidence for carrying out a risk assessment. This reasoning made by the panel deviates from a previous interpretation of Article 5.7 SPS Agreement by the Appellate Body in the beef hormones case in which the WTO's Appellate Body held that *"a minority scientific view can justify a precautionary measure (SPS Art. 5.7), without needing a formal 'risk assessment' required by SPS Article 5.1"* (Boisson de Chazournes et al., 2009). Such interpretation of the WTO Appellate Body was much closer to the European concept of precautionary principle to be discussed below.

Since there was sufficient scientific evidence for making a risk assessment, the panel maintains, article 5.1 of the SPS Agreement leaving no room for precautionary action has to be applied. Article 5.1 of the SPS Agreement requires Members to *"ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations"* (WTO, 1994).

Even though, the opinion of the experts called upon to answer the panel's questionnaire was by no means unanimous as to the availability of sufficient scientific data for carrying out a risk assessment on the safety of GMOs in the 1990s when the trade dispute arose, the members of the panel ignored the claims made by more cautious experts about insufficient scientific evidence on the safety of GMOs. Indeed, scholars insist that at the time of the GMO dispute there was *"no consensus within the scientific literature about the safety of GMOs"* (Barrett and Lee, 2003), a situation which persists even nowadays. The WTO panel ignored the more cautious opinions on the safety of GMOs expressed by some of the experts and made reference

to the existence of an official EU risk assessment of GMOs drafted by the predecessor of EU's European Food Safety Authority (EFSA), the Scientific Committee on Plants and Scientific Committee on Food. Hence, no scientific discussion of the expert opinions took place within the WTO panel and the EU's reference to diverging scientific evidence on (the lack of) GMO's safety was not considered relevant for its defense. Yet, in the past, WTO panels did engage in considering expert knowledge from a substantive point of view, instead of deciding a case on merely procedural grounds, as was the case of the GMO dispute. The panel concluded that the EU maintained measures contrary to Article 5.1 of the SPS Agreement.

Alemanno aptly summarizes WTO's policy towards precaution by saying that *“it is the party arguing that public health concerns justify a derogation from the principle of free trade that must gather and present the evidence necessary to establish, first, that the restriction pursues the legitimate objective of public health protection and, second, that it is proportionate to the objective pursued”* (Alemanno, 2013).

Having delivered this verdict, some commentators labelled the WTO as a new 'trans-science organization', which managed to undermine regulatory pluralism employing a false, and narrow concept of science (Walker, 1998).

3. EU's Interpretation of Precautionary Principle

As seen above, the WTO panel has adopted an extremely narrow approach as to when the precautionary principle may be invoked as a measure to protect human health under circumstances of scientific uncertainty. The WTO panel appears to have sided with the US and Canadian science-based risk assessment, which is likely to *“be more effective in protecting vested interests rather than protecting health and the environment”* (Quijano, 2003). The wording of the verdict by the WTO panel in the US-EU dispute over genetically engineered products not only deviates from an earlier interpretation of precautionary principle made by the WTO's Appellate Body, but it contradicts the Cartagena Protocol referred to above. EU's approach to precautionary risk assessment appears to be more in line with the Cartagena Protocol than the WTO's and US' science-based risk approach.

In EU's founding treaties, precautionary principle can be found in the chapter covering the protection of the environment. Article 191(2) of the Treaty on the Functioning of the European Union, which makes reference to precautionary principle, reads as follows: *“Union policy on the environment shall aim at high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay”*.

This wording of the precautionary principle appears to imply that risk assessment in the EU should not be limited to the safety of GMOs only, but should include that of the chemical substances by which GMOs are being treated with while growing on fields. The balance between environmental and economic benefits of GMOs still needs to be demonstrated since in some cases genetically engineered products resulted in lower yields while not reducing pesticide use (Barrett and Lee, 2003).

The EU has devised a specific set of legal rules governing the authorization and release of genetically engineered crops. Where GMOs have been authorized to be marketed, their producers are obliged to label them as products manufactured by employing genetic modification. On the contrary, in the US labelling of GMOs is voluntary. By establishing mandatory labelling of GMO products, the EU shifts the application of precautionary principle

from supranational to individual level. Yet, the mandatory labelling of GMO does not apply to meet from animals which have been fed on GMO crops, such as GM soy and GM maize. Such meet can be sold without any GMO labelling and fully complies with all EU safety and transparency rules adopted to date.

3.1 Commissions Communication on the Precautionary Principle

To simplify the application of the precautionary principle in the EU's legislative process, the European Commission adopted a non-binding communication on the interpretation thereof. This soft-law instrument declares to have four main objectives:

- *“to outline the Commission's approach to using the precautionary principle,*
- *to establish Commission guidelines for applying it,*
- *to build a common understanding of how to assess, appraise, manage and communicate risks that science is not yet able to evaluate fully, and*
- *to avoid unwarranted recourse to the precautionary principle, as a disguised form of protectionism”* (European Commission, 2000).

Since the precautionary principle is not defined in EU law, the Commission tries to detail on its meaning and application in this communication. With respect to the GMO debate, the essential part of the Commission Communication reads that the scope of the precautionary principle is not limited to the protection of the environment, but is much wider, reaching out to cover human, animal and plant health. Since the Commission Communication was adopted prior to the WTO's panel verdict on the US-EU GMO trade dispute, the Commission expressed its view that the EU (formerly the European Community) is entitled to establish the level of protection it considers appropriate in terms of the protection of the environment, human, animal and plant health.

The Commission Communication refers to the way in which the precautionary principle is to be reflected in the decision making of the European Union distinguishing three phases of risk analysis: risk assessment, risk management and risk communication. The Commission maintains that precautionary principle is particularly relevant to the risk management phase. This opinion has not been widely accepted by experts involved in risk analysis, since the different phases of risk analysis, especially risk assessment and risk management may overlap and it is very difficult to draw clear boundaries in between (Recuerda, 2009).

This soft law instrument specifies that precautionary principle should be applied to situations where *“scientific evaluation does not allow the risk to be determined with sufficient certainty”* (European Commission, 2000). At the same time, the Communication recalls that it is not the task of the scientists to judge what level of risk is still acceptable, but it is inherently a task entrusted to the politicians. As a rule, legal measures in the EU are adopted by the ordinary legislative procedure which involves the Council of the EU representing national interests and the European Parliament representing the interests of EU citizens. The politicians in these two EU bodies may also wish to take into consideration consumer interests, which have no room in the US science-based risk analysis. Consumer interests have no room in WTO rules either, since WTO rules are based upon the simplistic presumption that consumers always benefit from trade liberalization (resulting in lower prices due to increased competition) and therefore are unlikely to ask for protection (Kerr and Hobbs, 2005). In line with this argument, Read recalls that *“consumers find the cost of acquiring information on [food safety] high, and more importantly, also have difficulty in verifying science that provides that information”* (Read, 2005).

The Commission enumerates a number of principles which should inform the decision making process making recourse to precaution. The use of precaution should be bound by the principle of proportionality (taking into account the cost-benefit analysis, for instance), it should be non-discriminatory, consistent with similar measures already taken, and subject to review, should new scientific data become available (European Commission, 2000).

Finally, the Commission Communication stipulates that in exceptional circumstances, the burden of proof concerning the safety of a product or service may be placed on the producer, manufacturer or importer, but this can by no means be converted into a general rule, which is the case of the US science-based approach.

3.2 The Case-law of the CJEU Concerning the Precautionary Principle

Even before the precautionary principle was formally incorporated into EU's primary law by the Maastricht Treaty, the CJEU made reference to precaution in a number of judgments, where scientific uncertainty played a part, such as the cases of *Officier van justitie v Koninklijke Kaasfabriek Eysen BV* and *Sander* (Recuerda, 2009). More recent judgments adopted by the CJEU include *Pfizer*, *Alpharma*, *Monsanto*, *Artogodan*, and *Gowan*.

Similarly to the *Pfizer* case (CJEU, 2002a), also *Alpharma* concerned the banning of feeding stuffs on precautionary grounds to make sure humans do not develop a resistance to antibiotics used for feed. In the *Alpharma* judgment (CJEU, 2002b), the Court of First Instance dismissed the application of the US based company which alleged misinterpretation of the precautionary principle when adopting an EU regulation that banned four antibiotics from feeding stuffs. Echoing the *Pfizer* judgment, the Court of First Instance stressed that “*neither the Treaty nor the secondary legislation applicable to the present case contains a definition of the precautionary principle*” (CJEU, 2002b, para. 138). When adopting the contested regulation, the Council relied on precautionary principle. At that time, it was already settled case-law of the CJEU that “*the Community institutions may, by reason of the precautionary principle, take protective measures without having to wait until the reality and seriousness of those risks become fully apparent*” (CJEU, 2002b, para. 152), as stated in its legal reasoning in the *BSE* judgment (CJEU, 1998). The Court of First Instance recognizes a broad discretion of the Community institutions as to the protective measures they decide to adopt under the precautionary principle in order to protect the interests of human health where scientific knowledge is still insufficient (CJEU, 2002a, para. 181).

In the *Monsanto* judgment, the safety of genetically engineered products was at stake. The preliminary reference made by a French court concerned “*the lawfulness of two provisional national measures which suspended, successively, the transfer and use of MON 810 maize seeds, which are genetically modified organisms ('GMOs'), and subsequently prohibited the planting of seed varieties derived from the line of that maize*” (CJEU, 2003, para. 2). The Court of Justice essentially reiterated its interpretation of precautionary principle by saying that “*it follows from the precautionary principle that where there is uncertainty as to the existence or extent of risk to human health, protective measures may be taken without having to wait until the reality and seriousness of those risks become fully apparent*” (CJEU, 2003).

In the *Artogodan* judgment, the Court of Justice of the EU made precautionary principle a general principle of EU law (Vogel, 2012). This case concerned the grant and management of marketing authorization for medicinal products, which gave rise to some doubts about their safety. The Court of First Instance recurred to the precautionary principle to justify the refusal to grant a marketing authorization to the plaintiff (CJEU, 2010), a reasoning which was confirmed in the appeal against this First Instance Court judgment by the Court of Justice

(CJEU, 2012b). The *Artogodan* judgment is significant not only for making precautionary principle a general principle of EU law (thus applicable to all fields of EU law and not being limited to the environment), but for stressing that the protection of public health, safety and the environment prevails over economic interests (Recuerda, 2009).

The *Gowan* case (CJEU, 2010) concerned restrictions on the use of fenarimol as an active substance for plant protection. In this judgment, the CJEU tries to find a fair balance between the precautionary principle and principle of proportionality invoked by Gowan. The Court argues that “*given the concerns on the subject of the potential endocrine disrupting effects of fenarimol and the scientific uncertainty in that regard which justified the Commission’s application of the precautionary principle, the restrictions which Directive 2006/134 imposes on the use of that substance do not appear unsuitable for the achievement of those objectives*” (CJEU, 2010, para. 83). Hence, the contested Directive has been found to be in compliance with both, the precautionary principle and the principle of proportionality (CJEU, 2010, para. 87).

4. Conclusion

The WTO’s interpretation of precaution with respect to the SPS Agreement which served as terms of reference for the US-EU dispute over genetically engineered organisms revealed that WTO treaties leave no room for the representation of legitimate interests of consumers (their reluctance to buy GM crops due to precaution) since the WTO model expects consumers to benefit from trade liberalization at all costs. Having adopted a very narrow approach to precaution, the WTO panel which decided the trade dispute between the US and the EU relied rather on the US science-based approach to risk analysis, which is likely to protect vested interests of producers, manufacturers and distributors rather than legitimate interests of consumers.

The case-law of the Court of Justice of the EU has demonstrated on a number of occasions that precautionary action is justified if there is insufficient scientific evidence as to the safety of products in general, and in the *Monsanto* case it targeted genetically engineered products in particular. Unlike in the US and WTO approach to risk analysis, the EU does not require the proof of an existing hazard to declare a GMO product unsafe. The very existence of doubt with respect to a product safety can justify the adoption of a protective measure under the precautionary principle in EU Law.

The analysis of the case law of the WTO adopting the US science based approach to risk analysis and that of the EU applying a more stringent precautionary principle shows that the two concepts are mutually incompatible and unless addressed in the wording of TTIP they are likely to give rise to further trade disputes between the US and the EU. Therefore, it is advisable to negotiate a stricter interpretation of precaution in the body of TTIP to secure a high level of consumer protection, which is one of the goals of the EU enshrined in the Treaty on Functioning of the EU.

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Limits of Liberal Democracy in V4 Countries in Context of EU Imbalance between Economic and Politic Integration

Olga Gubová

VŠB - Technical University of Ostrava
The Social Science Department
17. listopadu 15/2172
Ostrava, Czech Republic
e-mail: olga.gubova@vsb.cz

Abstract

The current European Union as the greatest heir of democratic and liberal values and traditions has a plethora of critics from every angle today. In recent years, the main source of the EU's deceleration is imbalance between common integrated economy and unwillingness to deepen integration in the political sphere. The organization of the Visegrad Treaty is today sui generis kind of regionalization within regional integration. Its importance has changed over time in such a way as have evolved member states and their leaders. Recently, a common platform of the V4 is more pronounced within and outside the EU. The difficulties of the current development the EU are reflected in the internal political development of the Visegrad Treaty countries, all of which are EU Member States. There are invoked latent tendencies in political culture that challenge the limits of liberal democracy and therefore also possible limits for close cooperation. EU failing in terms of political integration, can, paradoxically, these developments strengthened. This article aims to identify in V4 countries violations towards political system of liberal democracy, which can lead to authoritarianism within context of EU imbalance between economic and politic integration.

Key words: EU, Visegrad Group, Political Integration, Limits of Democracy, Authoritarianism

Jell Classification: F 53, F 68, H 7

1. Introduction

The retreating world order with its values and rules was a heritage of industrial period when leading civilization was Europeans. Changing the status of man was probably the most important achievement from the heritage of modern Europe, whose term had expired. During the world wars of the 20th century began European states lose their dominant global superpower influence and became the powers. The bipolar division of the world associated with the rivalry of two superpowers United States (US) and Union of Soviet Socialist Republics (USSR) was, in retrospect, relatively transparent and stable and to a large extent understood: however, drove the world to the verge of nuclear annihilation, which did want neither side of cold conflict. Europe, as a flagship of human rights and democracy, prosperity and peace had great inner potential, which was its driving force. At the turn of Millennium has come predominance of information technology, also international relations occurred in chaotic entropy with unstable relations of actors: multipolarity. In transformation of global system the most important are probably the following: globalization, the transformation of the bipolar structure of the Cold War and the rising of multi-polar structure, with a new international division of power (compared to bipolar or unipolar), the relative decline of US

hegemony in combination with a more friendly approach towards regionalism from the US, restructuring of the global political economy into three main blocks: the European Union (EU), the North American free Trade Agreement (NAFTA) and the Asia-Pacific region and other which are based on various forms of capitalism; the end of the concept of the Third World, changed attitudes towards the so-called developing countries, erosion of the Westphalia system of nation-states. Multipolarism tends to lead the East to Asia, where the shift to information technology multiplies the conventional capacity.

Relations between states have different forms; can be friendly or hostile or neutral. Relations are friendly, if dominates political discussions and objectives are economic and cultural. The form of such relationships is usually diplomacy. The extreme form of hostility between the states is the annexation, aggression, war. For external condition is important whether the system tends to stability or instability what expresses the type of polarity of international relations. The polarity of the polar structure creates a system in which individual elements (actors) have different strength and ability to achieve their different aims and objectives. We usually recognize three types of polarity of international relations – unipolarity (one pole, actor), bipolarity (two poles, actors) and multipolarity (many poles, actors). Moreover, today's polarity does not reflect currently only relations between the states but also between the other elements of contemporary international relations: international organizations, transnational corporations and regional groups. Unipolarity, bipolarity and multipolarity – each creates unequal stability in international environment. Extreme position of the polarity has both unipolarity and multipolarity. Most stable is bipolar system (minimum conflicts at the central level), and most prone to conflict is multi-polar system. System of international relations was multipolar between two world's wars of 20th century, when disintegrated great medieval empires and emerged numerous new states. Unipolar period was really short period of US at the end and beginning of the millennium, especially second term of G. Bush j., when US try to serve as the world's policeman, „lonely" superpower (Huntington, 1999). Bipolar period is most known as military balance between US and SU after World War 2nd, known as Cold War. Current system is rather multipolar, tends to instability and war is so near to the EU borders - abstractly, but also very concrete, when Russian Prime Minister has assumed a new cold war (Medvedev, 2016). Thus, in a situation when the international relations changing systematically, when changing its actors and polarity, would be the interest to reinforce EU position in international relations the most important goal for member states (Söderbaum, Langenhove von, 2006). Nevertheless, iff it is so evidently effective, why is not the EU's foreign policy more integrated? And also: affects the insufficient political integration of EU democracy in Member States? Will assist unstructured regionalization Visegrad Group in stabilizing the EU, or create a new and stronger pressure platform inside EU? And what is the inner condition for stable cooperation of the V4 countries? Where are their limits of democracy necessary for further cooperation?

Methodology of the paper covers among the others the system analysis of international relations, comparative method, the historical method, and numerous theories: especially theory of international relations, theory of regionalism, theory of democracy and theory of political culture.

2. EU Weakening Position as a Result of Imbalance between Economic and Politic Integration

The EU is a very unique regional organization, whose first impulse was to preserve peace in Europe (European Coal and Steel Community, Euratom Treaty). The desire of Europeans after

World War 2nd was not only peace, but also prosperity and wellbeing. Therefore, economic integration has become an engine of regionalization and at the same time suitable platform for peace. At the same time, regional groups, in international relations can counteract the influence of commercial transnational corporations. However, today is clear that the EU is at next crossroads and needs to specify the future direction. So far, every critical situation in the EU's development was resolved, usually by adopting a new treaty with extended integration.

Current threats the EU, with exogenous and endogenous causes, have influence on potential of Europe in international relations:

1. Still fragmented foreign policy without real leaders
2. The real attempt to exit or remain in the EU (upcoming referendum in United Kingdom),
3. The threat to the Schengen area because of unprotected common border.
4. Attempts to potential division between "old" and "new" member states.

All the indicated threats also weaken Europe's position in international relations. Even greater fragmentation than before the last enlargements brought. The quality of regional groupings primarily reflects the degree of integration achieved. However, multipolar regionalism is the part of the global structural transformation so due to integration in foreign policy could be strengthened position of regional groups in international relations (Gubová, 2014).

Integration of foreign policy was not a part of European Community policy from Paris Treaty to Maastricht Treaty (1952-1993). The European Political Cooperation (EPC), being introduced in 1970, was the synonym for European Community foreign policy coordination until it was superseded by the Common Foreign and Security Policy in the Maastricht Treaty in November 1993. The Maastricht Treaty introduced for foreign and defence policy, as well as for the interior and justice, the concept of pillars. The second Common Foreign and Security Policy (CFSP) pillar was based on consensus decision making inter-governmentalism in the Council of Ministers, and also relatively low possible influence by the other institutions. The Amsterdam Treaty introduced the office of the High Representative for the Common Foreign and Security Policy, with highly respected Javier Solana (till 2009) to co-ordinate and represents the EU's foreign policy. The Lisbon Treaty (2009) the concept of the pillars finished, creating a High Representative of the Union for Foreign Affairs and Security Policy, in fact merging the post of High Representative for the Common Foreign and Security Policy and European Commissioner for External Relations and European Neighbourhood Policy. Since December 2011 the High Representative is in charge of the European External Action Service, which was also created by the Treaty of Lisbon. It essentially is intended to be a common Foreign Office or Diplomatic Corps for the European Union. Today, ambassadors for EU are in numerous countries and international organizations.

The aim of the EU common foreign policy is also gradual political and economic stabilization of external European countries. The potential benefits of becoming a member of the EU act as an incentive for both political and economic reform in states wishing to fulfil the EU's accession criteria. The latest EU enlargement definitely brought greater political stability all over Europe, but not made easier the integration of EU foreign policy, as the national interests are increasingly fragmented. Since the European Council continues to act unanimously, it is also possible to circumvent the decision-making procedures, if there is a danger of rejection of the planned decision by the veto of any state. Decision making is then transferred to soil the EU Council (of Ministers), where decisions are taken by qualified majority. Such a procedure often carries the aftertaste of moral failure. This approach was most recently practiced in September 2015 when deciding on immigrants (European Commission [online], 2015). The

EU also missing leaders with significant deep impact to international environment. Contrary, big states to the leading EU roles promote politics less important, often from the smaller states, and it is apparently for two reasons: firstly, they do not want to be accused of excessive undue influence on Union and also of course prefer not to be shading in their European role at home. So far, for greater unity in the common foreign policy does not serve the fact that it does not represent real leaders, such was undoubtedly Spanish Javier Solana, former Secretary General of NATO and former High representative for common foreign policy EU.

UK position in the European Communities was from its entering always a special. Even the entrance (1973) was long time defended by the French president Charles de Gaulle. Insular isolationism, colonial heritage, the London banking or differences in access to social security have always been a source of confusion with mainland Europe. First UK EU membership referendum was in 1975, when 67% of voters decided UK is a member state of European Community. Next referendum is scheduled to take place on 2016 June and its initiator is Conservative Party. From several other members state "why they, not us" will come later and will certainly affect national interests, common foreign policy of EU thus will be not strengthen.

Inadequately protected the EU external borders are currently the reason a threat to the Schengen area. The issue of immigrants divided "old" and "new" member states EU: Central and Eastern European countries are rather than target bumper countries. The division between old and new EU members is not as clear or sharp; therefore, it would be for EU's future extremely dangerous deepens this division as for EU is unity in current situation essential. Estimating the political, human and economic costs of restoring the Schengen area is too high, the greatest loss, however, would be a loss of confidence. Return before Schengen have not economic reasons, but purely political reasons. As soon as the political reasons become economic, then Schengen ends.

The causes of the aforementioned threats to the EU are both exogenous (described above international relations) and endogenous:

- Enlargement versus deepening of EU
- Imbalance between economic and politic integration
- Low regionness EU.

Most of the economic indicators of EU enlargement in the new millennium testify that states how old and new Member States benefited from the emergence of a common market with numerous freedoms with the knowledge that the process had some drawbacks and weak points. Enlargement, however, had insufficient reaction towards deepening of the organization, which means changes towards integration. When the logic of the economic development is movement from the free trade area, custom union, common market towards monetary union - is clear, that monetary union itself requires some elements of political union, at least common not only monetary, but also fiscal policy. However, more of political unification, political union or some form of European Federation, requires also some part of common foreign policy.

The source of the problems the EU is primarily imbalance between the levels of economic and political integration. It depends, first of all, on how much it will be possible to alleviate the imbalance between successful economic integration and insufficient integration in the field of foreign policy. The highest level of integration is in the economic area where the sovereignty of the member states is limited by decision making of supranational bodies (European Union, [online], 2016). It does so primarily on the platform of the Council of the European Union, without foreign ministers of the EU Member States. This decision procedure can be considered

the core of EU economic integration. However, foreign policy agenda belongs to the European Council. European Council consists of the heads of state, foreign ministers and head of European Commission. This council does not decide by majority, but by consensus, rather no integrative, but co-operative way. It is a source of low efficiency of a common EU foreign policy. In the words of H. Kissinger, foreign policy of Europe has still had no one phone number. More cooperation and less integration imply inclination to more instability in international relations. EU, as a big player (Söderbaum, Langenhove, 2006) should have potential for interregionalism (Söderbaum, 2011).

EU is ideologically emptied and retains only shell of the economic redistribution. EU's character is clearly defined geographically and culturally. European states share the history and thus to a large extent European culture. This is at least from the Middle Ages built on the monotheistic Christianity that influenced European social and political developments and created its value framework. Post medieval counterpart to Christianity was the ancient idea the desire for freedom and human cognition in non-religious organized state with the rule of law. This combination has created a successful modern Europe, where have been important human rights and this Europe is the aim of today's emigrants. It is perhaps ironic that this very successful Europe is inadequate for its population, missing public space (Hauer, 2014), albeit achieved in political, legal and social conditions incomparably much. As if we gradually lose sense of European identity. Solutions may be exogenous and endogenous. External condition for ideological reunification of Europe can be some safety threats.

Regionalization is one of the effective tools to empower individual states in foreign relations: paradoxically partial loss of national sovereignty in favour of integration can strengthen the state abroad, thanks to the power of integration grouping. This can be an advantage especially for small and medium-sized states. An example of a regional platform within the EU is Visegrad Group (V4) (Gubová 2015). Being members of EU, V4 states need not primarily seek for own new economic integration or harmonization of law, which are solved within the platform of EU. Member states, however, wishing to consolidate their position inside and outside the EU.

3. V4 Regionness and Limits of Liberal Democracy

Imbalance between EU economic and political integration, not only weakens Europe's position in international relations, but also affects the enforcement of democracy in the V4 countries. Liberal democracy as a long term project is not simply accepted. Current regionness of Visegrad group countries, which can be found in shared history, in similarities of political culture is connected therewith also with limits of liberal democracy. Most important for cohesion of states in some regional group is regionness (Hettne, Söderbaum, 2002), which is internal capacity to create regions with significant geographical factor. The intensity of regionness depends mainly on cultural and historical factors (Hettne, 2003, pp. 33-47). For long-term regionalization is important role of proximity, knowledge of the environment due to the frequency of contacts, cultural affinity and thus similarity of institutional environment. Other decisive determinants are the comparative benefits of natural conditions, different levels of technological advancement or specialization leading to the overproduction. For regionness are similarities of historical development of decisive importance as well as political culture (Almond, Verba, 1980, pp.1-37), as a result of political development.

The modern history of Central Europe region, in which is located V4 Czech Republic, Slovakia, Hungary and Poland countries, is extremely diversified and discontinuous. Mentioned states belonged at different periods of their history to the various empires

(Habsburg, Russian and Ottoman), and their culture has been also strongly reflected with other national influences (German and Jewish). Therefore, Central European states have a discontinuous, interrupted history of statehood. In states which have had discontinuous history of statehood, is usually underestimated role of institutions in political life, due to their inability to defend the statehood and associated social values. Institutionalization of political life is one of the essential guarantees of democracy. High institutionalization of political life is a prerequisite for high political culture. Conversely, low institutionalization of political life is the main feature of primitive non-democracy regimes and demonstrates a low level of political culture. When using the rating high or low level of political culture should be primarily taken into account the quality of the relations of politicians and citizens to the institutions determining political power. It is the core of political culture (Gubová, 2014). Very important evidence of high political culture is respect of politicians and citizens to political institutions. Conversely, a low level of political culture is evidenced by the low respect for political institutions, their untrustworthiness and contempt for them. Political culture creates long-term value orientation (Mishler, 2001) rather than just people's reactions to specific policy measures or on specific policy problems. It is necessary to take into account that trust (rational) in institutions is often in direct proportion to faith (emotional) in leaders, personalities, and politics. The low credibility of institutions is often an impulse for increasing faith with relation to the leaders. The predominance of faith (emotions) in individual politics also testifies to the low level of political culture. Consequently, country with low confidence to political institutions and high faith to leaders usually tends to authoritarianism, autocracy, and violations of political system of democracy.

Complicated history of Central Europe is also a cause for potential different evaluation of nationalism, religion, leadership. Czech Republic has a modern history connected with Habsburgs, Germany and Russia. The country has a democratic tradition and, unlike other V4 countries also industrial tradition, as well as some anti-Catholic tradition. These are probably the reasons for lackluster political nationalism and clericalism, when a leadership tradition has rather ethical content. In Czech Republic was snap election (2013), followed by rather center coalition created from three political parties. Politics is partially populist, with prevailing pro-European orientation. Slovakia has a modern history connected with Hungary and Czechoslovakia and really short history of statehood. Slovaks still search the way to distinguish from historically more dominant Hungary and Czech Republic. Initially, path led from nationalism through attempt to clericalism, with strong tendency to leadership. Part of the current parliament is the fascist political party. In Slovakia is great distance between town and countryside, rather agricultural tradition and prevailing political line frequently reflects the mood of the rural majority. Slovakia is just after election (2016), with extremely fragmented parliament of one bigger and several small parties, leader Robert Fico (SMER), populist politics. Formation of a government will be extremely difficult for a high polarity political structure. This may cause problems during the Slovak Presidency of the EU over second half of 2016. Should not be overlooked, that is Slovakia, who is a winner of post-communistic period among states of Central Europe as have new statehood, EURO, growing economy and does not violate democratic rules. Hungary's modern history is linked to the Habsburg and Ottoman empires. After World War 1st lost two third of its territory: that's why there is still significant nostalgia after „big“ Hungary and nationalism strongly influences politics. Also Hungary has quite great distance between town and countryside, rather agricultural tradition and prevailing political line frequently reflects the mood of rural majority. Hungarian public opinion accepts tend to authoritarianism, the tendency toward leadership is strong (Lendvai, 2012, p. 7). Hungary is in the middle of election term (2014)

with one party government (FIDESZ) with about constitutional majority in parliament and leadership of populist politician Viktor Orbán. When he became a premier with constitutional majority in 2010, started process of fundamental political changes. First had been replaced staffing state-controlled media, followed modification of role of the Constitutional Court, then has been changed electoral system, also was modified the functioning of the central bank. These changes were carried out in the first term of Orbán government (2010-2014). In the second term (2014-) Fidesz party lost its constitutional majority in parliament, but retains a simple majority. The parliamentary party Jobbik, which supports the Fidesz government, refers to the fascist past. 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 constitutes an important source for the creation of politics. Similar to Hungary, tendency toward leadership is strong enough; public opinion tolerates exceeding of democratic rules (Kucharczyk, Zbieranek, 2010). Poland is just after election (2016), with one party government (Prawo i Sprawiedliwość), majority in parliament and populist leader politics Jarosław Kaczyński, which controls the prime minister and president. In Poland can be observed a similar trend as in Hungary, when the pro-European Liberal Party (MSZP in Hungary, in Poland Platforma Obywatelska) were changed rather conservative nationalist parties, with an emphasis on domestic rather than foreign (European) policy, doing the changes that are on the edge or in the framework of liberal democracy. Currently, both countries are supervised by the Venice Commission of the Council of Europe

The political developments in the V4 countries evoke many questions with regard to political culture and democracy. Internal development 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, rather strong nationalism in Hungary, partly in the Slovakia and Poland, clericalism in Poland. Still persists certain distrust to EU, due to the asymmetry of large and small as well as old and new Member States. Post-communist past was last two decades the strongest connecting link between Visegrad countries. There are invoked latent tendencies in political culture – nationalism, clericalism, tendency to leadership - that challenge the limits of liberal democracy and therefore also possible potential for close cooperation.

4. Conclusion

In recent years, the brand V4 is increasingly visible not only within the EU, but also externally. The reason is effect of regions of V4 countries as well as imbalance between in economic and political integration of the EU in changed international relations. In the history of EU was economic integration always a means for political integration. Today, to the creation of a European federation lacks a monopoly on foreign policy and defense, which seems very far, regardless of the worsening of international situation and the changed focus of NATO and V4 countries have with the exception of the Czech Republic's external border of the EU, as well as post-communist past, turbulent democracy and tradition of authoritarianism, part of societies has high social needs. When country lack the deep democratic tradition, can be a path to liberal democracy limited requirements for reduction of human rights and democratic freedoms, especially at difficult social situation and increased international tension. If the EU fails in terms of political integration, such requirements may be strengthened.

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Effects of Economic Sanctions on EU-Russia Integration Processes: Selecting Regional Partners

Albina Gukova, Irina Anikina, Anna Chekalkina, Inna Skrynnikova

Volgograd State University
Institute for Continuing Education
400062, University Avenue, 100,
Volgograd, Russia
e-mail: ido.volsu@mail.ru

Abstract

The current paper shows the consequences of the sanctions imposed on Russia in connection with the Ukrainian crisis for European economies. Having analyzed the impact of sanctions in the financial sector on the economies of the EU member-states and Russia, the authors have arrived at the conclusion revealing the feasibility and necessity for creating new integration strategies for economic cooperation and facilitating the access of Russian companies to state-of-the-art innovation technologies. The paper substantiates the directions of the strategic priorities of regional interests and integration processes under the new economic and political conditions of international competition taking into account the analysis of financial and investment potential of the region. The latter determines the economic stability and financial security of regions and companies. Attention should also be paid to the degree of regional companies' innovative activities which enables to decrease the risks taken by the participants of integration activity in the field of innovation.

Keywords: *Cooperation, Financial and Investment Potential, International Integration, Regional Economic Stability, Sanctions, Strategies*

JEL Classification: *A10, A11, A13*

1. Introduction

Economic sanctions imposed on nations are one of traditional tools of taking enforcement actions on national governments to influence their policies. In fact, this is one of the crisis measures, indicating inability and / or unwillingness to practice the standard rules and principles of relations between nations. Economic sanctions against Russia imposed by the USA and other nations including a number of EU member-states in connection with the Ukrainian crisis have been exercised since March, 2014. Sanctions are various restrictions applied to individuals and legal entities. The ones affecting certain individuals include visa restrictions and assets freeze; while those affecting certain legal entities are restrictions on business cooperation with the companies located in the countries which have imposed sanctions; besides, the sector sanctions have also been imposed aimed at curtailing cooperation in various fields. They presuppose restricting access to capital markets, armaments supply embargo, the ban on the supply of dual-use goods as well as the ban on the export of critical technologies (EUR-Lex [online], 2014). In response to the sanctions Russia has imposed retaliatory sanctions against certain countries, involved in imposing sanctions against it: e.g., in August 2014 the Russian government imposed food embargo, having banned the imports of particular foodstuffs from these countries to Russia (RT News [online], 2015). Originally the

sanctions were imposed for a year with the possibility of further revision; they now continue to operate from both sides.

The issue of assessing the consequences of the sanctions in connection with the Ukrainian crisis is rather challenging, as the time which has passed is not enough for the objective assessment to be made. The presented assessments are estimates and are determined mainly on the basis of the current data. Thus, RT News website comments: *losses of (European – a) farmers account for billions of dollars. Renewing anti-Russian sanctions for another year can lead to negative consequences for the European economies. According to the latest estimates, under the worst case scenario, Germany alone could lose about € 30 billion. European farmers continue to urge their governments to solve this problem* (RT News [online], 2015). The Russian Foreign Ministry remarks: *extension of economic sanctions against Russia will inevitably cause the loss of hundreds of thousands or even several millions of jobs in Europe* (RIA News [online], 2015).

Researchers forecast negative effects of the sanctions for the Russian economy as well. E. Gurvich and I. Prilepskij (Economic experts group) believe that *losses resulting from financial sanctions will account for about \$170 billion, lost revenue from oil and gas exports – about \$400 billion* (Vedomosti [online] 2016). According to academic researchers, *provided we had expensive oil, net capital losses from the sanctions between 2014 and 2017 would have amounted to approximately \$ 160 billion, or 1.9% of GDP, low price for oil would have resulted in even greater losses - about \$ 170 billion, i.e. in relation to GDP would have increased by half to 2.8% of GDP* (Vedomosti [online], 2016).

M. Klimova and E. Sidorova note: *if annual GDP growth both in the EU and Russia is about 1 %, imposing sanctions may cause the negative growth dynamics for the both parties* (Klimova, Sidorova 2014), which is quite significant for current EU growth rate. According to statistics in the second quarter of 2015, GDP increased in all Member States for which data are available for the second quarter of 2015, except France where it remained stable. The highest growth compared with the previous quarter was recorded in Latvia (+1.2%), Malta (+1.1%), the Czech Republic, Spain and Sweden (all +1.0%), followed by Greece and Poland (both +0.9%), Slovakia (+0.8%), Estonia, Croatia, Lithuania, Slovenia and the United Kingdom (all +0.7%). The lowest growth rates were registered in the Netherlands, Austria and Romania (all +0.1%)” (Eurostat [online], 2015). The rate of GDP decrease in Russia in January 2016 is 3,7 % (as compared to the rate in January 2015) (Rosstat [online], 2016).

Research on the consequences of sanctions for the economy has been continually done by the group of scientists led by H. Hufbauer (Peterson Institute for International Economics). In their paper they emphasize: *To preview the results, we find that US sanctions in 1995 may have reduced US exports to 26 target countries by as much as \$15 billion to \$19 billion. If there was no offsetting increase in exports to other markets ,that would mean a reduction of more than 200,000 jobs in the relatively higher-wage export sector and a consequent loss of nearly \$1 billion annually in export sector wage premiums. This suggests a relatively high cost to the US economy while sanctions are in place* (Hufbauer, Elliott, Cyrus, Winston, 1997).

Negative economic assessment of sanctions consequences for EU member-states and Russia intensifies understanding of the need for integration to overcome negative effects of the sanctions for the national economies and importance of the fact that the selection of integration trends should be made on the basis of comprehensive analysis of economic benefits and risks for all the participants of the integration process. Involvement of foreign partners in joint projects under the current conditions is only possible through the support of federal and

regional authorities and public-private partnership. Such a form of interaction will reduce risks of all the participants in the integration process and will increase the probability of successful implementation of the projects. State policy in support of regional innovation has played the crucial role in modern world (Shin, 2015): *The state aimed to promote balanced territorial development and regional specializations in strategic industries. Innovation policy became an increasingly attractive instrument towards harmonizing regional economic development.* Interaction among public and innovation authorities is of paramount importance for minimizing barriers (Komninaki, 2015): *This relative neglect of RIS interactions is limiting, in terms of the fluidity of relationships between actors, particularly in peripheral regions. This risks negatively impacting public policy, as complex and dynamic issues of 'interactivity' reduce to a rather technocratic idea that having the right pieces of the jigsaw will all fit together well.* Similarly, state policy related to building strategies for regional innovation systems is vital for funding (Broek & Smulders, 2015). *This national level policy has a strong influence on the regions and is an important source of funding.*

For the purpose of objectification of integration-related decision-making and reducing risks for its subjects, we propose to apply the analysis of regional potential while selecting integration partner-regions. To analyze integration-related decisions we consider it reasonable to assess the financial and investment potential of the region and calculate the index of regional investment activity. This is due to the following reasons: 1) financial and investment potential characterizes the degree of regional sustainability; 2) is the source of free internal resources of the region enabling to evaluate financial resources of regional subjects, which in their turn can be directed to funding innovation; 3) the index of innovation activity enables us to judge about investment risks. Integration in support of developing and implementing production and products, innovative for the Russian market, is the priority direction of integration for European and Russian regions. Initiatives of foreign investors to develop such production have a high degree of implementation and a good potential market along with government support, which considerably decreases economic as well as political risks of the projects. *RTOs have become emerging players in policy processes for science, technology and innovation at the regional level. Regional RTOs' contributions to building capacity for collective innovation offer a rationale for public policy in their activities, but such public policy must be accompanied by a bottom-up approach. Given that regions may have different cultures of collaboration and different phases of regional innovation systems (RIS), a region-specific policy design is required for them to attain a credible position* (Shin, 2015).

2. Setting Goals and Methods

We propose to select economic subjects for developing integration-related interaction by assessing financial and investment potential of the regions and coefficient of innovation development, thus, on the one hand, revealing the regions having high innovation potential, which enables investors to reduce risks, and, on the other hand - to evaluate the amount of financial resources necessary for investment. Financial potential of Russian regions and elaboration of its assessment methodology have been extensively studied by A. Borodin, E. Strel'tsova, A. Chentsov (2015), T. Ivanova, R. Prokopenko (2007), L. Tolstolesova (2012). Research which has been done by these economists provides the substantial basis for further consideration on the topic.

Financial and investment potential (FIP) of the region is a set of financial resources found at the disposal of economic agents (regional authorities, firms, households), reduced by the value of final consumption and gross fixed capital formation. The value of financial and investment

potential shows the level of regional sustainability and sources of internal financial resources of the region, which can be directed to innovative activities.

Assessment of financial and investment potential of the region is achieved by dealing with the following tasks:

- grouping and identifying the most promising as well as financially underdeveloped regions aimed at establishing donor-acceptor relations between them;
- determining the possibility of issuing local government bonds;
- specifying the conditions for implementing concrete investment and innovation projects and programmes, selecting the most competitive and attractive ones from the regional financial resources perspective;
- identifying the need for elaborating the strategies of regional development (assessing the financial and investment potential can be a part of the analytical block of elaborating the strategies of regional development).

2.1 Financial and investment potential of the region: model and data

The financial and investment potential (FIP) of the region is determined on the basis of net savings index per capita.

$$FIP = \text{net savings} / \text{the population of the region} \quad (1)$$

$$\text{where net savings} = \text{gross saving} - \text{gross fixed capital formation} \quad (2)$$

$$\text{Gross savings} = \text{GRP} - \text{final consumption} \quad (3)$$

The indices used in the current paper are published by national statistics authorities and are accessible for everybody. GRP is a generic index of regional economic activity characterizing the process of producing goods and services for final use. It is calculated in terms of current prices (GRP nominal volume), as well as in terms of constant prices (GRP real volume). GRP is the gross added value of goods and services produced by regional residents and is defined as a difference between the output and intermediate consumption. The GRP index is very similar to the GDP index. However, there is a significant difference between GDP (on the federal level) and GRP (on the regional one). The aggregate GRP in all Russian regions is not equal to GDP as it doesn't include the added value of collective non-market services (security, public administration, etc.) provided by public institutions to general public.

Actual final consumption of households is an important index showing the final use of goods and services in the particular area. Households consume goods and services at their own expense and also get individual non-market services in the field of health care, education, culture, etc. at the expense of state and non-profit organizations provided to households as transfers in kind. This index is crucial not only for comparing GRP production and consumption but also for studying the well-being of the population in the particular subject of the Russian Federation. Due to significant "openness" of regional economy the consumption indices are calculated for all resident and non-resident units (households) consuming goods and services in the region. The gross fixed capital formation is residents' investment of funds into the object of the fixed capital for making additional income in future through their use in production. The gross fixed capital formation in the Russian Federation subjects reveals their investment activities. The value of net savings is calculated in our research per capita, which has enabled us to compare different regions in terms of their values of financial and investment potentials. To assess the effectiveness and efficiency of using innovation development of the region we propose to apply the coefficient of innovation development (C_i):

$$Ci = \text{Volumes of innovative products, works, services} / \text{Number of innovation businesses} \quad (4)$$

The coefficient shows how much GRP in a region is generated by a single innovative business, showing “productivity” of regional innovation system. The analysis of the indices mentioned above in the dynamics by region will enable to make more reasonable decisions concerning the selection of partners for integration.

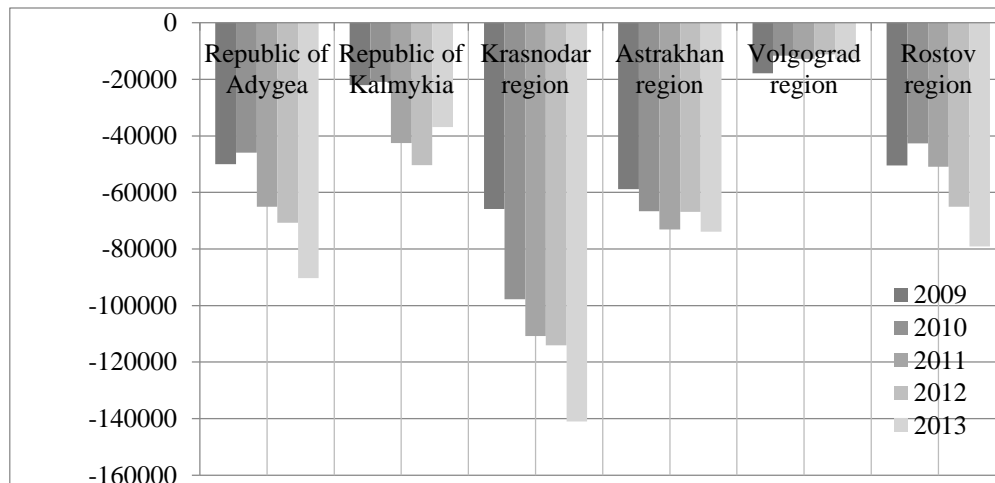
3. Analysis of Financial and Investment Potential of South Federal District (SFD) Regions

The results of the research on regional FIP in SFD regions of Russia between 2009 and 2013 are presented in Table 1. Rates of regional FIP growth in this case show the following: negative values indicate the decrease in the lack of free internal financial resources in the region and show the increase in regional sustainability. Positive values of FIP growth rates indicate the decrease in regional sustainability.

Table 1: Values of Financial and Investment Potentials of SFD Regions between 2009 and 2013, Rubles per Capita*

Years Indices	2009	2010	2011	2012	2013
Republic of Adygea	-49 977	-45 950	-65 045	-70 668	-90 280
Growth rate, %	-	-8,06	41,56	8,64	27,75
Republic of Kalmykia	-22 032	-20 955	-42 516	-50 330	-36 851
Growth rate, %	-	-4,89	102,89	18,38	-26,78
Krasnodar region	-65 852	-97 799	-110 824	-114 046	-140 976
Growth rate, %	-	48,51	13,32	2,91	23,61
Astrakhan region	-58 846	-66 702	-73 046	-66 826	-73 920
Growth rate, %	-	13,35	9,52	-8,52	10,62
Volgograd region	-17 906	-11 632	-12 783	-11 202	-12 815
Growth rate, %	-	-53,94	9,89	-12,36	14,40
Rostov region	-50 430	-42 695	-50 947	-65 052	-79 086
Growth rate, %	-	15,34	19,33	27,69	21,57

Source: authors' calculations based on the data of Federal State Statistics Service. – Access regime: <http://www.gks.ru/>

Figure 1: Values of Financial and Investment Potentials of SFD Regions between 2009 and 2013, Rubles per Capita

Source: authors' calculations

Looking at the data in Table 1, one should note that positive values of net savings per capita were not found among SFD regions of Russia within the period under consideration. However, the negative value of the index for Volgograd region is the minimal one among SFD regions. Thus, Volgograd region has a minimal negative value in terms of net savings per capita between 2009 and 2013, which leads us to the conclusion about its greater financial stability compared to other SFD regions.

The undertaken analysis of FIP growth rates in SFD regions between 2009 and 2013 can be summarized as follows. Within the specified period all SFD regions showed no positive FIP values, which indicates the lack of free internal financial resources in the region. The analysis has revealed that Krasnodar region having negative FIP value and positive value of growth rate within the period under consideration has used external funds to support investment projects in the region, that is mainly federal budget funds directed to Olympic infrastructure construction. Rostov region increased the number of external sources of regional investment funding between 2009 and 2013, as well as Republic of Adygea did, except for 2010. Republic of Kalmykia, Astrakhan and Volgograd regions used additional external sources of funding during the half of the specified period. In this respect we can assume that the degree of stability in the region has been significantly affected not only by economic but also political factors, e.g. the challenging social and political situation in North Caucasus (Republic of Adygea) and national policies of Russian authorities (Republic of Adygea and Republic of Kalmykia). Thus, one can conclude that all the regions in question are recipients of the Russian federal budget and are characterized by the low degree of stability/sustainability.

Special attention should be drawn to Volgograd region having the least negative FIP value and growth rate among SFD regions, which makes it also the least risky region, i.e. one of the integration partners. The analysis of values and dynamics comprising FIP of the region clearly demonstrates the degree of regional financial stability enabling to make the conclusion about regional sustainable development and make reasonable decisions concerning the opportunities for integration. Let us turn to FIP components of Volgograd region for the purpose of a more comprehensive analysis. We have thoroughly studied the following indices: gross regional

product (GRP), actual final consumption of households, gross savings, gross fixed capital formation, the ratio of net savings and gross savings.

GRP is understood as gross value added goods and services created within the region. GRP is defined as the difference between output and intermediate consumption. Another important index characterizing final consumption of goods and services within the region is actual final consumption of households. The latter consume goods and services at the expense of their own income and transfers. This index is particularly important not only in terms of comparing production and use of gross regional product but also in terms of analyzing regional population well-being.

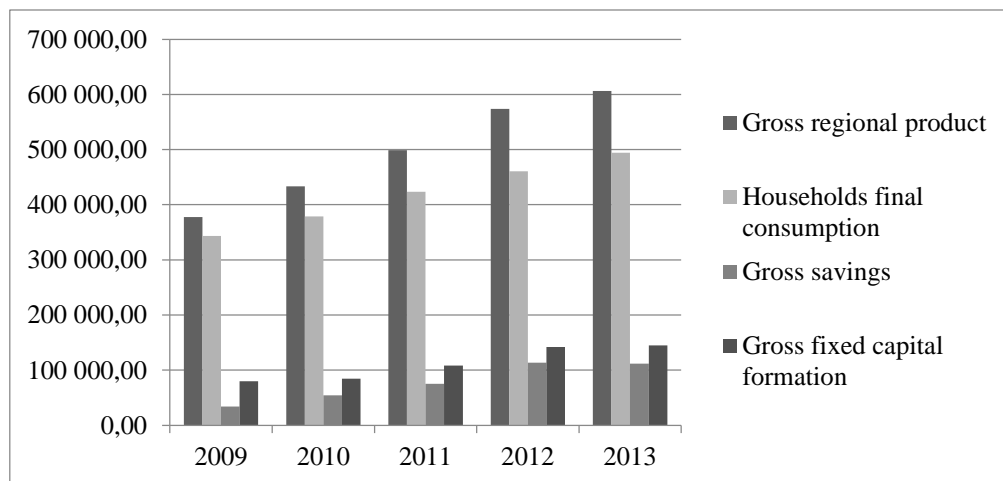
Net savings indicate the potential volume of money resources, which can be directed to investment projects by economic subjects, while gross fixed capital formation is actually invested funds into fixed assets. Gross fixed capital formation by Russian Federation subjects points out to the regional investment activity. The ratio between the net and gross savings characterizes the level of using financial and investment potential of the region.

The analysis of FIP components in Volgograd region in dynamics between 2009 and 2013 is presented in Table 2 and draws us to the following conclusion: dynamics of gross regional product is positive; the growth rates of households final consumption are decreasing, which indicates the unfavorable trends; gross savings are growing at a faster rate compared both to GRP and households final consumption which is the evidence of the growing crisis in the economy; the volume of gross fixed capital formation is growing which is the sign of production modernization in the region, however, GRP growth rates are lower than the ones of gross fixed capital formation volume. This fact reflects the lack of investment efficiency in the region at the current stage. In general, we can summarize that Volgograd region can be described as a region of economic stability growth, the development dynamics is positive, although still low.

Table 2: Dynamics of FIP Comprising Components in Volgograd Region between 2009 and 2013

Indices Years	Gross regional product, mln. rub.	Households final consumption, mln. rub.	Gross savings, mln. rub.	Gross fixed capital formation volume, mln. rub.	Net savings per capita, rub.
2009	377 514,3	343650,1	33864,2	79864,1	-17 906
2010	433 473,7	378828,3	54645,4	84526,9	-11 632
2011	498968,1	423494,0	75474,1	108314,5	-12 783
2012	573903,4	460592,1	113311	142088,7	-11 202
2013	606122,6	494078,2	112044,4	144965,9	-12815
Growth rate, %					
2010/2009	14,82	10,24	61,37	5,84	- 53,94
2011/2010	15,11	11,79	38,12	28,14	9,89
2012/2011	15,02	8,76	50,13	31,18	-12,36
2013/2012	5,61	7,27	-1,12	2,02	14,40

Source: authors' calculations based on the data presented by the Federal State Statistics Service// http://www.gks.ru/bgd/regl/b14_14p/Main.htm

Figure 2: Value of Indices Included into FIP Calculation in Volgograd Region between 2009 -2013

Source: authors' calculations

To assess the prospects for regional development and the efficiency of their innovation development we have calculated the coefficient of innovation development in SFD regions in dynamics between 2009 and 2013 (Table 3). The analysis undertaken has revealed that the best results in terms of dynamics of the innovation development coefficient growth rate within the specified period are found in Rostov region: from 11,32 % - in 2010 to 55,45 % in 2013. Despite the fact that the absolute values of the growth rate are higher in Astrakhan region (205,52 % in 2010 and 120,43 % - in 2013), the general dynamics is still better in Rostov region. One should also note that Rostov region has the highest absolute values of innovation development coefficient among all SFD regions. As for Republic of Kalmykia, the analysis shows the absence of innovation development in this region, coupled with the high dependence of the region on federal funding volumes, which leads us to conclude about the low level of the regional investment attractiveness. Krasnodar region has demonstrated the low efficiency of the investment activity, although the region has the high scientific potential. Volgograd region ranks third based on the absolute values of innovation development coefficient and its dynamics.

Table 3: Innovation Development Coefficient in SFD Regions

Years Regions	2009	2010	2011	2012	2013
South Federal District (average value)	2,549 9	3,658 495	3,090 791	2,013 582	3,000 284
Growth rate, %	-	43,48	-15,52	-15,52	49,00
Republic of Adygea	0,115 61	1,488 655	1,375902	4,000 717	3,313 899
Growth rate, %	-	1187,65	-7,57	190,77	-17,17
Republic of Kalmykia	-	-	-	0,208 537	0,008 944
Growth rate, %	-	-	-	-	-95,71

Krasnodar region	0,847 839	0,620 299	0,472 834	0,312 226	0,287 875
Growth rate, %	-	-26,84	-23,77	-33,97	-7,80
Astrakhan region	0,236 311	0,721 982	2,958 075	0,829 223	1,827 887
Growth rate, %	-	205,52	309,72	-71,97	120,43
Volgograd region	8,946 896	12,564 08	6,495 437	1,402 311	1,424 871
Growth rate, %	-	40,43	-48,30	-78,41	1,61
Rostov region	2,602 843	2,897 459	4,151 705	5,328 477	8,282 875
Growth rate, %	-	11,32	43,29	28,34	55,45

Source: authors' calculations

Despite the fact that FIP analysis has been done for the period between 2009 and 2013 (due to the absence of official statistics data for 2014-2015), experts believe the general trend assessing the dynamics of the indices is most likely to remain the same. Certain lag in the indices included in FIP evaluation and coefficient of regional innovation development explains this state of affairs.

4. Conclusion

Thus, the negative results of economic sanctions imposed on Russia by the EU member-nations will serve as an impetus for developing state-of-the-art innovation technologies in Russia and transform FIP into resources and factors of innovative production. It will enable to dramatically change the vector of economic development in the EU and Russia. The development of innovative technologies, which is possible due to the availability of innovative capacity and innovation development growth rate, will result in competitive products for sale on the foreign markets (including the EU) at a lower price. In the context of the ruble devaluation goods manufactured by Russian producers become more affordable for foreign partners. It means that in the long term the trends of regional economic development may change significantly. Under the economic conditions Russian regions will concentrate on exports of their goods, simultaneously decreasing imports, while the EU will take the opposite course. This situation will arise due primarily to the low prices of Russian goods in foreign markets as a result of the ruble devaluation. In such circumstances, the EU partners will benefit from reducing exports and increasing imports from the Russian Federation. In its turn, assessing the financial and investment potential and innovation development rate of Russian regions will enable the EU partners to select from the most promising Russian regions for developing foreign economic activity.

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Selected Aspects of a European Company Incorporated under the European Law

Jana Hakalová, Marcela Palochová, Yveta Pšenková

VŠB - Technical University of Ostrava

Faculty of Economics, Department of Accounting

Sokolská třída 33

Ostrava, Czech Republic

e-mail:jana.hakalova@vsb.cz, marcela.palochova@vsb.cz, yveta.psenkova@vsb.cz

Abstract

European Company, also known as European public limited liability company (Societas Europaea), is a public limited liability company incorporated under the European law, i.e. according to the European Union legislation. From the perspective of Czech legislation, the legal relations of European company are regulated by the Act No. 627/2004 Sb., on the European Company. The European company brings many specifics and basically takes the best of all legal systems and cultures, which it brings together. This paper defines European companies from the perspective of the legal regime, methods of its creation, registration, residence, administration and organizational structure, including the obligation to involve employees in supervising the activities of the company. The paper also focuses on the comparison of European companies with a Czech public limited company, including the analysis of advantages and disadvantages, or more precisely differences from traditional forms of business.

Keywords: *European Company, European Union, European Law, Public Limited Company, Two-tier and One-tier Structure*

JEL Classification: *F23, F63, K22, K23, H25*

1. Introduction

European company, also known as a European public limited liability company (referred to as SE), is a relatively new form of a legal entity. The form was created as a result of efforts to create a supranational form of a company, which aims to remove trade barriers, finish the establishment of an internal market and bring improvements in the economy and possibly even social sector of the whole European Community (Dědič, Čech, 2006). From the historical perspective, the first important pioneer of the supranational conceived regulation was Karl Geilers, a German lawyer, who expressed this idea at the 34th congress of German lawyers in Cologne in 1926 (Wenz, 1993). A supranational legislation for the European public limited company was also discussed at the 59th National Congress of Notaries in Tours, France in 1959, where it was presented by C. Thibierge (Blanquet, 2002). On the basis of these suggestions, the EC Commission had already addressed it in the 60s of the 20th century by submitting a comprehensive document to EC Council of Ministers and EC member states. P. Sanders, professor of commercial law from the Netherlands, prepared a draft regulation, which was in 1970 after adjustments discussed at the level of EC institutions, member states and representatives of the business community and later, after modifications, amendments and compromises, was issued in the form of Council Regulation (EC) No. 2157/2001, on the

Statute of European Company (Dvořák, 2005). The main reason for establishing European companies was to facilitate the free movement of capital. Companies from different member states have the opportunity to combine their potential, and create and manage companies with a European dimension, free from the obstacles arising from the disparity and the limited territorial application of national company law (Eidenmueller, Engert, Hornuf, 2010).

European Company (SE) is understood as public limited liability company incorporated under the European law, which include:

- a) Council Regulation No. ES/2157/2001 of 8 October 2001 on the Statute for a European company (SE) (hereinafter referred to as the Council Regulation),
- b) Council Directive 2004/83/EC of 8 October 2001, which supplements the Statute for a European company and further defines employee engagement in SE.

This European regulation and Council Directive brought the need to adopt SE also in the Czech legislation. From the perspective of Czech legislation, legal relations of European company are governed by the Act No. 627/2004 Sb., on the European Company. In the event that some areas are not regulated by the above-named legislative regulations, then the national regulations of the stock rights apply. In the Czech Republic, it is the Act No. 90/2012 Sb., on Commercial Companies and Cooperatives (Business Corporations Act), Act No. 125/2008 Sb., on Transformations of Commercial Companies and Cooperatives and Act No. 89/2012 Sb., Civil Code.

2. Legal Aspects

The European company has a number of specific features. Basically, it is a supranational public limited liability company which brings many benefits and differences from traditional forms of business. The sequential application of each relevant legislation is one of its specific features. This feature does not concern only European company. First of all, the above mentioned directive and regulation are applied. Apart from the two, statutes are the other regulation used by the European company. That is particularly true if the directive or regulation directly refers to them. Another regulation that a European company uses is the legislation of the member state which relates to the European company. In the Czech Republic, it is the Act No. 627/2004 Sb. on the European Company and other legislation of the member state, which applies to a public limited company incorporated under the laws of the residence state (in the Czech Republic the Act on Commercial Companies and Cooperatives, i.e. Business Corporations Act, or other regulations), and finally, it may also be the company statutes as in the case of public limited company which incorporated under the laws of the residence state. If the nature of the company's business is regulated by specific national laws, these laws apply in full to the company.

2.1 Formation, Registered Office and Forms of European Company

The main reason for the creation of European company in a form of supranational legal entity was to facilitate the free movement of capital and unify the legal status of companies throughout the European Union (hereinafter referred to as EU). After a slow start, the European company is gradually becoming more popular (Eidenmueller, Engert, Hornuf, 2009). European company represents the same kind of legal entity in any country. The actual use of the abbreviation of SE after the name of the company which is being formed adds a certain prestige throughout the EU, regardless of the country in which the company was formed. European company can be formed by at least two founding companies (legal entities), which have their registered offices in different member states. The registered office and head office

of the newly formed company must be located in the same country. The head office may be relocated in EU countries without dissolving the company and developing a new one, which is one of its biggest advantages. The company can choose a country with the most favourable conditions for business, particularly in terms of tax burden or complexity of administration. Transfer of the company's registered office does not break the legal continuity of the company, it only changes the legislation to which the company is subject. If the registered office of the company is transferred outside the EU, it is necessary to liquidate the company. Each newly formed European company is registered in the member state in which it has its registered office in a register designated by the law of the member state, in the Czech Republic it is a public register (business register). The Notification of the registration of the SE will be published in the Official Journal of the European Union. When transferring company's registered office, it is necessary to prepare a transfer proposal and publish it in the Official Journal. The country from which you want to transfer the registered and head office then has 2 months to oppose the proposal, so the transfer cannot take effect until after that period. If a company that operates in several member states becomes a European company, it only needs to be registered in one state, and its status will be recognized in other member states. The place of registration is the state in which the actual registered office is located. The European company which is incorporated in the business register in the Czech Republic must have its head office at its registered office (EUR-LEX, 2015). The trading name of the European company must contain the addition "SE". The minimum capital for forming the SE is the amount of 120 000 EUR. Since the Czech Republic has not joined the euro, the capital must be expressed in Czech crowns. The capital is divided into shares, and each shareholder is liable for the obligations in the amount of their invested capital. If the regulation of a member state requires a higher subscribed capital, then rules applicable to a European company with a registered office in that member state apply for companies with a certain type of business activity. This application of Council Regulation does not seem to be complicated. The same is true when the nature of business carried out by a SE is regulated by specific provisions of national laws. To fulfil the idea of a supranational nature of this legal form of a business, at least one cross-border factor must be present during the formation of a SE.

Possible ways of forming European company for example include:

- the merger of at least 2 public limited companies from at least 2 different EU countries,
- forming a European holding company - for public and private limited companies with registered offices in at least 2 different EU countries or which have had subsidiaries/branches in EU countries other than the country where they are registered for at least 2 years,
- forming a European joint subsidiary, to which applies the same conditions as for the holding company,
- a conversion - applies only to a public limited company if it has a registered office in one EU country and has had a subsidiary in a different EU country for at least 2 years.

The merger of existing companies (either public limited or European company), which are subject to the law of at least two different member states, can be done by acquisition or by the formation of a new company. In the case of a merger by acquisition, the acquiring company takes the form of a SE. In the case of a merger by the formation of a new company, it is the newly formed company. This kind of formation is fairly widespread.

Another way is a formation of a European holding company which merges not only public limited companies and European companies, but also limited liability companies which are

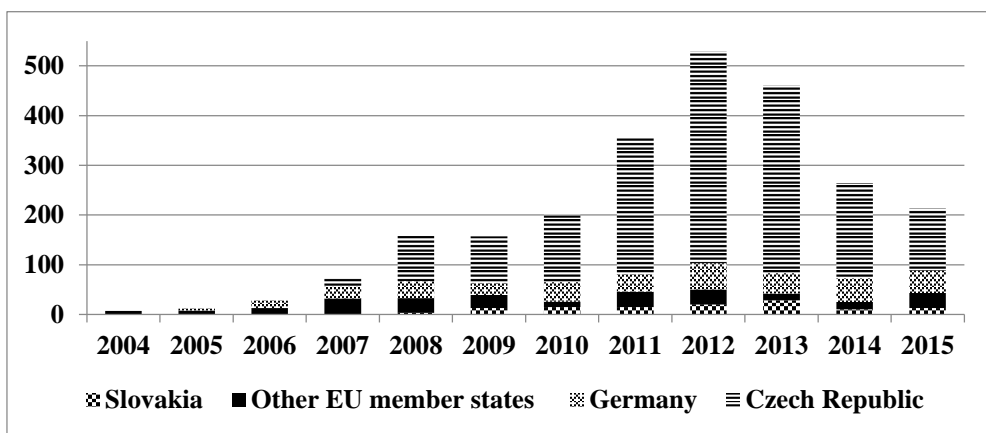
subject to the law of at least two different member states or for at least two years had a subsidiary company governed by the law of another member state. These companies create the SE by depositing their shares which at least equals to 50 % share in the voting rights, for which they receive shares in the European company. This kind of formation is not very common.

Another option is to form a subsidiary from commercial companies, which were established under the laws of at least two different member states or have had for at least two years a subsidiary in another member state and which have their registered office in the European Community. Those can set up a SE as its subsidiary by subscribing for its shares, where the subscription of the shares is governed by the national law of the founding countries. A subsidiary can be formed by only one existing European company. This method is not very widespread.

The change of the legal form of the existing national public limited company into a European company can only be made by a public limited company which had at least two years a subsidiary governed by the law of another member state than the one which governs the parent company. Such company must be formed under the law of a member state of the European Union or the European Economic Area and have its registered office and head office in the European Community. Change of the legal form of the original company does not dissolve the company as it keeps the legal continuity (Dvořák, 2005). This form is among the more commonly used.

European company can set up one or more subsidiary companies, which also are a European company. Regardless of how it was formed, a SE acquires legal personality on the date on which it is registered in the register designated by the laws of the member state in which it has its registered office. In the Czech Republic, it is a public register. Registration of new European companies should be published in the Official Journal of the European Union. There is no official EU-wide register of such companies. Companies are registered in the member state in which they have their registered office. In terms of all registered European companies, the Czech Republic is largely represented, which constitutes 79 % of all European companies. The number of annual registrations by EU member states is listed in the figure 1.

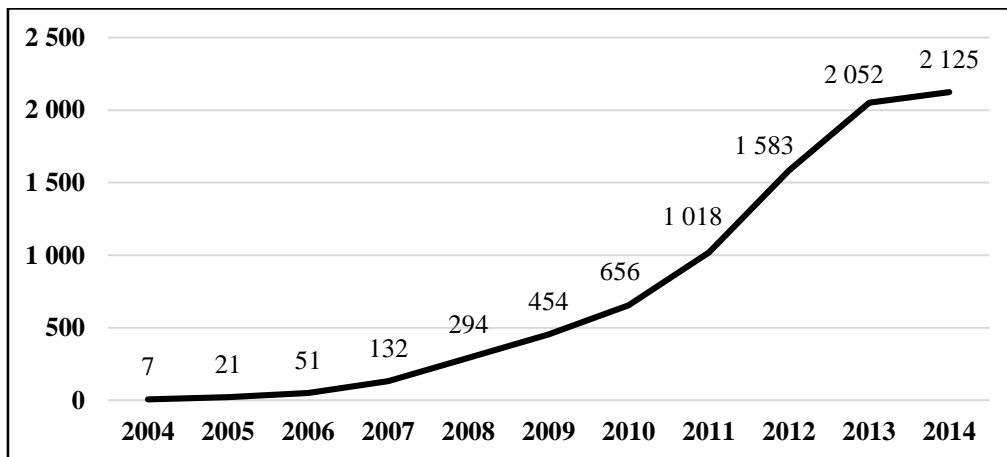
Figure 1: The Number of Annual Registrations of European Companies by EU Member States in 2004 – 2015



Source: ECDB, own data processing

Since the introduction of the European company statute in October 2004, the number of European companies is still growing, with almost exponential growth rate. At the end of 2014, the total number of registered European companies reached 2,125 companies (see figure 2).

Figure 2: Total Number of Registered European Companies (SEs)



Source: ECDB, 2015

2.2 European Company Management and Organizational Structure

Under the conditions set out in the Council Regulation a SE comprise:

- a) a general meeting of shareholders and
- b) either a supervisory body and a management body (two-tier system) or an administrative body (one-tier system) depending on the form adopted in the statutes.

The general meeting is traditionally the highest authority of a public limited company and the same goes for the SE. Most of the provisions in the SE Regulation which relate to the general meeting, refer to the national regulation of public limited companies. The general meeting may in the Czech Republic decide only on matters which are set out in the statutes or law. The actual position of shareholders is then governed largely by the national law.

The management of a European company does not differ too much from an ordinary company - with the exception of employee involvement in the company management. SE cannot be formed unless company managements comes to an agreement with employees, and a model of employee engagement is chosen. Before registering a European company, an agreement on arrangements for employee involvement in company operations has to be concluded with employees. Employees may have their representatives in the board of directors, or may be represented in a form of a special entity, or if they make an agreement with the employer, another model can be selected. Such involvement is required only on condition that the employees were already using it before the SE was established. Employee involvement in a SE is governed by Council Directive 2001/86/EC. In the Czech Republic, the adoption of the new Act No. 90/2012 Sb., on Business Corporations cancelled the obligation of public limited companies to include representatives partly elected by company employees in the supervisory board. This is where a public limited company incorporated under the Czech law has an advantage against SE.

One of the many strengths of European company is its flexibility in the structure of its management bodies. Founders have the opportunity to choose between the two-tier and one-tier model of organization of the company bodies, either by convenience of one of the models for the company or by custom in their country of origin. This enables entrepreneurs coming from states traditionally oriented towards one-tier system (mainly Anglo-Saxon countries, Italy, France) to maintain an organizational structure know to them in countries where the two-tier system is mandatory in case of company formation (Germany, Czech Republic). The same - only the other way around - applies to countries with the two-tier tradition. The management model can be changed during the life of a SE by a mere change of its statutes (EUR-LEX, 2015).

2.2.1 Two-tier (continental) Structure of European Company

The two-tier system is in fact identical to the structure of the Czech public limited company. In the two-tier system, the management body, whose members are appointed and dismissed by supervisory body, is responsible for managing the SE, unless the statutes states that the member or members of the management body are appointed and dismissed by the general meeting under the same conditions as those applicable to public limited companies with a registered office in the same territory. No one can be a member of the management and supervisory body at the same time. The number of members of the management body or the rules for its formation are stated in the statutes of SE. However, the member states may set a minimum or maximum number. The supervisory body is not entitled to manage the SE itself, and its members are appointed by the general meeting. The number of members of the supervisory body or the rules for its formation are stated in the statutes. As in the case of the management body, the member state may, however, set a minimum or maximum number of members of the supervisory body for a SE with a registered office in its territory. The advantage of this system is the separation of management and control. Apart from that, the lower personnel requirements in the management are an important motivator for some companies.

2.2.2 One-tier (Anglo-Saxon) Structure of European Company

In case of a one-tier (Anglo-Saxon) structure, the head of the company is the board of directors, headed by its chairman. The chairman can also be the chief executive officer (CEO). The board of directors embodies the management and supervisory body. The number of members of the administrative body or the rules for its formation are set out in the statutes of SE. However, the member state may set a minimum or maximum number of its members. The administrative body consist of at least three members. The member or members of the administrative body are appointed by the general meeting. In the Czech Republic, the administrative body must have at least three members. If the SE is not subject to employee involvement, the individual member states may even allow to forming a single-member board of directors, as is the case in Slovakia. In the classical model, the chairman is the head of the board of directors; the chairman also serves as chief executive officer, and in this case takes the role of executive board member. In the alternative model, the role of the chairman of the board is mostly representative and coordinative, separate from the role of chief executive officer, who is entitled to manage the business operations. It is debatable whether the unification of both roles into one hand is beneficial to the company. The main advantage of this structure is that it accelerates the decision-making processes, reduces administration costs and makes the system easier for smaller companies. However, it is true that for both approaches to the organizational structure the board members of the company are appointed for a period laid down in the

statutes, which may not exceed six years. Unless statutes provide otherwise, the members may be reappointed once or more times.

In the Czech Republic according to the Act No. 90/2012 Sb., on Business Corporations, both options of company structure are allowed. In a two-tier system of the public limited company, apart from the general meeting, the board of directors (executive body) and supervisory board (controlling body) are formed. The board has three members, but based on the statutes it can have more or fewer members. In the one-tier system, apart from the general meeting, the board of directors (controlling body) and statutory manager are established. However, in a one-tier system, the board can be more involved in the company's management. The members of the board are elected by the general meeting. The board of directors has three members, but the statutes may determine both lower and higher number. Statutory manager represents the company and is in charge of the management of the company's business. The statutory manager can be only one, and it must be a natural person. The director is appointed by the board. Statutory manager may, however, also be a Chairman of the Board, and basically the only member of the board of directors (Lasák, 2013).

The comparison of a European company and Czech public limited company from the perspective of statutory bodies, the amount of capital, registered office of the company and employee involvement is shown in Table 1.

Table 1: The difference Between a European Company and a Czech Public Limited Company

	Structure of statutory bodies	The minimum capital	Ability to transfer the registered office²¹	Employee involvement in company management
European company	two-tier model	120,000 EUR	Yes	Yes, but it can be significantly reduced in the statutes
	one-tier model			
Czech public limited company	two-tier model	2,000,000 CZK (80,000 EUR)	No	No
	one-tier model			

Source: ECDB, EUROSOP, own data processing

3. Tax Aspects

European companies may choose to have their registered office in the state in which there are most suitable conditions for their business, particularly in terms of tax burden or complexity of administration. While the draft of the statute for a European company originally contained a modification of uniform taxation, the final version does not include any provision relating to taxes. It is therefore necessary to apply the tax laws of the individual member states, which mostly operate on the principle of establishment taxation, in which case the registered office is not relevant. Still, the flexibility to transfer a registered office may for some companies be

²¹ With the ability to change the location of its registered office, the SE can use all benefits of the legal and tax environment in EU

advantageous for tax purposes. Despite the registration in a state where the company's management is located, the company will continue to pay taxes at all locations where it operates. The company may be subject to withholding tax in states in which it received dividends and interests, ie. it must take into consideration the agreements on avoidance of double taxation. It is expected that implementation of the SE as a legal form will increase tax competition between member states. It is subject to the Directive 90/435/EEC on parent companies and subsidiaries and 2003/49/EC on uniform taxation of interests and royalty payments between associated companies. Debates are expected in the individual EU member states, especially in the area of tax policy, which is a very sensitive issue in relations between EU Member States. The reason for this debate is the submission of a new plan by the European Commission, which fundamentally reform the taxation of corporate income tax in the EU. One of the key measures in this plan is the re-introduction of a common consolidated corporate tax base for corporate income tax. The commission should proceed with the publication of a mandatory common consolidated corporate tax base for corporate income tax in the course of 2016. Individual member states will then be obliged to adopt rules in their national legislation. Consolidated income tax base will then be comparable with each other, no matter in which member state the legal entity has its registered office (EUROSKOP, 2015).

4. Conclusion

The European company is an alternative to a public limited company. Unlike the public limited company, it has fewer demands on the number of persons in the company management. From this perspective, there is no advantage compared to Czech legislation of the internal structure of the company. The advantage of forming a SE is the ability to freely move the registered office of the company to a country with better administrative and tax environment. Companies can therefore choose from different tax systems of the individual EU member states and seek a reduction in tax costs. There is an assumption that the formation and functioning of a SE will increase "tax competition" between individual member states. Another advantage is the acquisition of a European identity and status, which is obvious. Especially large multinational corporations are formed in the form of a SE, and the number of such companies in the Czech Republic increases.

The disadvantage of establishing a European company is relatively high minimum capital and mainly the difficulty of its formation. It is necessary to take into account additional costs associated with the conversion of companies. There are already a number of specialized companies that offer the forming of a SE as a ready-made company and so eliminates the administrative complexity. Most European companies therefore opt for a complete outsourcing of such services, primarily in the areas of legal, accounting or tax advice. In practice, "empty companies" (shelf companies) are often established, which are subsequently transferred to a third party (Keller, Werner, 2012).

Other issues related to European companies include the absence of a possibility to fully offset losses in one-member state against profits from activities in another state, so double taxation may occur. Most states do not allow offsetting the loss from a foreign branch. Furthermore, problems relating to debt financing of subsidiaries (i.e. thin capitalisation rules), taxation of the profits from controlled foreign companies under the national tax regimes (CFC²²), issues associated with a different definition of a permanent establishment in the EU states and the additional tax costs associated with the transformation of companies and so on.

²² Controlled Foreign Corporation Regime

The question in the debate is whether the existing companies in the Czech Republic will see the advantages of SE formation to such extent that they would be interested in forming one. It has passed quite a long time since the first time it was possible to form a European company, during which the legal environment in the Czech Republic changed (recodification of the Czech law since 2014) and the major differences were removed. Another influence on the formation of European companies may be the changes in the tax policy, which can be expected in the future.

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Impact of Selected R&D Indicators on Competitiveness of the European Union Countries

Martina Halásková¹, Svatopluk Slovák², Renáta Halásková³

VŠB - Technical University of Ostrava¹, University of Ostrava², College of Logistic³

Faculty of Economics¹, Pedagogical faculty², College of Logistic³

Department of Public Economics¹, Department of Technical and Vocational Education, Department of Economic², Legal and Social Sciences³

Sokolská třída 33¹, Dvořákova 7², Palackého 1381/25³

Ostrava^{1,2}, Přerov³, Czech Republic

e-mail: martina.halaskova@vsb.cz, svatopluk.slovak@osu.cz,

renata.halaskova@vslg.cz

Abstract

The paper focuses on competitiveness, which can be perceived as a set of prerequisites for achieving long-term growth performance, and thus also for increasing the economic level in the conditions of internal and external balance. One of the key drivers increasing competitiveness, productivity and the resulting economic growth in EU countries is the area of science, technology and innovations. Close attention is paid to expenditures on research and development in relation to GDP in EU28 countries and other R&D indicators, which provide a view on the assessment of competitiveness as well as innovation capacity of the individual countries. By use of cluster analysis, selected R&D indicators (R&D expenditure, publications per researcher (FTE) and patent applications to the EPO) in EU-28 in years 2004 and 2013 are compared and their impact on competitiveness and innovation capacity assessed.

Keywords: *Competitiveness, Indicators of Competitiveness, Research and Development, R&D Expenditure, EU Countries*

JEL Classification: *H59, O30, O32*

1. Introduction

Competitiveness can be, in broader context, understood as a set of prerequisites for reaching a sustainable long-term growth, resulting in an increasing economic level against the backdrop of internal and external balance. In knowledge economy, a complex system of innovation is considered to be a prerequisite and condition for a sustainable long-term growth and competitiveness, thus not only research and development, but also the generation of knowledge in relation to its practical usage. Current structural and innovation changes in the countries of Central and Eastern Europe are indubitably heading in the right direction. Competitiveness of these countries is increasing slowly, approaching the developed EU countries. In the conditions of globalised economy, more attention has been paid to the creation of various assessment charts which would enable an international comparison of competitiveness and performance of innovation. What is used is not only the individual indicators but also comprehensive indices based on a variety of selected factors of economic and social development (European Commission [online], 2014; ECB[online], 2015). Among the most respected evaluations of

competitiveness is the Global Competitiveness Report, published by the World Economic Forum (WEF) (see Schwab [online], 2015) and the World Competitiveness Yearbook, published by the International Institute for Management Development (IMD [online], 2015).

Competitiveness is one of the stable priorities of the EU in terms of its long-term development. Its understanding of competitiveness is, however, specific with respect to the inclusion of European elements of integration as well as the extent that overreaches purely economic parameters, which is associated with the nature of European strategies of growth. The level of competitiveness in the EU is currently achieved through the Europe 2020 strategy objectives (Staničková and Melecký, 2013).

One of the indicators of EU competitiveness is innovation performance. The major indicator used to compare the performance of innovation at the level of European countries is the Summary Innovation Index (SII), which is a non-weighted average of standardised values of all indicators used for comparing the respective countries. Another feature is the growth dynamics of the performance of innovation measured through the indicators and the SII. The Summary Innovation Index summarizes the performance of a range of different indicators. The Innovation Union Scoreboard distinguishes between 3 main types of indicators – Enablers, Firm activities and Outputs – and 8 innovation dimensions, capturing in total 25 indicators (European Commission [online], 2015). Another tool evaluating EU economies, including R&D indicators, is the innovation barometer of the Erste Corporate Banking (Kozelský [online], 2014). It is a guideline for the comparison of attractiveness of the countries. It comprises nine statistics which determine the innovation potential, competitiveness and future prosperity of a given country (R&D expenditures to GDP, the number of cited papers per 1,000 population, patent applications per 1,000 population, public expenditures on education to GDP, graduates of technical universities per 1,000 population, venture capital investments in startups to GDP, share of high-tech product export, share of households with broadband connection, share of persons using e-government).

Numerous authors in EU countries deal with the evaluation and measuring of competitiveness from both broad and narrow perspective, e.g. Audrone and Tvaronaviciene (2010); Baszová and Křížová (2009); Kraftová, Mateja and Zdrzil (2013); Majerová (2014); Priede and Neuert (2015); Rozmahel, Issever Grochová and Litzman (2014); Schwab [online] (2015); Staničková and Melecký (2014). Among those who focus on research, development and the performance of innovation in relation to the evaluation and measuring of competitiveness of EU countries are Priede and Pereira (2013); Rodríguez-Pose and Crescenzi (2008); Sandu and Bogdan (2014); Šoltés and Gavurová (2014). With respect to the competitiveness of economies, initiatives of the EU as well as individual countries have been increasingly focused on the conditions for research, development and innovation over the past decades. The main emphasis is laid on the improvement of financing research, development and innovation in EU countries. One way of contributing to competitiveness in the long term is direct and indirect support of R&D of developed countries' economies (European Commission [online], 2010).

This paper aims to evaluate selected R&D indicators in EU countries from the viewpoint of competitiveness and innovation capacity. The research subject are R&D expenditures, publications per researcher (FTE) and patent applications to the EPO per researcher (FTE) in EU28 in years 2004 and 2013 and their impact on competitiveness and innovation capacity by use of cluster analysis.

1.1 R&D indicators in relation to competitiveness

The Europe 2020 strategy is the main economic reform agenda of the EU as regards the outlook to 2020. It replaces the Lisbon strategy, which expired in 2010. The strategy as the major economic strategy of the EU until 2020 essentially relates to a marked part of sectoral policies and its fulfilment will have a great impact on economic and social environment of the respective member states. One of its goals is to improve the conditions for research and development, mainly with the aim to ensure that public and private investments in this branch reached a yield of 3% GDP (European Commission [online], 2010). Among the crucial indicators of a country's competitiveness are the total expenditures allocated on R&D, associated with a higher level of qualitative competitiveness. The Frascati Manual defines total expenditures on R&D (GERD) as total internal expenditures (current as well as capital) on R&D that took place in a given state over a given period of time. It is total expenditures of public and private sphere allocated to R&D in relation to GDP of a given economy (OECD [online], 2015). The indicator of expenditures on R&D in relation to GDP enables a view on a country's innovation capacity and allows for assessing the effort of a country in generating new knowledge and using the results of research with verifiable positive externalities (i.e. positive side effects on other economic subjects). The higher these expenditures are, the better potential for the growth of competitiveness and innovation potential of a given country is created. The indicator of ratio of total expenditures on R&D (GERD) to GDP is "R&D intensity", used most frequently in international comparison. GERD in % of GDP belongs to the group of structural indicators, whose development evaluates the fulfilment of the Europe 2020 goals. The informative value of the indicator is connected to the similarity, or more specifically, difference of the economic structure (e.g. activities of multinational R&D companies have a considerable influence on the GERD: GDP ratio). The Europe 2020 evaluation shows that without an appropriate volume of financial means, neither from the state nor the business sector, it can not be expected that R&D will deliver information competitive on the international scene, innovations and technology that would contribute to higher productivity, employment and economic competitiveness of economy (European Commission [online], 2010).

Apart from the expenditures on R&D (% GDP), also other indicators of R&D can be placed in the category, such as the share of enterprise expenditures on R&D, share of high-tech export on total export, and graduates of scientific subjects per 1,000 populations (Eurostat [online], 2016; OECD [online], 2015). As Kozelský [online], (2014) states, higher focus on innovation and competitive production with a high added value are also determined by the number of patents: the exclusive rights for an industrial use of inventions that are applied by the subjects of a given economy. It is the total number of applications for granting international patent in terms of Patent Cooperation Treaty counted per 1,000 populations in accordance with the country of origin of the applicant. A more focused orientation on knowledge-based and innovation-based economy is to a marked extents determined also by the number of publications, or cited articles, reviews and conference papers (cited in follow-up documents due to their significance). These statistics is observed by the SCImago Journal & Country Rank SJR [online], (2016) agency to compare countries of different sizes.

2. Methodology

Selected R&D indicators are compared in EU countries (total expenditures on R&D in % GDP (GERD), the number of publications per researcher (FTE) and patent applications to the EPO per researcher (FTE)) in years 2004 and 2013. The set comprises 28 EU countries that were

selected on the basis of a deliberate choice (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). The authors made use of statistical data from Eurostat (Eurostat [online], 2016) and the database of the SCImago agency (SJR [online], 2016). The years 2004 (when ten countries joined the EU resulting in a significant expansion of the membership) and 2013 (the latest available data for all EU countries regarding patent applications to the EPO in the Eurostat database. Given this, the year 2013 has been chosen for the assessment of other R&D indicators as well) were selected. The outcome was generated using hierarchical cluster analysis. Because of different units, Z-score values (dimensionless values) were used. Standardised score are figures generated through linear transformation from originally measured or otherwise acquired values (referred to as gross score) in such a way that the resulting distribution had pre-defined properties. The most frequent example of standardised score is Z-score with a mean of 0 and a standard deviation of 1. With respect to a marked outlier value of publications per researcher in 2013, Cyprus was excluded from the EU28 and assessed individually. Cluster analysis is a multidimensional statistical method use to classify objects (Everitt, 2011). It enables sorting the observed units (the EU28, in this case) into several groups in such a way that similar units occurred in a given group and, in turn, that units from the remaining groups would differ as much as possible. A dendrogram was used to view the resulting distances between the EU countries. One way of graphic visualisations of numeric data using their quartiles which divide the statistical set into quarters is box-plot, where 25% of items have lower values the bottom quartile Q0.25, and 75% have lower values than the top quartile Q0.75. The boundary of the middle "box" part of the diagram marks the third quartile at the top and the first quartile at the bottom, and between them is a line delineating the mean value. The size of the box represents the inter-quartile range. The vertical bottom line (lower whisker) corresponds with values found below the box in the distance not exceeding the 1.5 time of the size of the box. The end of the whisker corresponds with the lowest such value from the set. Similarly, the upper whisker corresponds with the highest value from the set. Outside whiskers (above and below them) are points that correspond to outliers (Pavlik, 2005). The data for cluster analysis were processed with an IBM software SPSS.

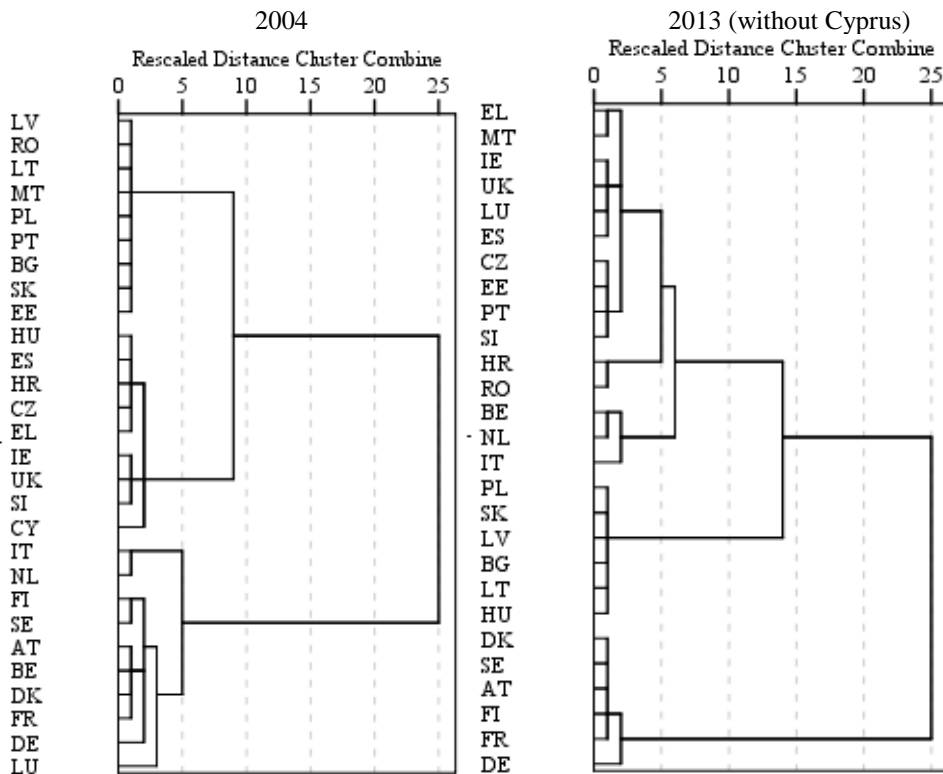
3. Evaluation of Selected Indicators of Competitiveness in R&D in EU Countries by Use of Cluster Analysis – Results and Discussion

The growth of economic advancement is concomitant with gradual changes in key factors of competitiveness. For the sake of assessing the level of competitiveness, it is vital to observe not only the aspects of the national innovation system, but also their interdependence and effectiveness of these bonds. To assess the selected R&D indicators in EU28, total expenditures on R&D (% GDP (GERD)), the number of publications per researcher (FTE) and patent applications to the EPO per researcher (FTE) were selected. By use of cluster analysis, EU countries were compared, and changes in the position of R&D in 2004 and 2013 evaluated. Following the outcome of the cluster analysis, the EU countries were divided by their internal similarity in 2004 into four clusters. In 2013, Cyprus was excluded from the statistic due to its significantly outlying value in papers per researcher (FTE) as this criterion distorted the division and number of clusters (after Cyprus were to be included it would comprise four clusters, with Cyprus in a specific cluster). Without Cyprus, the EU28 countries were divided into five clusters. The results of the division into clusters by R&D indicators with the use of

cluster analysis in years 2004 and 2013 are demonstrated in the dendrogram (Figure 1) and Table 1.

In 2004, the first cluster comprises countries with the highest total expenditures on R&D and a relatively large number of patent applications to the EPO. The most similar countries are Sweden and Finland. Outliers can be observed in Germany in the number of patent applications to the EPO per researcher (FTE), considerably extending other countries, and in Germany in the lowest number of publications per researcher (FTE). In 2013, these countries saw a similar trend of the observed R&D indicators, i.e. the highest expenditures on R&D and number of patent applications to the EPO, but with a relatively low number of publications per researcher. Evident is a marked long-term superiority of Finland, Sweden and Denmark in terms of generating new knowledge and strengthening the innovation potential. The margin of these three countries from others is clearly apparent regardless of which of the three countries is in the lead. As also the evaluation according to the innovation barometer states (Kozelský [online], 2014), these countries maintain their dominance, be it R&D expenditures or application patents. Scandinavian countries also have a strong position in citing scientific publications but also other areas of competitiveness (e.g. the number of households with broadband internet connection or in capital investments in startups in relation to GDP).

Figure 1: Dendrogram of EU Countries by R&D Indicators in 2004 and 2013



Source: Authors using program SPSS

Changes in the position of the selected R&D indicators can be observed in 2013 compared to 2004 in Belgium in terms of an increase of expenditures on R&D and a decrease of patent applications to the EPO per researcher (FTE) and a decrease in the number of publications per researcher. Changes in the position of R&D competitiveness and innovation potential can be observed also in Luxembourg in 2013. An increase in the publications per researcher is apparent, which confirms a larger orientation on knowledge-based economy; by contrast, a decrease in R&D expenditures and patent applications to the EPO can be characterised by a weakened competitiveness and innovation capacity of a given country.

Table 1: Division of EU Countries into Clusters by R&D Indicators in Years 2004 and 2013 Using Cluster Analysis

EU28 countries in 2004				
Cluster 1	Cluster 2	Cluster 3	Cluster 4	
BE, DK, DE, FR, FI, SE, LU, AT	BG, EE, LT, LV, MT, PL, PT, RO, SK	CZ, IE, SI, EL, UK, HU, ES, CY, HR	NL, IT	
EU28 countries without Cyprus in 2013				
Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
FI, FR, AT SE, DK, DE	BE, IT, NL	CZ, EE, SI, EL, MT, IE, ES, LU, PT, UK	RO, HR	BG, LT, LV, PL, SK, HU

Source: Authors own elaboration

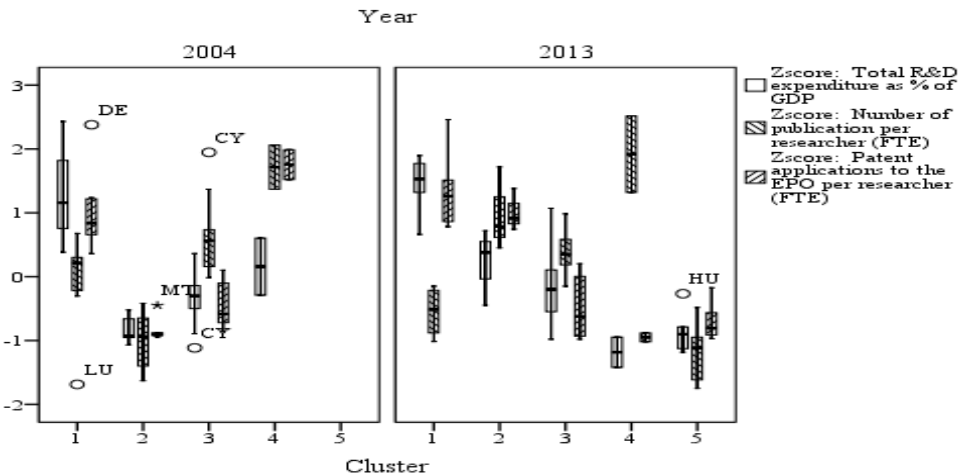
In 2004, the second cluster comprises countries with the lowest total expenditures per R&D, patent applications and the number of publications per researcher (FTE). These are countries with the lowest level of R&D competitiveness, knowledge-based economy as well as innovation capacity of a given country. The exception is Malta, with an outlier in the higher number of patent applications to the EPO per researcher (FTE) and thus with better potential for a competitive production. In 2013, compared to 2004, there is an apparent change in the position of R&D in Estonia, Portugal, Malta (third cluster), where an increase in the number of publications per researcher was observed. By contrast, all countries experienced a decrease in patent applications to the EPO. A notable increase of R&D expenditures and investments, and the fulfilment of the Europe 2020 requirements are observed in Estonia only. Other changes in 2013 in R&D are seen in Romania (fourth cluster), which saw a significant increase of publications per researcher compared to 2004, however also showing a low level of competitiveness in other evaluated R&D indicators.

In 2004, the third cluster comprises nine countries with a higher number of publications per researcher (FTE) and lower total expenditures on R&D and patent applications to the EPO per researcher (FTE). These countries demonstrate a strong position of the development of knowledge economy compared to competitive production and innovations. Outliers were found in the case of Cyprus. It is a country with the lowest expenditures on R&D (% GDP) and the highest number of publications per researcher (FTE) which shows a relatively high effectiveness of the observed R&D indicators. In 2013, compared to 2004, Cyprus saw a rise in the total expenditures on R&D and a decline in the number of patent applications to the EPO. A marked increase in publications can be observed in Cyprus in 2013, compared to 2004, which is a result of a pursued trend towards R&D assessment and results. On the ground of an extremely large amount of publications per researcher (FTE) in comparison to other EU countries, Cyprus is not included in the evaluation of 2013.

The results also show that the Czech Republic, Ireland, Slovenia, Greece, United Kingdom, and Spain demonstrate a comparable internal similarity in R&D in 2013 (third cluster, Table 1). In the Czech Republic and Slovenia, changes can be observed in the competitiveness connected with a marked rise in expenditures on R&D in 2013, compared to 2004. Croatia (fourth cluster) changes its position in terms of R&D in 2013, compared to 2004, with a marked increase in publications per researcher (FTE) but low competitiveness in other R&D indicators. Hungary changes its position in R&D in 2013 (fifth cluster) due to a weakened position of its knowledge economy development, which is also the result of the decrease in publications per researcher (FTE). By contrast, Hungary demonstrates a stronger competitiveness of R&D associated with a rise of expenditures on R&D. In 2013, countries in the third cluster varied widely in R&D expenditures against the mean value, with the highest expenditures on R&D in Slovenia and the lowest in Greece (Figure 2). The results show that the trend of rising R&D expenditures is associated with the requirement to support investments in R&D and the fulfilment of the Europe 2020 strategy in several countries.

The fourth cluster includes the Netherlands and Italy in 2004, which are the countries with the highest numbers of publications per researcher (FTE) and patent applications to the EPO per researcher (FTE), but low expenditures on R&D. Both countries showed a rise in all observed indicators, compared to 2004, fulfilling the objectives of the Europe 2020 strategy in R&D. In 2013, identical internal similarity was found in the observed R&D indicators in Belgium, which however diverted from the innovation leaders and dominating countries in R&D in 2004 (second cluster, Figure 2).

Figure 2: Box Plot of the EU28 by R&D Indicators in 2004 and 2013



Source: Authors using program SPSS

The graphic visualisation of the comparison of EU in years 2004 and 2013 is showed in the box plot (Figure 2). Figure 2 shows that the most marked differences in 2004 were found in all observed R&D indicators in the countries of the first and second cluster. Between countries of the second and the fourth cluster, the most marked differences were found in the number of publications per researcher (FTE) and patent applications to the EPO per researcher (FTE). After Cyprus was excluded in 2013 (due to an extremely high volume of publications per researcher), the most marked differences in the number of publications per researcher (FTE) was found between the countries of the fourth and fifth cluster. Further differences were found

in the countries of the first and fourth cluster in all observed R&D indicators. As the results show, the development of R&D indicators in the individual EU countries is influenced by different priorities of national policies of R&D and trends of innovation policies.

The outcome showed the highest increase in R&D expenditures in 2013 compared to 2004 in Belgium, the Czech Republic, Denmark, Germany, Hungary, Slovenia, Estonia, Portugal, Austria and Ireland. It may be said that these countries created better conditions for the growth of competitiveness and innovation capacity associated with the use of the R&D results. Conversely, a decline of R&D expenditures in 2013 can be observed in Luxembourg and Croatia, a slight decrease of R&D expenditures also in Sweden, where competitiveness and innovation capacity deteriorated slightly, compared to 2004. The steepest rise in the number of publications per researchers in 2013, compared to 2004, took place in Cyprus. The trend of growing number of publications per researcher (FTE) was also observed in Estonia, Croatia, Luxembourg, Romania and Malta. Eleven countries manifest weakening in the orientation on innovation and competitive production by lowering the number of patent applications to the EPO per researcher (FTE). As the already carried out analyses and research show (Cohen, Nelson and Walsh, 2002, Kozelský [online], 2014; Rodríguez-Pose and Crescenzi, 2008; Sandu and Bogdan, 2014; Šoltés and Gavurová, 2014), specifics of the individual countries, including their virtues and shortcomings of their national policies of R&D and innovation systems, need to be considered when seeking inspiration as to which policies and instruments should be used to set a stimulating environment for research and innovation in less developed countries in terms of innovation.

4. Conclusion

Different positions of countries in the charts of competitiveness, which reflect on R&D as well, is determined by a variety of approaches to measuring competitiveness. What is more important that the order of countries in the comprehensive comparison is identification of factors which contribute to the growth or decline of competitive advantage of the given country. As the evaluation of competitiveness of EU countries in the innovation barometer shows, Scandinavian countries enjoy a strong position also in R&D indicators (total expenditures on R&D, patent applications, citing scientific papers). By contrast, Romania, Bulgaria, Greece, and Latvia are among countries with a low competitiveness. The results of the research based on selected R&D indicators through cluster analysis in years 2004 and 2013 demonstrated relatively marked differences in the position and development of scientific and research activities. Scandinavian countries, Austria, Germany, and France can be said the leading countries, as opposed to Bulgaria, Lithuania, Latvia, Slovakia and Poland, which lag behind in the development of research, development, innovation and knowledge economy. The cluster analysis showed the most marked differences in the number of publications per researcher (FTE) and in the number of patent applications to the EPO per researcher (FTE) between the countries of the second and the fourth cluster in 2004. The largest differences in R&D expenditures in 2004 are between the countries of the first and the second cluster. Cyprus shows the highest rise of publications per researcher (FTE) in 2013, compared to 2004. In 2013, after Cyprus was excluded, the most marked differences in the number of publications per researcher (FTE) were found in the countries of the fourth and fifth cluster. The results of the research also proved the most marked different in the number of patent applications per researcher (FTE) in 2013 in countries of the first and fourth cluster, and the most marked differences in R&D expenditures in the countries of the first and the fourth cluster. The selected indicators of R&D form but a part for measuring and evaluation of complex indices and indicators. The authors are aware of the fact that the acquired results may differ from

international comparisons in complex indices of competitiveness and innovation performance of the EU countries. In terms of the evaluation of research and development a number of questions remain unanswered and may serve as a theme for further research. This, in particular, includes a more detailed observation of R&D indicators in EU countries in relation to competitiveness, tracking changes over time, including R&D efficiency, also with the use of other statistical methods.

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Globalization and Political Economy of Speed

Tomáš Hauer

VŠB - Technical University of Ostrava
Department of Social Science
17. listopadu 15/2172
Ostrava, Czech Republic
e-mail: tomas.hauer@vsb.cz

Abstract

The concept of globalization has become the subject of theoretical thinking in the late 80s and 90s of the twentieth century and it is considered a phenomenon that will be used throughout the third millennium in the world economy. The essence of the modern era can be described using the concepts of wealth and speed. The current social, philosophical and economic theories only cope with the analysis of the concept of wealth. The theme of speed and acceleration has remained completely outside their field of vision. Economic and social sciences and philosophy are able to convey a lot of about wealth, but until recently, they have not been able to tell almost anything about speed. The problem of speed has a more prominent place in economic and social sciences. However, without the fact of accelerating, it is not possible to imagine and theoretically grasp the modern era at all. The absence of problems of speed and acceleration in economic and social sciences is perplexing because the speed of our modern societies has become one of the highest values and one of the most important requirements of the present time. The notion of speed does not yet have a clear and usable definition, and it lacks systematic economic and social analysis. It seems, therefore, that it is necessary to complement the existing theoretical reflection on the concept of globalization with another important fact, namely, the concept of speed. Speed is a key analytical tool for exploring hitherto neglected dromologic dimension of globalization. The main paper's aim is the analysis of new political economy of speed and its relation to the globalization.

Keywords: *Speed, Dromology, Globalization, Wealth, Accelerating*

JEL Classification: *A12, A13, A19*

1. Introduction

European integration is one of the most important themes of contemporary economic research, which is, naturally, directly applied to the context of the current economic theory. The research is focused on institutional aspects of European integration and integration of the Czech economy into the integrated and globalized market competition. What is European integration? Transitional stage on the way towards a global system? Community of nation states of the same civilization genotype? The response to the American challenge? The new power-sharing arrangement on the continent? Economic and security inevitability? Consequence of the collapse of the bipolar world? Fiction and myth? A little bit of everything? And yet, now we know that the main problem of the European Union lies in the very legitimacy of its institutions, leaders, decision. Even very brief insight into specific decision-making mechanisms of the European Union suggests that the actual proportion of small states – and their inhabitants – in decision-making will be negligible, if not zero. So why should European

integration be so desirable? Apparently, exclusively because of more freedom, prosperity and security. Can “Fortress Europe” offer us all these things”? Yes, it can, but only conditionally, and within the walls of this fortress. The vision of an integrated Europe in global competition is therefore the vision of cooperation. The more closely related culture and cultural behaviour of citizens, the closer cooperation. The closer cooperation, the more integrated European space.

Integration based on shared values and practical interests, however, is integration “from below”, it does not require enforcement, massive bureaucracy, and rampant elite with broad authority and therefore power. The primary goal of European integration was to enhance mutual cooperation through the development of foreign trade by eliminating the barriers (tariffs and other restrictions). Over time, mutual trade has become a major pillar of stability of the west and eventually of almost the whole of Europe. Post-war reconstruction and European integration led to the fact that in the 1960s, the EU became the world’s largest exporter and importer of goods and finally began to dominate in other respects. Integration and geographical proximity were especially strengthening the trade between the EU countries, which despite rapid development of trade with China and Russia in recent years, represents 68 % of the total EU foreign trade (in the case of the NAFTA countries it is about 50 %, and only 25 % in the case of the ASEAN). Let us continue creating common institutions if they are supposed to serve as a service for the autonomous development of people and not as a guardianship over their lives. The European Union has to transform. Competence can only be received from citizens, regions, and nation states. The current issue is: Does the European unification represent a process, which deprives the Europeans of part of their sovereignty, or is it a process that strengthens it? What is the role of speed in this process? Will Europeans get a chance to re-think this issue?

2. Integration and Globalization: Two Methodological Approaches

It is certainly very difficult to define the concept of globalization precisely. Upon closer examination of the concept itself, however, we find that there are basically two methodological approaches to define the whole process. The first methodological approach equates globalization with integration, the second methodological direction views the phenomenon of globalization as a completely new qualitative change, the correct understanding and interpretation of which is in direct proportion to considering those new variables. The new phenomena also include speed, which occupies the forefront position; a French theorist and cultural critic Paul Virilio attempts to categorize the theories of speed (dromology) within the context of social sciences and humanities. In defining the term of globalization, but also in defining the process and the concept of integration, we are confronted with different definitions. Integration can be defined in various ways. In professional literature, we encounter the concept of integration at macroeconomic and microeconomic level. The first level is a more functional approach that characterizes the interconnection of enterprise systems. The second level indicates a process of gradual cross-linking, alignment and convergence of the various national economies. However, there is also a definition of geographic integration. Integration undoubtedly contributes to the internationalization of the world economy itself that is the situation when various forms of economic activity exceed the national economy of each country (Cohen 2016, p. 69). It is therefore clear that in the definition of globalization in the integration concept, there are many different forms of interpretation. Some authors talk about integration at the level of markets in goods, services, human capital and technology. Other authors consider integration as a purely geographic concept, monitoring the growing

dependence of individual countries. However, sometimes globalization is identified with integration without any further explanation.

Globalization followed within the context of deregulation in the world economy (Albrow, 1996, p 56). Market liberalization came first and led to an unprecedented expansion of international trade, which began in the mid-1950s. Liberalization of regimes for foreign investment came next, and led to a wave of international investment that began at the end of the 1960s. Financial liberalization came last. Internationalization of finance in the mid-1980s followed after that. The technological revolution in transport and communications, which is connected with the transmission of information and computer technology that makes it easier to process information, has created information technology, which is extraordinary in speed and range. This technological development removed geographic barriers. Some authors (Gilpin 2001, p. 136), also refer to technological development. They consider it crucial. Globalization is then directly conditioned by the development of technologies, and it would have been unthinkable without specific direction of the current technical development and scientific progress. The result is a more efficient functioning of market systems, faster economic integration, deepening interdependence, i.e. the mutual political and economic dependence of the national economies and the interconnections of economic activities in the areas of trade, finance and investment. The result is a further backward support for globalization processes. Scientific and technological progress leads to facilitating the interconnection of world markets, thus also increasing the possibilities for international trade.

Globalization is a spontaneous, uncontrolled process (Cohen 2016, p. 193). To a certain extent, it leads to mutual integration of some companies at the higher, global level. Ulrich Beck describes globalization as “a certain most frequently used – misused – least often defined, probably the worst understood, the most vague, and politically the most effective slogan of the past, but also of the upcoming years” (Beck 1997, p. 42). Globalization has become a unifying concept of academic and general intellectual debates of the 1990s (while it gradually eclipsed the postmodern discourse), as well as an object of parliamentary debates, management meetings, and numerous activist campaigns. Globalization has been criticized as well as celebrated, it is associated with hopes and fears, often simultaneously. Some lobby for globalization, others demonstrate and fight against it. All these phenomena make it an empirical fact, even though this fact should be of the nature of the theorem, according to which everything becomes real, what people consider real. If we consider the genesis of this concept and the reasons for which it came to the forefront of scientific and media popularity, one cannot fail to notice the coincidence in time between the boom of the globalization discourse and the end of the second millennium. It is true that “all European generations from the early 19th century had felt that they were experiencing an unprecedented era” (Gubová 2014, p. 471), but the proximity of the magical year with three zeroes made this feeling even stronger - and duly globalized. In the invocation of globalization, it is possible to recognize chiliastic hidden motive associated with the idea that in the upcoming period, certain predictions (historical trends) will be fulfilled, pushing human history into an entirely new dimension. The term globalization now often plays the same role as the Marxist-Leninist concept of historical necessity in the past. The future holds its final form, which reveals itself in history, and that is a global market, global government, and global civil society.

The concept presented so far has been focused almost exclusively on the area of economic globalization. The sphere of culture, although it is “one of the most immediately perceived and experienced forms of globalization” (Held 1999, 327), is surprisingly often omitted in these debates, which leads to the fact that the meaning of the term globalization is reduced to just

the processes of political and economic changes. If we, however, view globalization not only as a process of deepening the interdependence of macro-structural phenomena, but also as a process of global exchange of symbols and symbolic systems – a myth, values (Feber 2015, p. 431), and behaviour patterns – which are involved in the reconfiguration of personal and collective identities, the cultural sphere must be given equal if not more attention than economy and politics, with which it is, after all, directly related. Dominant carriers of cultural representations in the modern society including its globalized phase are the communication media (Barker 1999, p. 158), machines driving the lighting effects and working at the limit speed of light. Logically, now they have become one of the main symbols of technological and cultural globalization. Now they are carriers of speed and radical changes.

3. Globalization as a Qualitatively New Phenomenon: Speed as a New Dimension of Integration

Let us now consider writers who perceive globalization differently. They do not identify it with integration, but with a certain qualitative change in the evolution of human society. Compared with the past, the consequence of the changes is that remote economic or other factors affect us more directly and much more immediately today. From the perspective of the authors, who belong to this group, qualitative change is not the same as integration. It is the case of an extensive business expansion with new effects. An example is the extension of the range of goods and services, which get on the international markets as a consequence of trade liberalization; it is also a growing freedom of establishing organizations of technical innovations that enable the provision of services without space constraints. From this perspective, globalization can be seen as a set of economic activities and processes that encourage a number of other social implications and changes. Globalization creates new situations in the context of interpersonal relationships, which disrupts the existing character of the nation states by undermining the supposed link between nationality and the state. However, changes also occur in the relationships at the level of the international economy. It gradually changes into the environment in which a number of different competitive advantages are formed in a manner independent of the state. These changes are illustrated by, for example, new, more influential and more powerful multinational companies, which are a major force in global changes in economic activities. So now let us look at some specific explanations of the concept of globalization. This time they come from an author, which we have included in the second group, and who views globalization as a qualitative change. Specifically, we will focus on the theory of a French cultural critic and philosopher Paul Virilio, which accentuates the concept of velocity (dromology is the theory of speed), and traces the changing of speed carriers and their influence on the current form of the Western civilization.

“To say today that speed is obsolete is an untruth as obvious as that which consists in praising slowness“ (Virilio 1991, p. 104). Speed, we are still captured by speed. At the beginning of human history, there was only slowness – slowness of life of agricultural society. Speed was created by people - merchants, soldiers, industrialists, scientists, engineers, computer scientists, bankers, etc. The present-day Identification with the speed may lead us to many different conclusions. The speed of our world is full of contradictions, the accelerated world conceals quite a few paradoxes. Most speed phenomena seem reasonable at first glance and usually it is actually the case. This applies particularly to those devices and equipment that we use every day - from cars and Velcro over Fast Food and email, to our computer and particle accelerators. Their formation is understood as a response to the clearly defined need, their further development as a useful improvement. In today's life, it is only speed that counts, and nothing else. The question how much speed one needs and what rate of acceleration is tolerable

for the economy, society and environment, remains unanswered. Speed began to gain positive value in the late 19th century. Dromology by P. Virilio seeks to analyse the ways that were crucial for the development of speed. He asks how the principle of acceleration in Central and Western Europe arose and explains the origin and method of spreading "various triggers of speed". Virilio's theory shows the far-reaching extent to which the speed conquered all and everything over the centuries: transportation and production, peace and war, men and women, urban and rural areas, work and leisure time, arts and commerce. Virilio clearly shows us how the principle of acceleration of the word has taken root in professional and private lives of individuals and societies in both good and bad sense, and how it has changed and continues changing our standards, values, perceptions and mentality.

„The development of high technical speeds would thus result in the disappearance of consciousness as the direct perception of phenomena that inform us of our own existence. Cinema is not a seventh art but an art that combines all of the others: drawing, painting, architecture, music, but also mechanical, electrical works, etc.“ (Virilio 1991, p. 104). Dromological research by Paul Virilio present a critical analysis of the consequences for our perception and logistics caused by polar inertia, inertia of absolute speed. Speed changes the field of our perception because it transforms the habitual understanding of ontological characteristic of reality, i.e. time and space. „Speed treats vision like its basic element; with acceleration, to travel is like filming, not so much producing images as new mnemonic traces, unlikely, supernatural. In such a context death itself can no longer be felt as mortal; it becomes, as in William Burroughs, a simple technical accident, the final separation of the sound from the picture track“ (Virilio 1991, p. 60). What is much more important for Virilio's concept of aesthetics of disappearance is the role of unconscious disappearing of objects from our field of perception, aesthetics of disappearing, one of the consequences of dromology, is based on studying cinematographic effects coming from the area of art, film, television and video. „What is given to see is due to the phenomena of acceleration and deceleration in every respect identifiable with intensities of light“ (Virilio 1991, p. 19).

Each company will be faced with speed and each company deals with certain speeds. Therefore, it can be said that each society is dromocratic. Speed competition either wins its way in the society as a positive value and speed will assume power and establish its psychological, social and cultural domination, or the society recognizes the negative aspects of speed and because of fear of excessive speed, it creates social and cultural barriers to further acceleration. In the first case, the company gives way to accelerating dromocracy, in the second case, it remains on the road of decelerating dromocracy. So this is the basic structure of the society from the viewpoint of dromology or in terms of speed.

In many of his texts Virilio emphasises that speed is not a phenomenon, but a relation between phenomena. The difference between contemporary society and societies of the past consists in the fact that earlier speed used to be mainly connected with transport, now it concerns relations within information. "The question of speed is central. Speed and wealth go hand in hand. To give a philosophical definition of speed, we can say that it is not a phenomenon, but rather the relationship between phenomena. In other words, it is relativity itself." (Virilio 1999, pp. 13-14). Virilio's influential book - *Speed and Politics*, analyses new problems resulting from the fact that the development of industrial capitalism has reached the stage in which wealth and power in society have been interconnected with ever increasing speed. In view of Virilio's statement that wealth is an aspect of speed (Virilio 1999, p. 49), it has become necessary to consider speed and all its aspects and consequences through a prism of a new discipline – dromology. In an interview with J. Armitage, Virilio comments on this:

"Dromology originates from the Greek word *dromos*. Hence dromology is the science of the ride, the journey, the drive, the way. To me this means that speed and riches are totally linked concepts. And that the history of the world is not only about the political economy of riches, that is, wealth, money, capital, but also about political economy of speed. If time is money, as they say, then speed is power. You see it with velocity of the predators, of the cavalry, of railways, of ships and maritime power. So all my work has been about attempting to trace the dromocratic dimension of societies from ancient Greek to our present-day societies. All societies are pyramidal in nature. The higher speed belong to the upper reaches of society, the slower to the bottom. The wealth pyramid is the replica of the velocity pyramid" (Armitage, 2000, p. 35). Dromologic revolutions cause artificial acceleration of speed in the form of steam or combustion engine, or, nowadays, nuclear energy and they immediately form both e.g. waging wars and kinds of communication. Vehicles of speed create new tracks and nodal points (ports, roads, airports, telecommunications etc.) through which things, goods, money, weapons, people or information will start flowing within a different structure. A territory is space across which speed, technology, politics, economy and everyday life flow by means of vehicles of speed (transport, communication, etc.). Nowadays, both politics and the city are victims to nodal points through which transport of things and transfer of information flow (Virilio 1986, p. 7).

A will for speed prevailed and started the path to absolute dromocracy with gradual series of three recipients of speed. The first world-historical carrier of speed was the woman, the second one the horse, and the third one the machine. In the case of the last medium, three types of machines should be mentioned: the machine driven by an external force, the machine driven by its own power, and the machine driving the lighting effects. Therefore, the machines that significantly contributed to dromocratic-speed revolutions were the sailing ship (powered by an external force), the steam engine (fuelled by its own power), and cinematography (driving lighting effects). Other machines – cars, airplanes, computers, etc. – are just variations of these three kinds of machines. The second epoch-making speed carrier, the horse, created a relatively homogeneous space. The third epochal speed carrier, the machine, made space absolutely dromogenous. The horse and derived speed carriers transformed the space of physical places into a source of accelerating and increasingly higher speeds. Thanks to carriers of the speed change, distances became shorter and these carriers allowed to set out on the journey to the practical reduction of physical space and miniaturization. The machine began an era of miniaturization and the gradual replacement of space with time.

4. Conclusion

According to P. Virilio, changes in society (hence globalization as well) can be monitored from the perspective of speed. From this point of view, it is also possible to explain the development of the society as a dromocratic development. In this case, we find that during a certain recent historical interval there was a fundamental event, which resulted in unusual acceleration in all areas of the society, and within the two centuries, the speed of some human activities reached its limit, the speed of light – for the first time in the history. Paul Virilio thinks that in reality, there is no industrial revolution, but only dromocratic-speed revolution, there is no democracy, but dromocracy. Which means that by using terms such as the "industrial revolution", "technological progress", or globalization of modern thinking collectively refers only to the various striking phenomena, but the essential, less prominent issue eludes – namely, speed. Now we can better see how complicated the definition of the concept of globalization is. However, despite obvious discrepancies, we can try to explain it. It can be argued that this the process of interdependence of all spheres of human activity, i.e.

economic, political, etc., which interact with each other, influence each other, and induce new relationships, but also the integration process, whose influence is mutual convergence and unification. The common denominator of the new theory that explains the concept of globalization, is the speed and the speed carriers of the new generation, the machines powering lighting effects and working with the speed limit. What characterizes the current form of globalization is an unstable mixture of fast information and slow movements, fast technology and slow society of technocratic liberalism. Besides monetary wealth standard, there is a globalized standard of the speed limit.

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The Evaluation of Regional Competitiveness in the Context of Cluster Potential

Katarína Havierniková¹, Dana Jašková², Emília Krajňáková³

Alexander Dubček University of Trenčín

Faculty of Social and Economic Relations, Department of Economy and Economics^{1,2}, Department of Social Sciences and Humanities³

Študentská 3, 911 50

Trenčín, Slovakia

e-mail: katarina.haviernikova@tnuni.sk, dana.jaskova@tnuni.sk,

emilia.krajnakova@tnuni.sk

Abstract

The role of clusters in regional development in case of the Slovak Republic came in importance regarding to the European integration process. Clusters in developed economies contribute to increasing of regional competitiveness. In conditions of the Slovak Republic the issues of cluster's potential in terms of regional competitiveness are in the focus of various studies. However, the findings that would contribute to quantification of cluster's potential in the field of regional competitiveness absent. The main aim of the paper is to construct the specific tool for quantification of the cluster's potential in region on its competitiveness. The construction of this tool is based on the use of composite indicator. The results of our study show positive effect of cluster's potential on regional competitiveness of Slovak economy.

Keywords: Competitiveness, Composite Indicator, Cluster, Region

JEL Classification: R10, R11, R150, O18

1. Introduction

The issue of competitiveness is an important range of researchers at many levels in various areas including: nation, region, sector, industry, business, as well as products. (Mereuta et al., 2007, Ivanova, 2011, Mikalauskas et al., 2013, Pires et al., 2014, Korods, 2014, Lu and Xu, 2015, Akpınar et al., 2015, Caiazza et al. 2015). Voinescu and Moisoiu (2015) explain that the competitiveness is clearly one of the most frequently used concepts in current economic policies, in the regional or national policy frameworks and strategies, in businesses, especially when they discuss about growth or convergence, when strategies or comparative analysis are designed. World Economic Forum defines competitiveness as the set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can earn. (Schwab et al., 2015)

In recent years the Slovak economic practice has been faced with a new paradigm – regional competitiveness mainly in regarding the European integration processes, which have a long history and where the common denominators are: the joint cooperation, the reducing of regional discrepancies at the social and economic level, the achieving of common goals in the areas of Economic and Monetary Union, the achieving of common political goals and mainly the achieving of competitiveness of whole Union. (Dúbravská, et al., 2015, Lipkova, 2014, Kaňa and Mynarzová, 2014, Betáková, et al., 2014, Kordos, 2013). European integration process contributes to overall regional development and creates better conditions for regional

competitiveness. There are many opinions expressed in professional publications and academic literature on the concept of regional competitiveness, which is possible to understand as the most productive usage of all resources, sectors and opportunities towards the sustainable growth potential of regions. (Mereuta, 2007, Fundeanu and Badele, 2014, Kordos, 2014, Mynarzová and Kaňa, 2014, Kordos and Karbach, 2014, Akpınar et al., 2015 and many others). According European Commission the regional competitiveness can be defined as the ability to offer an attractive and sustainable environment for firms and residents to live and work. (Annoni, Dijkstra, 2013). The main prerequisites of regional competitiveness are the quality of infrastructure: technical, administrative (Holomek and Klierová, 2015) and economical (Mura et al., 2015), the support of research, innovation and technological development, as well as providing appropriate high-quality trainings for residents in regions. As follows from the description of international competition base of Fundeanu and Badele (2014), this type of competition is based on an excellence and the need to have a competitive and innovative industry have favoured the emergence of new forms of competitive advantages in the form of partnerships between businesses, universities, research institutions and the state, called clusters. 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 and by contributing to technology transfer, networking and information dissemination among the cluster's enterprises. Because of the reason mentioned above, the concept of regional competitiveness will be discussed with concept of cluster cooperation with focus on the Slovak's conditions in this paper.

2. Problem Formulation and Methodology

Clusters contribute to the regional competitiveness in different ways: they increase the competitiveness of individual business entities, create the conditions for stimulation of innovation and effective using the research and development, specialized clusters represent the center for specialized knowledge, know-how, R&D, they create the new sources of regional or local competitive advantage and influenced the economic development and growth. (Pavelková, et. al., 2009). The issues of clusters have become central place in industry policy, in connection with regional and science policy at the EU level and increased mainly in connection with the European integration processes. In accordance with achievement of the main aim of the paper, the empirical part is focused on evaluation of the existing clusters' impact on regional competitiveness in Slovak regions. The presented approach is based on following steps: (1) The selection of indicators on which the cluster's potential could impact. (2) The creation of composite indicator for a comprehensive assessment of the cluster's potential impact on regional development. (3) The assessment of the actually existing clusters' extent for regional development.

2.1 Data and methodology of tool's construction

For evaluation of regional potential, a wide range of indicators and their combinations is used. The selection of appropriate indicators depends on the particular purpose for which they are intended. In case of the Slovak conditions these indicators are limited by data availability. Based on previous research of Mereuta et al. (2007), OECD, (2008), Ivanova (2011), Melecky and Stanickova (2014), Ivanova and Koisoava (2014), Fundeanu and Badele (2014), Lemanska-Majdzik and Okreglicka (2015), Lu and Xu (2015), we focused on three main dimensions, based on which it is possible to evaluate the regional competitiveness in the context of cluster's potential: macroeconomic environment dimension, dimension of social area and innovation

ability dimension. For macroeconomic environment dimension we selected indicators: Regional gross domestic product ($x_{1,r}^t$), Gross value added ($x_{2,r}^t$) and Number of entrepreneurs ($x_{3,r}^t$), for dimension of social area: Economically active population by upper secondary education ($x_{4,r}^t$), Unemployed by upper secondary education ($x_{5,r}^t$), Employment rate ($x_{6,r}^t$). In the dimension of innovation ability was selected following indicators: Employees in research and development ($x_{7,r}^t$) and Expenditures on research and development ($x_{8,r}^t$).

The assessment of cluster's potential impact on regional competitiveness in case of Slovak regions is not easy and it is limited. In the Slovak Republic (SR) the clusters are formed on the "bottom-up" principle and their formation is connected with many problems: the cluster strategy and policy are missing, the support for cluster cooperation is at a low level, and the output results of cluster are not recorded and many others. Their importance is highlighted in many documents that the SR accepted in context of the European integration (Innovation Strategy, Innovation Policy, Regional programs of social and economic development, Operational programmes, Partnership agreement and many others). Table 1 summarizes the development of clusters in SR in observed period (2009-2013). The numbers of clusters were obtained from official Registers and Evidences due to the legal form of clusters that occur in the SR. Currently, there are 33 clusters in the Slovak regions.

Table 1: Clusters in Slovak Regions (2009-2013)

Region	2009	2010	2011	2012	2013
Bratislava (BA)	1	2	2	2	2
Trnava (TT)	4	7	7	7	7
Trenčín (TN)	0	0	0	1	1
Nitra (NR)	0	0	0	0	2
Žilina (ZA)	2	2	2	2	3
Banská Bystrica (BB)	2	2	3	3	3
Prešov (PO)	0	0	0	1	1
Košice (KE)	0	1	1	1	1

Source: author's calculations based on data from Register of the Interest Associations of Legal Persons and Evidence of Civil Associations

In practice there is logically a need for and integrated view of the discussed issue. In this article for measure of clusters potential impact on regional competitiveness the construction of composite indicators (*CI*) and comparison of results with the development of clusters is used. In literature we can find several scientific works that are focused on measurement of regional competitiveness by using of *CI*: e.g. Booyesen, (2002), Pires et al., (2014) and others. In the SR mainly industrial (technological) clusters prevail and stated studies provide the research framework for creation a specific tool of cluster's potential effect on regional competitiveness measurement. The suitability of *CI* using is confirmed also by publication of UNIDO (2013) that discusses the concept of competitiveness and industrial performance and provides a theoretical foundation and justification for the CIP index (Unido, 2013). We also followed detailed methodology and the procedure published by OECD in 2008. Composite indicators (*CI*) which compare regional potential are recognized as a useful tool in regional policy and public communication. *CI* provides simply comparisons of regions that can be used to illustrate complex problems in wide-ranging fields, e. g. economy, social and environment. *CI* is much like mathematical or computational model. In the next section following convention will be used the: $x_{q,r}^t$: raw value of individual indicator q for region r at time t , with $q = 1, \dots, 8$ and

$r = 1, \dots, 8$. $I_{q,r}^t$: normalised value of individual indicator q for region r at time t . CI_r^t : Composite indicator value for region r at time t . For construction of CI the 6 steps were followed. Step (1) developing a theoretical framework for the selection and combination of individual indicators. In this step, for construction of the CI the selected indicators for three main dimensions published by Statistical office of the SR were selected for observed period 2009 – 2013. This period in terms of completeness of data sets seemed most appropriate. Step (2) consists of imputation of missing data. Data were modelled explicitly by regression imputation. Step (3) multivariate analysis is based on PCA analysis. Using method is based on the properties of the correlation matrix of variables. Initial variables (manifest) will be replaced by a smaller number of new variables, called latent variables - the main components. Step (4) normalisation of data is required prior to any data aggregation as the indicators in a data set often have different measurement units. The method Min-Max was used. This method normalises indicators to have an identical range $\langle 0; 1 \rangle$ by subtracting the minimum (maximum) value and dividing by the range of the indicator values. In the case of positive force of CI we followed the formula:

$$I_{q,r}^t = \frac{x_{q,r}^t - \min_r(x_q^t)}{\max_r(x_q^t) - \min_r(x_q^t)} \quad (1)$$

In the case of negative force of CI the normalization is realized through the formula:

$$I_{q,r}^t = \frac{\max_r(x_q^t) - x_{q,r}^t}{\max_r(x_q^t) - \min_r(x_q^t)} \quad (2)$$

Step (5) - weighting and aggregation is focused on the assigning of weight to indicators. Weight value of the indicator v_q is calculated from the PCA analysis. For calculation of CI was used the Additive aggregation method. The Composite indicator for each region was calculated according formula:

$$CI_r^t = \frac{\sum_{q=1}^n I_{q,r}^t \cdot w_q^t}{\frac{\sum_q \sum_r^m I_{q,r}^t}{m}} \quad (3)$$

where w_q^t is weight of q -th indicator at time t . If $CI_r^t = 1$, the region is assessed as an average. $CI_r^t > 1$ means the above average appreciation of region, $CI_r^t < 1$ means, that region is evaluated as a below average.

3. Problem Solution

The process of CI construction is detailed stated for year 2013. The process of CI construction is identical for the rest years of observed period. All results are stated in table 2 and table 4.

3.1 Exploratory Data Analysis

The aim of exploratory analysis is to reveal the presence of traits between the data and validate assumptions for subsequent statistical processing. They were calculated descriptive statistics (position, variability, and asymmetry). To assess differences in the shape of the distribution was assessed coefficients of skewness and kurtosis. Some indicators have been identified skew left. The data standardization was realized.

3.2 Correlation analysis

The relationship between indicators was assessed by Spearman correlation coefficient. For the significant correlation between the indicators we considered while the correlation coefficient applied $|r| > 0,9$. These values have been diagnosed by the inverse correlation matrix and subsequent *VIF* factor.

Table 2: Correlation Matrix

Indicator	$(x_{1,r}^t)$	$(x_{2,r}^t)$	$(x_{3,r}^t)$	$(x_{4,r}^t)$	$(x_{5,r}^t)$	$(x_{6,r}^t)$	$(x_{7,r}^t)$	$(x_{8,r}^t)$
$(x_{1,r}^t)$	1,00	0,98	0,18	-0,20	-0,57	0,89	0,95	0,96
$(x_{2,r}^t)$	0,98	1,00	0,30	-0,05	-0,44	0,80	0,98	0,99
$(x_{3,r}^t)$	0,18	0,30	1,00	0,34	0,14	-0,04	0,31	0,31
$(x_{4,r}^t)$	-0,20	-0,05	0,34	1,00	0,84	-0,49	0,07	-0,04
$(x_{5,r}^t)$	-0,57	-0,44	0,14	0,84	1,00	-0,82	-0,30	-0,38
$(x_{6,r}^t)$	0,89	0,80	-0,04	-0,49	-0,82	1,00	0,70	0,74
$(x_{7,r}^t)$	0,95	0,98	0,31	0,07	-0,30	0,70	1,00	0,99
$(x_{8,r}^t)$	0,96	0,99	0,31	-0,04	-0,38	0,74	0,99	1,00

Source: author's calculations

The correlation analysis shows that from the structure of *CI* should be removed indicator $x_{1,r}^{2013}$. Due to the fact that this indicator is considered as a key indicator of the described analysis in next part of the paper all indicators will be used.

3.3 Principal Components Analysis

The indicators were analyzed by PCA. Its aim was to identify the key indicators and transform the original data to create latent variables. The suitability of selected indicators was statistically assessed (Kaiser-Meyer-Olkin's criterion and Barlett's test). The result of the analysis is shown in table3.

Table 3: Table of Eigenvalues

Order of eigenvalue	Eigenvalue	% of total Variance	Cumulative (%)
1	5,03	62,83	62,83
2	2,08	25,99	88,81
3	0,70	8,79	97,61
4	0,15	1,92	99,53
5	0,03	0,41	99,94
6	0,00	0,05	99,99
7	0,00	0,01	100

Source: author's calculations

For further analysis we recommend to retain only those components that have their own number greater than 1. Subsequently we selected the first two components, labeled *PC1*, *PC2* that are explaining 88.81% of the total variance. The results of correlation between the two main components and the individual indicators are in the table 4.

Table 4: Factor Coordinates Variables by Correlation

Indicator	$(x_{1,r}^t)$	$(x_{2,r}^t)$	$(x_{3,r}^t)$	$(x_{4,r}^t)$	$(x_{5,r}^t)$	$(x_{6,r}^t)$	$(x_{7,r}^t)$	$(x_{8,r}^t)$
PC1	-0,99	-0,97	-0,20	0,28	0,64	-0,91	-0,92	-0,95
PC2	0,06	0,23	0,65	0,90	0,71	-0,33	0,35	0,27

Source: author's calculations

The table shows that with the first component, which explains about 63 % of the variance of the original input values, most coefficients correlate negatively. The second main component, which explains 26% of the variance, is positively correlated with the fourth and fifth indicator.

3.4 Weighting and Aggregation

The results of PCA analysis allows to determine the weight of q -th indicator in any time as:

$$w_q = |r_{qs}| \cdot var_s \quad (4)$$

where r_{qs} is value of correlation coefficient of the q -th indicator of the s -component. var_s - proportion of variability explained by s -th component. By using the weights, the weighted form of CI was calculated according formula (3). Table 5 states the resulting data.

Table 5: Weighted Form of CI

Region	CI _{weight} 2009	CI _{weight} 2010	CI _{weight} 2011	CI _{weight} 2012	CI _{weight} 2013
BA	3,31	3,47	3,30	3,29	3,35
TT	1,00	1,25	0,92	0,93	0,88
TN	0,88	0,98	0,66	0,68	0,59
NR	0,71	0,60	0,75	0,75	0,79
ZA	0,88	0,74	0,78	0,76	0,87
BB	0,32	0,26	0,51	0,52	0,48
PO	0,31	0,21	0,41	0,39	0,40
KE	0,61	0,50	0,67	0,68	0,63

Source: author's calculations

Calculated value of the indicator was compared to the average. If the value is $CI_r > 1$, region can be evaluated as above average, otherwise as below average. The above average value of CI we can observe only in Bratislava region and in 2010 also in region Trnava.

3.3 The Impact of Cluster's Potential on Regional Development

For verification of contribution of cluster's potential to the regional competitiveness we use Pearson coefficient of correlation. The verification was realized in Trnava region, where is the highest proportion of clusters in the SR. The results show the approximately linear dependence between observed CI and the share of clusters in Trnava region. A Pearson coefficient of correlation's value is 0,75 and coefficient of determination is 0,57, what means 57% reliability of model.

4. Conclusion

As follow from conducted analysis, the regional potential measured by using of the CI in Slovak regions differs. The results confirm the possibility of cluster's potential impact on regional competitiveness. Composite indices, according Booyesen (2002) furthermore, are often considered to be ideological statements rather than practically functional indicators. But

these indices remain invaluable in terms of their ability to simplify complex measurement constructs, to focus attention and to catch the eye, thus enhancing their political appeal. This issue is confirmed by work of Pires et al. (2014) who point on the indices as an efficient tool to be applied locally. According stated results and study of related works, this study represents one of the methodological approaches to the research of cluster's potential and its impact on regional development. The cluster policy in the SR is not established due to the low level of cluster competitiveness, also there is a gap between decelerated support of clusters from the view of European Union and corresponding policies in the Slovak republic. Findings of this study could contribute to economic practice and formulation of cluster policy which is important part for future integration processes in European context.

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The Financial Position of the Hotel Industry in the Czech Republic

Tomáš Heryán¹, Veronika Kajurová²

Silesian University in Opava¹, Mendel University²

School of Business Administration in Karviná, Department of Finance and Accounting¹, Faculty of Business and Economics, Department of Economics²

Univerzitni nám. 1934/3¹, Zemědělská 1665/1²

Karviná, Czech Republic¹, Brno, Czech Republic²

e-mail: heryan@opf.slu.cz, kajurova@mendelu.cz

Abstract

Foreign capital from whole Europe plays important role even in such business as the hotel industry is. In according to economic events of recent years it is the question how it has affected its sustainability and competitiveness. The aim of the paper is to examine if the economic integration can positively impact on earnings of the hotel industry in the Czech Republic. It is obtained annual data from Amadeus statistical database for period 2005 till 2014. Whereas it is usual to estimate those relations among other business industries, current study contributes with using the methodology also for the hotel industry. We deployed Generalized Method of Moments (GMM), regression with pooled data for large sample of Czech hotels. We prove positive impacts of changes of working capital on changes hotels' returns. Integration process impacts on the level of working capital through cash pooling or franchising, and in according to transfer pricing, the process have finally good impact on the hotel industry in the Czech Republic.

Keywords: Hotel Industry, GMM Panel Regression, Financial Ratios, Economic Integration

JEL Classification: D22, D24, D31, D57, D92

1. Introduction

Economic integration affects various economic disciplines including business finance as well. In according to internationalization and globalization of financial markets the problematic of economic integration is also connected with such business industries as a tourism and hotel industry. Even despite its possible negative impacts, integration process is often associated with business efficiency. When we mention horizontal or vertical integration, it should be connected with lower costs and potential higher incomes of the companies (Sethuraman et al., 2015).

Alon et al. (2012) investigate international franchising of hotels, which present unique characteristics among franchising companies, with a high investment capital requirement, maturity in the product life cycle, and a high level of standardization and globalization of operations. In according to them, however, internationalization through franchising can be a complex process affected by many forces, particularly organizational factors and market conditions. Chen (2011) argue, as the international tourism industry expands, hotels are expected to benefit from the expansion of the inbound tourism market due to high occupancy rate, which means better sales earnings and corporate performance. On the other hand, hotels affiliated to international chains are more efficient than independent hotels (Aissa and Goaid, 2016).

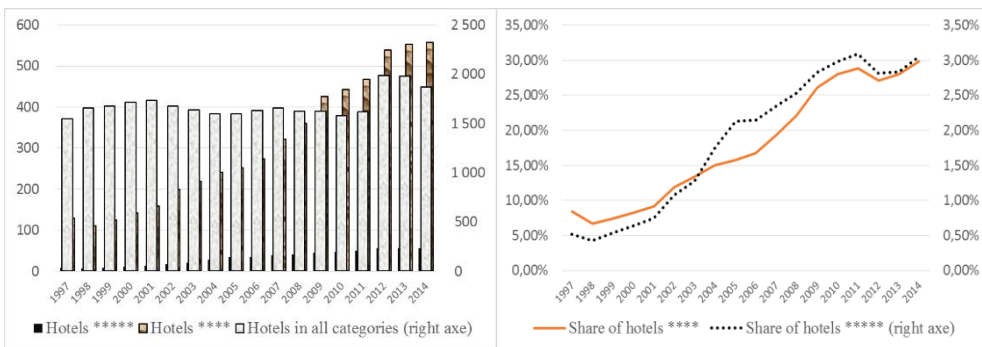
The aim of the paper is to examine if the economic integration can positively impact on earnings of the hotel industry in the Czech Republic. The paper is structured as follows: in next section we investigate problematics of relations between selected financial variables as well as describe our data and methodology. In Section 3 we discuss the results of panel regression's estimations in context with economic integration. Finally, Section 4 concludes.

2. Problem Formulation and Methodology

Within the financial theory it is argued that working capital is very important for all firms. It simply means that a company is able to create some earnings, even if all its short-term liabilities will be paid off. Working capital is basically examined as a difference between the sum of claims and goods from current assets against to short-term liabilities. It should be a positive number. So, it is necessary to create a higher value of claims therefore.

If a hotel is able to create working capital, it positively affects its creditworthiness. Therefore, banks can offer those hotels a lower interest rates on loans, which is connected with decreasing of paid interests. With lower financial costs will increase hotel's earnings. However, the question is, whether the relation between working capital and earnings do exist or not?

Figure 1: Development of the Quality within the Czech Hotel Industry



Source: Authors illustration from the Czech Statistical Office (2016)

Figure 1 shows increasing quality of the Czech hotel industry in period from 1997 till 2014. On the left hand side we see strong increase of total number of the hotels in the Czech Republic in 2012 (excluded pensions and other types of accommodation). On the right hand side we see that a share of four stars hotels increased in the period from less than 10% to 30%. The share of five stars luxurious hotels also increased, but only to 3%. If this hotels' standardization means a quality, we can argue that almost half of the hotel industry is well arranged and organized.

In Table 1 we see how international tourist arrivals increased in period from 2000 till 2015 by EU regions. It is obvious that Central and Eastern European (CEE) countries, where it is also included our country, have one from the biggest increases there (from 69.6 to 127.8 mil). But when we take a look a bit closer we see that in 2013 it reached the same number 127.8 mil international arrivals as in 2015 (there is a decrease in 2014). So, is it possible that CEE countries and their hotel industries are working at their maximum?

Table 1: International Tourist Arrivals by EU Regions (Mil)

	2000	2005	2010	2013	2014	2015
WORLD	674	809	950	1 088	1 134	1 184
Advanced economies ¹	420	466	513	585	619	648
Emerging economies ¹	254	343	437	503	515	536
By UNWTO regions:						
Europe	386.6	453.2	489.4	566.8	580.3	609.1
Northern Europe	44.8	59.9	62.8	67.2	70.8	75.3
Western Europe	139.7	141.7	154.4	170.8	174.5	180.9
Central/Eastern Europe	69.6	95.3	98.9	127.8	120.1	127.8
Southern/Medit. Europe	132.6	156.4	173.3	201.0	214.9	225.1
-of which EU-28	330.5	367.9	384.3	433.1	454.2	478.3

¹ Classification based on the IMF (2015).

Source: World Tourism Barometer

2.1 Model and Data

It is obtained annual data from financial statements of 1484 Czech hotels from the statistical database AMADEUS. Concretely, we use working capital (WC), earnings before interests and taxes (EBIT), earnings before taxes (EBT), and sales of hotels (SL).

Table 2: Descriptive Statistics of Used Data (Thousand CZK)

	WC	EBIT	EBT	SL
Mean	-302	719	-2 336	26 915
Median	10	-1	-159	6 258
Maximum	134 927	294 028	203 006	1 502 157
Minimum	-273 668	-479 500	-567 972	-1 051
Std. Dev.	10 547	17 022	25 542	79 331
Observations	7 306	7 306	3 416	8 753

Source: Authors' calculation in EViews 9 software

In Table 2 we see selected descriptive statistics for our data. We see negative mean of WC and EBT, but positive mean of EBIT and SL. Our sample includes those hotels which make working capital but also those which are not. Positive mean of EBIT against to the negative EBT, it means that the hotel industry in the Czech Republic is affected by interest's costs very often. On the other hand, the biggest standard deviation is in the case of the total sales of the hotels. We see that number of observations differentiates among all selected variables due to some missing data. Therefore, it affects number hotels in our regression models within the panels.

For the paper we deploy the same methodology as Růčková (2015). We use Generalized Method of Moments (GMM) with pooled data. Panel GMM models with 1484 hotels in cross sections are described in equation (1):

$$Y_{it} = \alpha_{it} + \beta_1 Y_{i(t-1)} + \beta_2 WC_{it} + \varepsilon_{it}, \quad (1)$$

where dependent endogenous variable Y_{it} means EBIT, EBT or SL of i hotels in time t , among regressors we see lagged endogenous $\beta_1 Y_{i(t-1)}$ from previous year, which is typical for GMM

method, and working capital WC_{it} . Symbols α_{it} and ε_{it} are constant and residuals of the panel regression.

3. Problem Solution

Our estimation results are included in Table 3. Nonetheless, it has to be said as the first, we use two-step GMM panel regression on its stationary differences (see Appendix). Sargan test indicates that Prob(J-statistic) is non-significant, which is good for the models robustness. Arellano-Bond tests indicate that there is not a problem due to serial correlation. Therefore, our results are in good condition. In According to missing data we see that for the first type of the model with dependent variable EBIT the number of hotels is 995, for dependent EBT only 494, and for total sales it is obtained 996 hotels in panels' cross-sections.

Table 3: Estimation Output

Variables	EBIT	EBT	SL
β_1	0.5448 ^a	0.6119 ^a	0.3837 ^a
β_2	0.3920 ^a	0.2262 ^a	0.4065 ^a
Cross-sections	995	494	996
Prob(J-statistic)	0.1778	0.4900	0.0935
AR(1)	0.0064	0.0122	0.0038
AR(2)	0.2852	0.0526	0.3180

Note: Symbol ^a means significant coefficients at 1% level.

Source: Authors' calculation in EViews 9 software

In Table 3 we see positive significant impact of working capital's changes on the changes of all three dependent variables (EBIT, EBT and SL). In context with economic integration and its positive impacts on decreasing of interests costs we can excluded significant relation with EBIT (earnings before interest and taxes). On the other hand, more important is the significant relation between differences of working capital and differences of EBT (earnings before taxes). Even if it is weaker than in the case of EBIT, because we obtained just 494 hotels in the panels cross-sections and due to including of the interests. The positive impact means that a higher change of working capital influence also a higher changes of EBT within the hotel industry in the Czech Republic.

When the parent companies from abroad are able lend Czech subsidiaries through the cash pooling, Czech hotels are able to increase their working capital. They will simply make the claims without any increasing of interests cost from using short-term foreign capital. In extreme case hotels would not need any banking loans when the foreign companies are capially strong. Moreover, in the case that Czech taxes are lower than taxes abroad, in the countries of the hotels owners, it means transfer pricing and a higher income in form of fiscal earnings of the Czech Republic, too. They will also pay the taxes from their dividends (if it will be paid). However, the owners prefer paying of the money back through the cash pooling or paying the services or payments of another fees.

Even in the case of the franchising by the foreign or global hotel chains it means similar situation. In this case Czech hotels have a good quality long-term assets as foreign good-will and foreign know-how. In according to that they are able to make the claims in much easier way, which is connected again with a higher working capital. The last significant relation has been estimated between differences of working capital and differences of total sales. We see

that the biggest is the impact of increasing or decreasing working capital on the increase or even decrease of hotels' sales. It also supports our argumentation.

Finally, we argue, economic integration process can positively impact on earnings of the hotel industry in the Czech Republic. However, the problematic is also connected with the corporate governance of parent companies as well as with the financial health of those companies. For transfer pricing it is also important, whether tax rates in the Czech Republic are lower than foreign tax rates or not.

4. Conclusion

The aim of the paper was to examine if the economic integration can positively impact on earnings of the hotel industry in the Czech Republic. From our results it is obvious that there really exists a positive impact of working capital to earnings of Czech hotels. Many hotels are owned by foreign companies or they use franchising from the global hotel chains nowadays. We discussed the ways, how those foreign companies could positively impact the level of working capital due to a higher claim. Therefore, we simply proved that the economic integration can positively impact on earnings of the hotel industry in our country.

Nevertheless, the problematic is not so simple due to corporate governance as well as due to financial health of foreign companies. They do often still suffer from the economic events as the global financial crisis or current crisis in the Eurozone. For the future research it could be interesting for example to compare the same situation among hotel industries of Visegrad countries as Růčková (2015).

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Appendix

Table 4: Stationary Time Series at 1st Differences

Method	Statistic	WC Prob.	EBIT Prob.	EBT Prob.	SL Prob.
Null: Unit root (assumes common unit root process)					
Levin, Lin & Chu t*	-194.5970	0.0000	0.0000	0.0000	0.0000
Null: Unit root (assumes individual unit root process)					
Im, Pesaran and Shin W-stat	-103.1910	0.0000	0.0000	0.0000	0.0000
ADF - Fisher Chi-square	3881.5900	0.0000	0.0000	0.0000	0.0000
PP - Fisher Chi-square	4640.9500	0.0000	0.0000	0.0000	0.0000

Note: Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Source: Authors' calculation in EViews 9 software

Some Evidence on the Response of Eurozone Export Structure to Exchange Rate Shocks: a FAVAR Approach

Martin Hodula, Bohdan Vahalík, Markéta Dolinová

VŠB - Technical University of Ostrava

Faculty of Economics, Department of European Integration

Sokolská třída 33

Ostrava, Czech Republic

e-mail: martin.hodula@vsb.cz, bohdan.vahalik@vsb.cz, marketa.dolinova@vsb.cz

Abstract

In this brief paper we examine linkages between technological structure of Eurozone high-tech goods export and changes of some major macroeconomic variables using a factor-augmented VAR model (FAVAR). The objective of this paper is to collect some preliminary evidence about the impact of exchange rate shocks on technological structure of Eurozone exports in time period 2003-2015. From a set of macroeconomic data, we extract three factors which we identify as credit conditioning factor, real economy factor and risk factor. These factors are included in FAVAR framework together with selected macroeconomic variables which could be associated with developments in export volume and structure. Our analysis revealed that after EUR/USD exchange rate appreciation high technology exports were affected. Nevertheless, not significantly. On the other hand, the total production was affected much more, so the volatility of EUR/USD exchange rate influenced particularly other product groups than high-tech goods.

Keywords: Eurozone, Exchange Rate, Export, Technological Structure, VAR

JEL Classification: C32, F14, F31, N14, O52

1. Introduction

After the breakdown of the Bretton Woods system and the transition to floating exchange rates, the exchange rate development became a sharply monitored area. Due to internationalization, globalisation, financial liberalization, increasing number of economic integrations etc., more economies started to be involved into the international trade and consequently the international trade flourished in the last decades. Hand in hand with these processes go heightened fluctuations of macroeconomic variables including exchange rates as well.

Since its introduction in 1999, euro (EUR) has always faced the significant fluctuations toward currencies of its most important business partners, see Micossi (2015). The existence of the link between the exchange rate and international trade is an area where economists are united. The widely discussed and examined issue is whether the impact of exchange rate volatility brings positive or negative effects on trade. Furthermore, the speed and importance of the exchange rate shocks on economic sectors and producer prices is a subject of discussion and investigation, see Côté (1994). For an international currency, such euro is, exchange rate fluctuations toward currencies of its main business partners are natural. Exchange rate changes influence production prices and then also both export and import prices. Therefore, its development is a crucial factor of trade competitiveness.

The link between the exchange rate and economic outputs has been researched by many authors for example Peterson and Schneider (2014), Anaraki (2014), Colacelli (2009). Peterson and Schneider (2014) were investigating the role of euro exchange rate on economic recovery of Eurozone in 2012 and 2013. These authors state that there is a high effect of euro exchange rate development on the competitiveness of export and therefore on Eurozone as whole. Anaraki (2014) researched the effect of euro devaluations on European exports towards its main trade partners. His statistical analysis was based on quarterly data from 2001-2010. The results of this work were as follows: 10% depreciation of euro towards dollar (USD) led to 3,1% increase of European exports, but paradoxically the cross elasticity of exports to the United States of America (USA) was not statistically significant. Colacelli (2009) focused on the same problematic. In his research he examined data of 136 countries in a period 1981-1997 and his empirical analysis revealed that the elasticity of exports on exchange rate shocks differs for high-income and low-income countries. Hence, according to Colacelli (2009), the elasticity of exports of high-income countries is very low in case of exchange rate shock.

Verheyen (2011) investigates the euro exchange rate volatility and its effect on trade of eleven Eurozone countries with one of its main business partner, the USA. This study also deals with an issue of diversification of exports into several categories based on Standard International Trade Classification (SITC). Verheyen (2011) claims, that there is a strong cointegration between SITC categories and euro development. However, the elasticity of SITC products on exchange rate differs crosswise SITC trading categories. Verheyen (2011) adds that especially SITC 6 and 7 categories of products have a very low elasticity towards exchange rate fluctuations. The similar results were presented by Ćoric and Pugh (2008). Nevertheless, there is a lack of examination in the area of exchange rate development and its effects on the technological export structures based on SITC, which we dealt with. Thus, the topic of this paper can be considered as highly recent.

Johannsen and Marinéz-Zarzoso (2013) examined export structure of the Eurozone members and non-members and they found significant evidence for sectoral differences in the responsiveness of bilateral trade to exchange volatility. They claim that the common currency has a significant positive impact on exports in all categories, except capital goods. An increase in volatility of the bilateral nominal exchange rate in all cases raises the likelihood for two countries to trade but decreases its volume. Cheong, Mehari and Williams (2005) reached similar conclusion about trade under common currency. Their results indicate that, for the major manufacturing categories analyzed, exchange rate uncertainty depresses international trade. This finding lends support to the proposition that adoption of the euro by the UK would enhance the export performance of the country. There is also revers causality between external factor and exchange rate. For example, Gossé and Guillaumin (2010) find out that global imbalances explain a large proportion of exchange rate fluctuation of the euro and that external shocks do more to explain variations in the real effective exchange rate than in the growth differential or current account.

It is crucial to differentiate not only export as such but also types of export categories. Many export classifications exist. Johannsen and Marinéz-Zarzoso (2013) analyzed short term effect of exchange rate volatility on high frequency trade data in categories such as agricultural and manufacture products or intermediate and final products. This paper works with exports categorized by its technological structure. International databases of foreign trade do not provide enough information about technological level of export for each country neither on any fairly disaggregated level. Therefore, the classification used in this paper was presented

by Lall (2000) which was upgraded by authors according to currently used trade classification. The individual categories involve four main groups which are as follows: based manufactures, low technology manufactures, medium and high technology manufactures. In this paper we particularly focus on the last category – high technology products. We used disaggregated data by Standard International Trade Classification (SITC) at the 3-digit level from UNCTAD database based on second revision of this classification because of the longer available time series. We upgraded classification of technological level of exports based on Lall (2000) at the same level of disaggregation by revision 3. Division of export by technological classification fails to capture technological complexity within the same product category. Despite this problem, the aggregation at the 3-digit level brings satisfactory results because it gives considerable technological differentiation. Due to space limitations, detailed information about technological classification used in this paper is available upon request.

The objective of this paper is to analyze and collect some preliminary evidence about the impact of exchange rate shocks on technological structure of Eurozone exports in time period 2003-2015. As an econometric model was used a FAVAR model which enables us to estimate impulse response functions. The time series is 2003-2015 and we used monthly macroeconomic data from the European Central Bank Statistical Data Warehouse database and Eurostat database as well. The structure of the paper contains introduction, economic framework and estimation, empirical results and finally conclusion.

2. Econometric Framework and Estimation

In this section, we discuss our used empirical framework. A simple VAR model comprising of at most representative set of export value, exchange rates and some macroeconomic variables representing common macroeconomic shocks would be far too large to be estimated using classical methods²³. To reduce the dimensionality problem, we employ factor analysis using a factor-augmented VAR model (FAVAR) as proposed by Bernanke et al. (2005). Our objective is to analyse the impact on technological structure of Eurozone export of a set of macroeconomic variables, more concretely we focus in this brief paper on exchange rate shocks.

The basic idea of a FAVAR models rests on incorporating the large amount of macroeconomic data into a small number of factors which are used for the estimation of a VAR model. We follow Bernanke et al. (2005) and assume that a $M \times 1$ vector of macroeconomic time series denoted Y_t can be represented as a linear combination of $K \times 1$ vector of unobservable factors F_t , where K is relatively small. We now assume that the additional informational time series X_t (capturing economic activity, market conditions etc.) are somehow linked to the originally unobservable factors F_t and the observable factors Y_t by:

$$X_t' = \Lambda^f F_t' + \Lambda^y Y_t' + e_t', \quad (1)$$

where Λ^f and Λ^y are matrices of factor loadings and e_t' is a mean zero serially uncorrelated error term, also referred to as an innovation shock. Equation (1) captures the idea that both vectors Y_t and F_t are pervasive forces that might drive the common dynamics of X_t . We

²³ It should be noted, however, that use of a Bayesian approach would be sufficient to overcome the dimensionality problem.

use a two-step principal components approach, which is a nonparametric way of estimating the space spanned by the common components $C'_t = (F'_t, Y'_t)$ in (1). For details on estimation using principal components method see Stock and Watson (2002) or Bernanke et al. (2005).

In our application, X_t consists of a balanced panel of 50 monthly macroeconomic time series drawn from Eurostat and ECB database respectively. Data are transformed accordingly to assure stationarity using natural logarithm and first differences. The data span the period from January 2003 to November 2015. The set of variables can be divided into five blocks: (i) the real economy (the industrial production index, the construction production index, retail sales, the housing market); (ii) prices (the consumer price index, the industrial producer price index); (iii) money and credit aggregates; (iv) financial variables (interest rates, exchange rates, the market index, etc.); (v) the external environment.²⁴ As we are interested in estimation of the exchange rate changes effects on Eurozone export, we choose variables for our impulse response analysis in a way to capture the system behaviour. We also assume that the exchange rate is the only observable factor in Y_t and treat it as a factor that has pervasive effect on the economy X_t . The identification of structural shocks in the transition equation is recursive (Cholesky) where all factors respond with a lag to change in the variable. We order the EUR/USD exchange rate last a treat its innovations as shocks to the economy. Above we order index of industrial production, index of construction, export of high-tech goods, inflation, credit for consumption, retail trade turnover, monetary aggregate M2 and 3M-EURIBOR. Industrial production is placed first which assumes that demand shocks are instantaneously transferred to all equations in the system. To implement defined identification scheme, it is useful to define two categories of variables: slow/fast moving. As pointed by Bernanke et al. (2005), “a slow moving” variable is one that is predetermined in current period while “fast moving” variable is highly sensitive to contemporaneous economic news or shocks.

3. Empirical Results

Before we can proceed to discussion over our FAVAR results, we need to perform some misspecification tests. First, we see if the VAR model broadly satisfies standard assumptions. All inverse roots of characteristic polynomials lie inside the unit circle, indicating that the model is stable. The residual graphs show no signs of residual autocorrelation. Joint normality tests used suggest that residuals are multivariate normal. Finally, we tested whether the residuals contain heteroscedasticity. We could not fully overcome this issue - test results of the null hypothesis of no heteroscedasticity show mixed results, when individual components are tested but the null hypothesis of no heteroscedasticity is rejected, when they are tested jointly (misspecifications tests results are available upon request). We have used various information criteria tests to set an appropriate lag to endogenous variables in our VAR. From the inspection of information criteria results, we chose Schwarz information criterion which under general conditions gives us the appropriate lag for our data analysis (we use four lags).

Figure 1 shows the development of the time-varying standard deviation of high-tech export, industrial production index and EUR/USD exchange rate estimated based on 12-months rolling windows. The volatility of industrial production index was particularly high after the beginning and first signs of financial crisis in 2007-2009 and then shortly after the Eurozone debt crisis broke. However, EMU export is much less volatile as expected during the entire

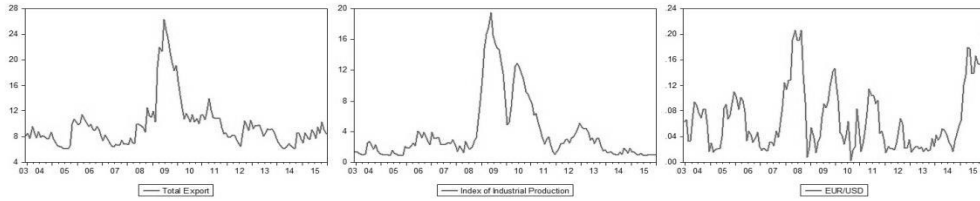
²⁴ All the variables along with their transformation and slow/fast listing are available upon request.

sample period. This may be due to several factors. Hodula and Vahalík (2016) analysed the elasticity of demand for Eurozone exports which has clearly shown that Eurozone exports are inelastic to price changes. Elasticity occurs only in times of great economic change, such as the crisis in 2008/2009. The second reason for the low volatility of Eurozone exports is its geographical and product diversification. In geographical terms, the Eurozone faces its export mainly to the European Union countries, other developed countries as well as to the emerging countries which showed high and stable economic growth during the last two decades. From a product perspective, the Eurozone exports are created by more than a half of exports in the medium-tech category which shows only moderate elasticity of demand. The share of agricultural products or raw material, which are usually more sensitive on price changes, in the EU export composition is very small and thus it has no significant impact on total elasticity of exports. Another reason for the low volatility of exports is ongoing multilateral liberalization and various business tools that ensure exporters against unexpected economic events (long-term contracts, insurance, ensuring the foreign exchange risks such as currency forwards, futures, etc.).

In terms of examined period, the highest volatility of EUR/USD exchange rate was reached during years 2007, 2008 and recently as well. In fact, exchange rate volatility during crisis period is very common due to uncertainty of future economic development, negative expectations of investors and their dislike for risk etc., see Kohler (2010). After the economic crisis broke out in the USA, the demand for dollars was increasing because of the scant liquidity of American financial sector. Hence, it paradoxically led to the depreciation of the EUR/USD exchange rate and reversely to the appreciation of USD. Afterwards, till the third quarter of 2008, EUR/USD exchange rate was appreciating as investors preferred investments out of the USA and Europe became their favourite destination. The moment the economic crisis fully broke out in Europe, and consequently the political debate about how to deal with the situation in the Eurozone and worsening of the rating of most Eurozone states appeared, the euro exchange rate started to weaken as well. This situation has repeated several times during the years 2009-2011 in response to economic and political development in the euro area.

The high volatility of this EUR/USD exchange rate at the end of 2014 and during entire year 2015 was associating with a price level situation in Eurozone. In 2014 the European Central Bank (ECB) was unsuccessful with fulfilling its main target - to maintain the inflation rate around 2 %. Due to the thread of deflation development the ECB started to consider a usage of its other instrument which is quantitative easing. As exchange rate market is considered to be highly developed, it strongly reacts on every single official statement. Thus, after Mario Draghi announced this possibility, the euro started to weaken to USD and this trend was continuing after the ECB indeed launched the policy of quantitative easing. Moreover, in 2014 due to a positive development of American economy, USD was naturally strengthening not only to euro but also towards other world currencies, see Spiegel (2015).

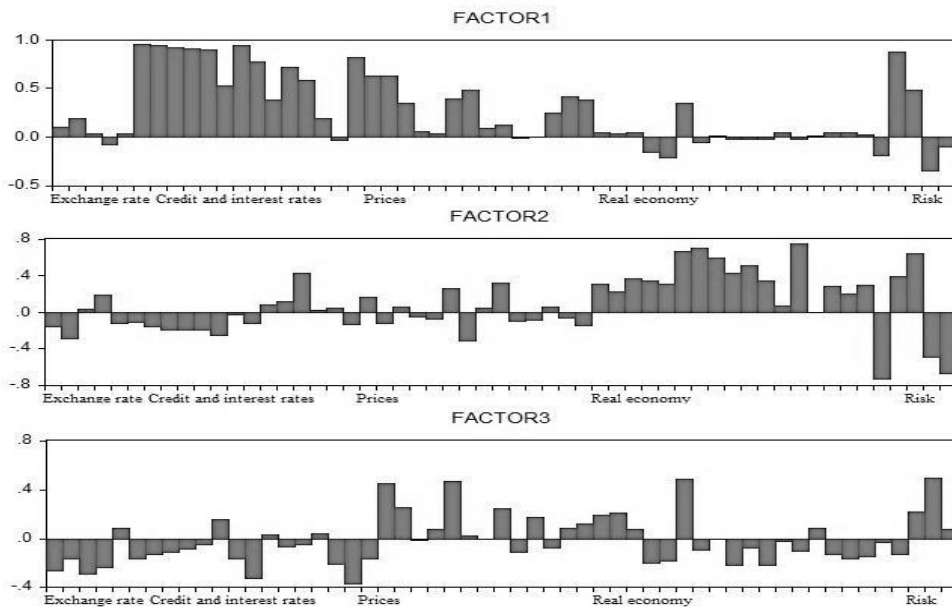
Figure 1: 12-Month Rolling Windows of High-tech Export, Industrial Production and EUR/USD Exchange Rate



Source: ECB, EUROSTAT and own estimation

Bai and Ng (2002) provide a criterion to determine the number of factors present in the macroeconomic data vector X_t , however this does not solve the issue of how many factors we should include in VAR model itself. Bernanke et al. (2005) propose the usage of 3 and 5 factors respectively to check for the model robustness under various number of factors used. We have used both specifications with the same impulse response analysis results but the model with only 3 latent factors showed higher explanatory power. To identify each estimated factor, we use a simple correlation analysis with all of the variables used in dataset. The results are reported in Figure 2. The positive correlations accumulated in Factor 1 correspond at most to credit and interest rates related variables. We can probably identify it as credit conditions factor. The second factor loads on real economic variables. The third factor is the most insignificant of all as it exhibits mixed correlation results. This supports the idea of Tuzcuoglu and Hacıoglu (2015) that some of the factors might be generated artificially to capture nonlinearity in the data or surprises.

Figure 2: Correlation Analysis of Estimated Factors with Used Macroeconomic Variables



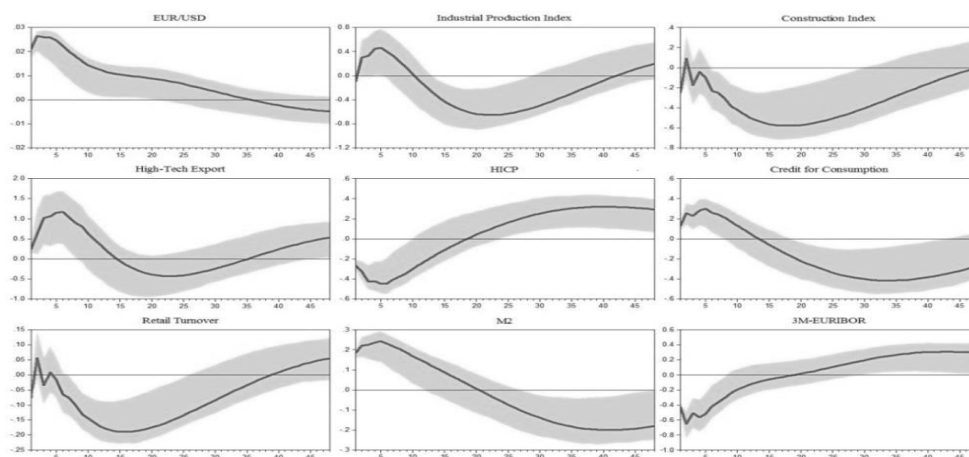
Source: ECB, EUROSTAT and own estimation

Figure 3 presents impulse response analysis for chosen variables to one standard deviation shock to EUR/USD exchange rate. The FAVAR model appears successful in capturing relevant information. Thanks to our data transformation, we can interpret the strength of response in percentages. Regarding the effect of exchange rate appreciation shock to production, results are mixed and depend on the functioning of the expenditure-switching channel (negative effect on production as export declines) or the interest rate channel (positive effect on production as interest rates decline after the exchange rate appreciate). Within first 5 to 7 months we can detect an increase in production up to 0,4 % at impact but in about 12 months the production index declines up to -0,8 % suggesting the dominance of expenditure-switching channel in longer horizon.

Next, the response of high-tech goods export is as follows: while its value increases at first (as the currency appreciates the traded-value of exports in EUR grows), it is followed by a decrease in value in 12 to 15 months after the shock introduction. The EUR appreciation shock has clearly a lagged effect on Eurozone export because of the fact that business contracts are set and the exchange rate is fixed for some time. This should be valid especially by high-tech exports as the producers are usually big multinational corporations or highly specialized companies with access to cheap forward deals. In future research, we aim to analyse the remaining technological levels of export – medium and low tech goods where we expect more significant drop after currency appreciation.

Regarding prices, our results confirm the general finding in the literature of decreasing inflation following an appreciation. However, our findings suggest that prices respond with a slightly decreasing pass-through to an exchange rate shock and HICP index eventually exhibits an overshooting tendency. Retail turnover slightly drops due to cheaper imported goods. Domestic producers are forced to lower their prices as well causing their profits to decline. While focused on monetary policy variables, we can see that interest rates are declining and M2 aggregate increasing as a central authority response to currency appreciation. However, these actions might increase inflation in a long-run due to self-fulfilling economic agents' expectations.

Figure 3: Response to One Standard Deviation Shock to EUR/USD Exchange Rate



Notes: months after shock are put on the horizontal axis; vertical axis describes the strength of the response with 90% bootstrapped confidence bounds

Source: own calculation

4. Conclusion

This paper deals with an issue of the relationship between Eurozone export structure and exchange rate shocks and in this area it provides some new empirical evidence. The objective of this paper was to collect some preliminary evidence about the impact of exchange rate shocks on technological structure of Eurozone export and a set of chosen macroeconomic variables. The effect of exchange rate shocks in Eurozone was researched via FAVAR model and impulse response analysis. The time period was 2003-2015 and we analyzed the set of macroeconomic data relating with export structure and export volume. Using the FAVAR model, we estimated three factors which accounts for changes in credit conditioning, real economy and risk factors. Our empirical analysis enabled us to determine the intensity of reaction on exchange rate shock in percentages. In case of EUR/USD exchange rate appreciation the high-tech goods (with a short-terming exception) decreased. Nevertheless, not significantly. The total production was effected in larger scale, so the effect of the other two technological groups must have been higher than the effect on the high-tech goods. This will be the objective of our future research.

Acknowledgements

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EU Electricity Market in Context of EU Competitiveness

Martin Hon¹, Iva Honová²

VŠB-Technical University of Ostrava

Faculty of Economics, Department of Economics¹, Department of European
Integration²

Sokolská třída 33

Ostrava, Czech Republic

e-mail: martin.hon@vsb.cz, iva.honova@vsb.cz

Abstract

The article deals with electricity industry reform in the European Union. The pros and cons of the electricity market liberalization in the context of EU competitiveness are being argued. The liberalization of the electricity industry raises social costs above social benefits. Due to the market failure the electricity market is unable to allocate resources properly. The possible risks of liberalization are underestimated. We are facing nobody's responsibility for the reliable functioning of the whole electricity industry. To ensure the long term reliability in electricity supply, the coordinated regulatory approach is needed. In our opinion, it is necessary to ensure the coordinated development of generation, transmission and distribution capacities.

Keywords: Electricity Industry, Liberalization, Market Failure, Social Costs, Social Benefits

JEL Classification: D61, L94, Q48

1. Introduction

The creation of the single electricity market in the European Union is considered to be the way how to strengthen competitiveness (Honová, Hon, 2014) and raise the social welfare. This idea is enshrined in the foreword of the key directive concerning common rules for the internal market in electricity (No. 2009/72/EC): „the internal market in electricity, which has been progressively implemented throughout the Community since 1999, aims to deliver real choice for all consumers of the European Union, be they citizens or businesses, new business opportunities and more cross-border trade, so as to achieve efficiency gains, competitive prices, and higher standards of service, and to contribute to security of supply and sustainability“.

The whole concept of the internal electricity market is based on the changed view of the functioning of the electricity industry. The traditional approach regards electricity generation, transmission and distribution as a single unit which behaves as a natural monopoly. Natural monopoly is a specific form of monopoly that is beneficial for the whole society. The promotion of the competition in the natural monopoly industry raises social costs. The new approach, being the dominant approach nowadays, regards only transmission and distribution as naturally monopolistic – it means only a part of the supply chain which is bound to the network infrastructure as the duplication of the network infrastructure would be inefficient. The generation itself is considered to be fully competitive in the new approach (Sioshansi, 2006; Woo et al, 2006).

The competition among the producers of the electricity (to get customers votes) should reflect in all positive effects we expect from the market – raising effectiveness, expanding the range services supply, quality improvement. The price will start to play its information and allocation role and thus ensures the long term stable development of the whole industry. The other free market expectations are as follows: cost reduction reflecting in prices for the final customers (Woo, Zarnikau, 2009; Hattori, Tsutsui, 2004), improvement of reliability, promotion of investment and technological innovations, solutions to environmental issues and long-term security of supply.

Creating the single electricity market meant a radical change in the structure of the whole industry. So called unbundling has broken the natural links within the vertically integrated monopoly firm between generation, transmission, distribution and final consumption. From 1 July 2007 is each customer so called eligible customer (Directive 2003/54/EC) which means a customer with the right of free choice of supplier. We would like to analyse how far above expectations match reality.

This paper is mainly based on a development in the CEE – Germany, Austria, Czech Republic, Poland, Slovakia and Hungary. Central European energy market faces similar opportunities and threats.

Any serious analysis of the electricity industry must take into consideration the unique features of electricity as market goods. Equality between the quantity of electricity demanded and supplied is required in every moment due to physical properties of electricity. Since electricity cannot be stored in the relevant volumes, you need to have such a high generators capacity to be able to meet any peaks in consumption. There are no electricity storages available as for the oil or gas. Failing to balance the production and consumption in every moment leads to crash of the network within seconds. Electricity is almost irreplaceable by other forms of energy. The ability of consumers to substitute electricity is generally very low. Even together with using other energy sources (oil, gas) electricity is the complementary goods quite often. That is one of the reasons for a very low price elasticity of demand.

Production facilities and transmission infrastructure for electricity have long reproductive cycle. There is a five or more year gap between the decision to build a new power plant or new power lines and its beginning to work. The reason is the legislative environment in developed countries, emphasizing the environmental protection and the protection of individual property rights. The operational life of facilities is projected for fifteen years or more.

Different ways of generating electricity are associated with different advantages and disadvantages. For the electricity system to be effective there must be a mix of different modes of production. In our opinion some specific features were completely overlooked when creating a single electricity market in the European Union, especially considering production and transmission coordination.

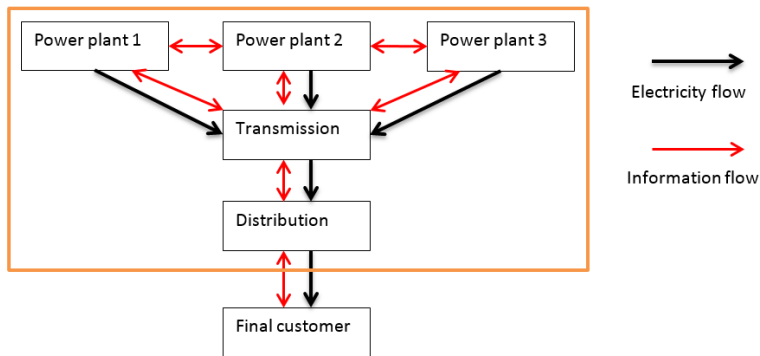
2. Missing Coordinator

Moving away from the concept of natural monopoly industries, the result of which in practice was the requirement of so called unbundling (Baarsma et al., 2007; Pollitt, 2008), has a serious consequence – no one is responsible for the functioning of the electricity system as a whole. The main objective of the integrated system is to ensure the electricity deliveries to customers. In a liberalized market the main goal of autonomous economic entities is the economic profit. The necessary coordination of these independent bodies should ensure an anonymous market

mechanism. But is it able to do that? In our opinion, it is not. It is primarily due to the loss of information.

As shown in the Figure 1, the information flows are synchronous with the electricity flows in an integrated system. It has the advantages: in the short term – the optimal choice of the mix of production capacities due to current consumption, and especially in the long term – synchronous development of production, transmission and distribution capacities. Complete information is the basis for achieving economies of scale and scope, it means the basis for a positive influence of a natural monopoly on social welfare.

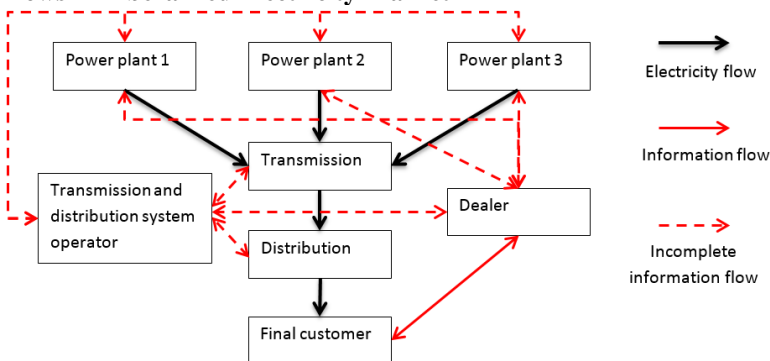
Figure 1: Flows in Vertically Integrated Electricity Industry



Source: own elaboration

In a very simplified diagram of a liberalized market (see Figure 2) you can see firstly a separation of electricity and information flows and secondly incomplete information (expressed by dashed line). Separation of information and electricity flows brings an increase in transaction costs in a short period. The problem of coordination of production, transmission and distribution is manageable in the short run, but with higher social costs (Fetz, Filippini, 2010).

Figure 2: Flows in Liberalized Electricity Market



Source: own elaboration

The main problem, however, occurs in the long run. In the integrated system the individual power plants behave as partners to ensure a reliable supply of electricity. On the contrary, in a liberalized market individual producers are competitors to each other with the aim to maximize

profit. But the problem is that the competing companies keep secret sensitive information especially about future business and investment plans.

Taking into account the need to have sufficient production (including the securing fuel supply) and the transport capacity at each point in time, we think it is evident that the restoration and construction of new facilities must be coordinated even among competing firms. Let's have a look at the relationship between transmission network and power plants. To each other they can behave as complements or substitutes, depending on the situation. The new power plant requires a large enough network infrastructure capacity. But the construction of a new network can take over ten years or more (due to the high number of entities affected). It is therefore necessary to ensure timely coordination.

The consequences of the failed synchronization can be seen for example at the moment when it is necessary to transport the huge amount of electricity from wind farms in the northern Germany to the place of consumption in Austria and the south of Germany. These electricity flows not only burden the German system but also systems in Poland, the Czech Republic, Slovakia and Hungary. Is it possible to ensure the necessary synchronization through the price mechanism? We do not think so. The electricity transmission does not run according to business contracts but is governed by the laws of physics.

3. Common EU Electricity Market vs. Regulation

According to the liberalised approach, the market (market price) should ensure effective use of scarce resources and optimal allocation of investments thanks to its information and allocation functions. This statement is necessary to analyse carefully. You cannot liberalize the electricity industry only for ideological believe in competition.

Let's investigate the structure of price for the final customer first. The price consists of five main items of which only one is the result of the market (as a supply and demand match). This one is the price of electricity itself. Other items of the price are set by government and its regulatory body. These are fees for transmission and distribution, system services (for the activation of support services that are needed to maintain continuous equality between the quantities of supply and demand), grants to support electricity production from renewable energy sources (mostly in the form of guaranteed purchase prices) and the last fifth item is taxes.

For example, in the Czech Republic is the share of market item less than 50% of the final price of electricity for households and small business customers (the exact percentage depends on the chosen tariff and the size of consumption). More than 50% of the final price is being set administratively by the decision of the regulator. This has a major impact on market functioning. The supply side is responding to different prices than does the demand side.

The possible different trend in development of market and regulated price items will become more urgent in the future. In our opinion the share of regulated price item on the final price is about to grow continuously. This is mainly because of the transition from traditional production to renewable energy sources. This does not only increase the cost of production through subsidies (for example by guaranteeing the purchase price) but also the transmission and distribution costs increase (investment in smart grids) as well as the costs of system services (in particular the activation of backup when the weather conditions for wind and solar power plants are unfavourable).

As can be seen from the structure of the price items, the so called liberalizations did not bring the elimination of the state interventions. The regulation still remains the most important element that affects the operation of the whole electricity system. However, in a disintegrated industry the regulation due to the loss of information is less effective. If the regulator does not know the plans of competing producers, how can he plan the development of transmission and distribution infrastructure? The regulated price for transmission and distribution cannot fulfil the allocation function. More to that, the development of the transmission and distribution system is not only about the capacity but it is also about technological changes. Disintegration of the electricity industry causes a significant decline in R&D investment (Jamassb, Pollitt, 2008). The market failures lower security and stability of electricity supply within the EU and thus threaten the competitiveness of EU member states.

4. Common Electricity Market Fails

The negative impact on social welfare induced by disintegration of electricity industry (increase in transaction cost, uncoordinated long-term infrastructure development, etc.) should be overcome by the positive effects of competition among the producers. The market competition should lead to more efficient use of scarce resources and to optimization of the production mix.

Proponents of liberalization convince us that the market will ensure reliable and secure supply of electricity for everyone at reasonable prices. Is their belief justified? We think it is not. In a liberalized electricity market none of the participants takes long-term responsibility for the functioning of the electricity industry as a whole. Today's high standard of quality of electricity supply that we have in European Union nowadays is the result of so much criticized excess capacity built under the allowed rate of return in the past.

Competition between producers leads to an increased production efficiency of the single producers (Erdogdu, 2011). But the main benefit of the competition is not only the short-term reduction in economic profit. This can be partly achieved by a well-chosen motivation regulation. Competition is socially beneficial in the case that the market price provides the information about how to allocate scarce resources efficiently in the long run. In most other markets the price provides this information. Concerning the electricity, however, due to its specific features, the market in resource allocation fails and generates a socially suboptimal outcome.

The key question is whether the liberalized competitive electricity market in EU can secure a sufficient production and transmission capacity to ensure uninterrupted electricity supplies for any level of demand at reasonable prices (insufficient market incentives for investment demonstrates Milstein, Tishler, 2011; Neuhoff, De Vries, 2004). Not just the absolute size of the production capacity matters talking about the social costs, but also its optimal composition of the production mix is important (Finon, Romano, 2009). The optimal production mix must reflect the difference between base-load and peak-load, environmental issues, energy independence of other states, etc. For example maximal total gross domestic consumption in 2014 in the Czech Republic was measured 10 December 2014 at 4 p.m. with the rate 10 861 MW, minimum 10 August 2014 at 5 a.m. with the rate 4 837 MW (statistical data for 2015 has not been published yet). The difference between maximum and minimum is more than two times.

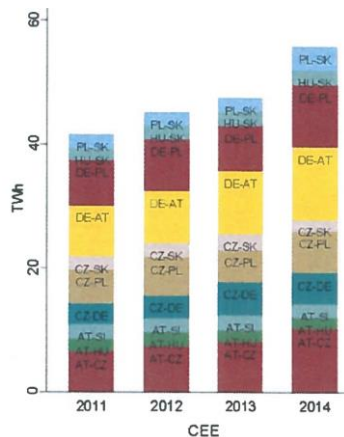
In terms of social costs is better over-investment than under-investment in production and transmission and distribution capacities. In terms of individual costs of private companies in

the industry it is vice versa. The dependence of the society on the electricity is crucial. Constantly operating electricity supply brings significant positive externalities for the whole society, where social benefits outweigh the private benefits. That results in the market that fails to provide the optimum level of supply of the electricity goods.

In today's "liberalized market" investors do not decide according to market principles but invest according to government interventions (having the form of guaranteed purchase prices mainly). Investors invested heavily in renewable resources. It is obvious that the final choice of technology used is ultimately made by the government through the setting of subsidies, administrative regulations (for example the German government decision to withdraw from nuclear energy), modifications of EU ETS parameters, etc. (Toke, 2011). However the government effort to influence the future form of the electricity industry is very inefficient in a disintegrated environment. Any government incentives in the single electricity market must be in accordance with "market principles" (although the market fails) and this fundamentally reduces the possibility of government intervention. Favouring of the "market" incentives (e.g. guaranteeing purchase prices) creates more distortion only. The right to choose the energy mix is de jure, but de facto it is restricted by the EU environmental policy (Hon, Honová, 2012). The example is the massive expansion of wind power plants in Germany.

In situations when the north of Germany is windy, wind parks in northern Germany produce large quantities of cheap electricity, which is transported to Austria, where it is consumed or stored in the pumping stations in the Alps. At first glance this economically logical business transaction, however, is limited by the fact that increase in production capacity was not coordinated with the development of transmission infrastructure in Germany. Due to the fact that electricity transmission is ruled by physical laws and "disregards" the state borders, commercial transactions between Austria and Germany result in significant power flows through the transmission grid of neighbouring countries transmission system operators and so breaching network security standards and leading to the occurrence of structural congestion, if not on the specific German-Austrian border, at least on other parts of the CEE network. The growing volume of unscheduled overflows shows Figure 3.

Figure 3: Sum of Hourly Absolute Unscheduled Flows per Border in CEE



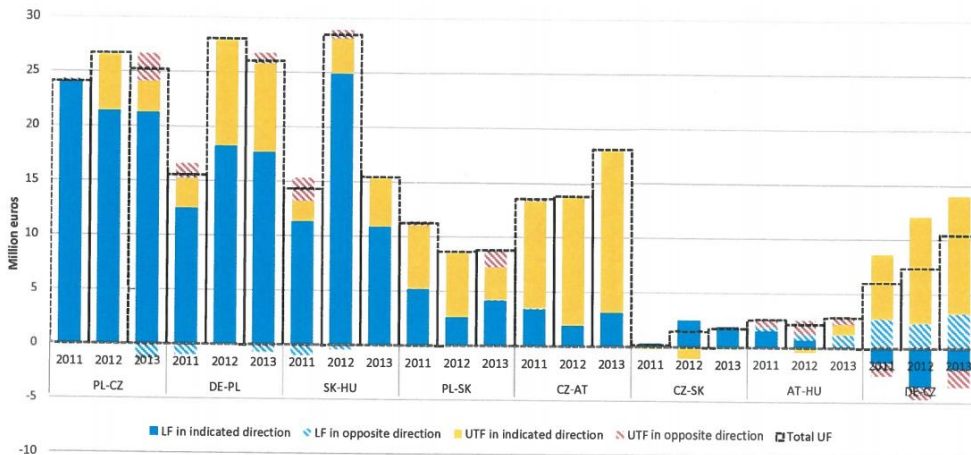
Source: Opinion of the Agency for the cooperation of energy regulators No. 09/2015

Due to the fact that at any moment the amount of electricity supply must equal the one demanded (otherwise there would be a black out in the entire network), in case of unscheduled

overflows system measures must be activated (e.g. reduction of production in local power plants), which causes additional costs.

Figure 4 shows the estimated social costs of unscheduled cross-border flows of electricity in the region CEE (most often caused by electricity generation in wind power plants in northern Germany). Unscheduled flows (UF) are the difference between schedules and physical flows. They are also the sum of unscheduled transit flows (UTF) and loop flows (LF) over a border. Transit Flow is the physical flow resulting from an electricity exchange between two bidding zones. Loop Flow is a physical flow caused by an electricity exchange within one bidding zone.

Figure 4: Estimated Loss of Social Welfare Due to Unscheduled Flows in CEE Region



Source: Opinion of the Agency for the cooperation of energy regulators No. 09/2015

The above example shows just one of many situations where separation of generation from transmission, distribution and final consumption of electricity raises social costs and threatens the stability and security of electricity supply. The functioning electricity sector is one of the key factors for all areas in the EU, especially for industry policy (Mynarzová, Kaňa, 2014). To maintain the competitiveness of the EU it is necessary to reform the entire electricity energy system, which hopefully will be done within the emerging Energy Union in the EU.

5. Conclusion

Creating a single electricity market has brought the breaking of natural links between production, transmission, distribution and customer. Anonymous market mechanism should coordinate all these activities. But the market is unable to do so. The electricity price structure for the final customer consists of more than 50% set price administratively (transmission and distribution fees, system operator services, RES support, and taxes). The remaining “market” part of the electricity price is not able to fulfil its information and allocation functions.

Nowadays we are in a situation where no one has the power to coordinate the development of the industry as a whole in the current institutional environment. Nor the anonymous market mechanism is able to ensure such coordination. This results in the rising social costs of electricity consumption. These negative trends are not seen clearly enough nowadays due to the long-term feature of all the processes in electricity industry. But having in mind the future

reliable electricity supplies the authors suggest it is necessary to begin to look for the new institutional arrangements that will help to solve the need for a coordinated approach in the single electricity market to maintain the competitiveness of the EU in the future.

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Growing Energy Dependence: A Security Risk for the EU

Michaela Horúcková

Silesian University in Opava
Department of Economics and Public Administration
Univerzitní náměstí 1934/3
Karviná, Czech Republic
e-mail: horuckova@opf.slu.cz
Université d'Orléans
Laboratoire d'Economie d'Orléans
Rue de Blois
Orléans, France
e-mail: michaela.horuckova@etu.univ-orleans.fr

Abstract

Since 1970's the security of energy supply has gained immense importance when the first oil shock stunned the world and together with other adverse events that occurred in following years put energy security in the forefront of political agendas of many countries. One of the key components of energy security is undoubtedly energy dependency that is in the case of the European Union growing through the years and remains its momentous security threat. This paper aims to emphasize the growing energy dependence of the EU, and to highlight the facts in case of selected European countries that led to the increasing (in)dependence. The paper is structured in two main parts. The first part introduces both concepts – the concept of energy security and principally the concept of energy dependence, and second part is devoted to the analysis of EU's energy dependence with an emphasis given to the energy dependence of the Czech Republic, France, Germany, Hungary, Poland, and Slovak Republic, and to the main challenges that these economies face.

Keywords: Energy Dependence, Energy Security, European Energy Union, European Union

JEL Classification: F50, Q40, Q41, Q49

1. Introduction

'Energy dependence' is one of the key components of 'energy security' and it remains for years subject of discussions and research of many policy-makers, researchers and academia. Unfortunately, the lack of widely accepted definition and measurement of energy security leads to misinterpretation of this concept, mainly by tendencies to equate the concept of energy dependence with energy security (Cohen et al., 2011; Winzer, 2012). This contribution, *inter alia*, defines both concepts and focuses on energy dependence that is analysed in its narrowest sense as dependence on energy imports required to meet the energy needs of economy.

The aim of this paper is to emphasize the growing energy dependence of the EU, and to highlight the facts in case of selected European countries that led to the increasing (in)dependence. The paper is structured in two main parts. The first part introduces both above-mentioned concepts when the significant importance is given to the concept of energy dependence, and the second part is devoted to the analysis of EU energy dependence and its evolution in time, when significant attention is given to the energy dependence of selected

European countries, namely the Czech Republic, France, Germany, Hungary, Poland, and Slovak Republic, and to the main energy challenges that these countries face.

2. Defining Energy Security and Energy Dependence

The concept of 'energy security' has gained immense importance after the first oil shock in 1973. Over the years, there have been several adverse events, as further oil shocks, fluctuating prices of energy resources, nuclear plants accidents, natural disasters, increasing energy demand, and so on, that put energy security high on political agendas of many countries (Baghat, 2006; Cohen et al., 2011; Chester, 2010; Umbach, 2010).

The original conceptualization of energy security has been focused on energy imports/exports and straightforwardly equated with secure oil and then gas supplies. However, predominantly in last decade, the literature dealing with the multi-faced and multi-dimensional approach to energy security has begun to gain significant importance and it was more or less desisted from its original simplified interpretation (see for instance literature overview of Ang et al., 2015). Despite the numerous literatures on energy security, the definitions of energy security are manifold and lacking consensus. Multifaceted interpretations of energy security include economic, environmental and social, but also political, technological, military, or other aspects depending of the concrete study. Nevertheless, despite the variety of definitions and its scope, there are some very frequently used definitions in recent literature. We can see very frequently the definition of APERC (2007, p. 4) that describe energy security as *"the ability of an economy to guarantee the availability of energy resource supply in a sustainable and timely manner with the energy price being at a level that will not adversely affect the economic performance of the economy"*. Another very commonly used, quoted and modified definition is the one of IEA (2014, p. 13) that defines the energy security in its latest report as *"the uninterrupted availability of energy sources at an affordable price"*. There are many other interesting papers and studies providing definitions that with energy security aspects/dimensions and measurements than above mentioned ones (Bohi and Toman, 2006; Greene, 2010; Kruyt, 2009; Le Coq and Paltseva, 2009; Littlefield, 2013; Löschel, 2010; Martchamadol and Kumar, 2013; Narula and Reedy, 2015; Ren and Sovacool, 2015; Sovacool and Mukherjee, 2011; Sovacool, 2012; Vivoda, 2010). Based on definitions provided by various authors, we understand the energy security as uninterrupted and reliable external energy supply for affordable prices while respecting environment.

Concept of energy dependence is closely associated with the concept of energy security, as it is its crucial component/indicator, and it represents an important tool reducing energy supply insecurity. No wonder that both concepts tend to be equated. If we take a look at literature dealing with energy security, we can see that energy independence used to be an integral part of it. Regarding to the extent of the paper, one broader and one narrower approach to energy dependence is provided.

Böhringer and Bortolamedi (2015) presents the broader concept in which energy dependence is measured by four indicators that are dependency on primary energy; dependency on external primary energy sources; dependency on primary energy carriers; and dependency on external primary energy suppliers. The European Commission (2013, p. 5) defines the energy dependence as *"the vulnerability of a given Member State to energy price shocks or energy supply disruptions, which may translate into significant losses to competitiveness and GDP, inflationary pressures and trade balance deterioration"* and presents energy dependence in its purist sense as import energy dependence. The energy dependence is thus an indicator of energy security that shows the extent to which an economy relies upon imports in order to

meet its energy needs (Eurostat [online], 2016). According to the Eurostat, energy dependence is calculated as net imports (net import = $M_j \text{ import} - X_j \text{ export}$) divided by the sum of gross inland energy consumption (GIC_j) plus international maritime bunkers ($bunk_j$), when j represents energy product (see Equation 1).

$$\frac{M_j - X_j}{GIC_j + Bunk_j} \quad (1)$$

Since this paper does not aim to incorporate any other aspect than dependence of economy on external energy sources to meet its energy needs, the data used in this paper are based on Eurostat concept and dataset related to the energy dependence measurement.

3. Energy Dependence of the European Union

The energy has been at the forefront of European project since its foundation and it still is, today even more than never. The European Union faces many energy challenges as rising energy demand, volatile prices, disruptions to energy supply, environmental impacts of energy sectors, and so on, what calls for coherent and clear strategy in this field.

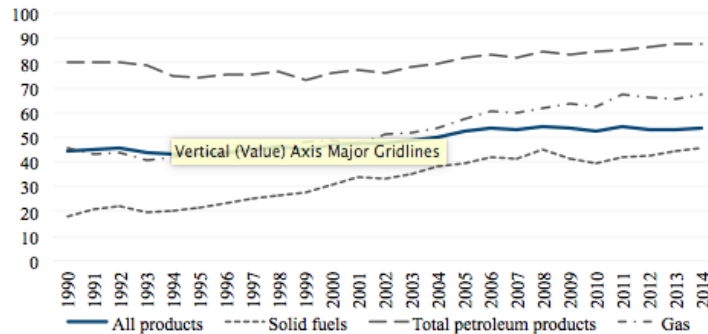
To combat climate change and face current energy challenge, the EU has set up its ambitious energy and climate change strategy within which the Union aims to achieve a low-carbon, secure and competitive economy up to 2050. Within this coherent long-term strategy, the EU has set up targets for 2020, 2030 and 2050. The current framework of 2020 Energy strategy commits EU members to reduce the GHG emissions by the 20% compared to the level of 1990; to raise the share of renewables in final energy consumption by at least 20%; and to achieve energy savings of 20% and more. Strategy Targets for 2030 are even more ambitious.

The set of binding legislation within EU Energy strategies includes, *inter alia*, an increase of energy security by reducing the dependence on imported energy. Actually, the EU imports more than half of its energy what is rather alarming and obviously makes comprehensive strategy that will ensure secure energy more than necessary. In response to the current energy issues, the EU has launched plans for a European Energy Union that should accelerate the compliance with its commitment to become a sustainable, low-carbon and environmental-friendly economy by ensuring secure, affordable and climate-friendly energy. The EU's Energy Union builds on existing EU energy policy that includes 2030 Energy and Climate Framework within which the energy security plays an inseparable role, and the European Energy Security strategy that “sets out areas where decisions need to be taken or concrete actions implemented in the short, medium and longer term to respond to energy security concerns” (Commission European Energy Security Strategy, 2014 [online], p. 3). Energy union bases on 5 mutually reinforcing dimensions – energy security, a fully-integrated internal energy market, energy efficiency, action against climate change and emission reduction, and support of research and innovation in low-carbon technologies (see more at European Commission, 2016 [online]).

The energy import dependence of the EU is gradually growing over time and in 2014, the EU's energy dependence reached 53,4% that is 10% increase compared to 1990 (see the Figure 1). Crude oil dependence attained 87% that is an increase by about 7% compared to 1990. Dependence on natural gas has increased by about 22% since 1990 to 67% in 2014, and dependence on coal and other solid fuels has increased more significantly by almost 28% since 1990 to 46% in 2014. These changes are driven predominantly by the growing energy demand,

by the depletion of domestic energy sources, but can be caused by the energy transition towards nuclear sources, or by the refraining from domestic production to cheaper imported sources.

Figure 1: The Evolution of EU's Energy Dependence (by product, %)



Note: EU-28 countries; All product average consists of all the energy sources including renewable or nuclear energy and it is not an average of three fuel categories

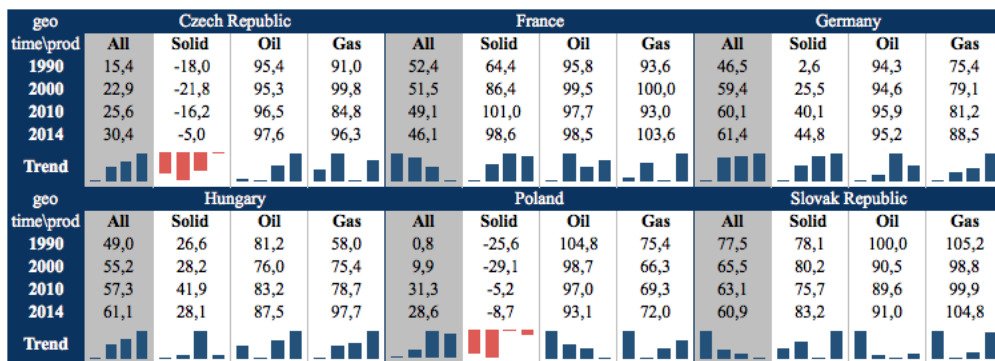
Source: Eurostat database [online] (2016), own proceedings

According to the European Commission (2013), the import dependence can be reduced by lessening energy intensity (“*the amount of energy used in the whole economy per unit of GDP*” – European Commission, 2013) and improving energy efficiency (“*using either less energy to get the same level of energy services, or maintaining the same level of energy services, but using less energy*” – Department of Energy & Climate change, 2012, p. 3); diversification of the energy mix; and by increasing the geographical diversification of energy import sources. There are three challenging technological tools that can help to reduce overall energy dependency, and these are exploitation of renewable energy sources (RES); increasing reliance on nuclear energy; and development and promotion of clean coal technologies.

3.1 Energy (in)dependence of Selected EU Member States

Following subsection deals with energy dependence of Germany, France, and countries of Visegrad group, namely Czech Republic, Hungary, Poland and Slovak Republic. The sample of countries is not random and it reflects main energy challenges in terms of energy dependence that these economies face with regard to the diversities of individual energy policies. This part aims to show the development of energy dependence over time and what are the differences in energy needs among very discussed ‘nuclear’ France, ‘renewable-loving’ Germany, and energy intensive and multifarious Visegrad group that has always been interconnected through common roots and values but in terms of energy countries show considerable disunity.

Performance on energy import dependence of countries in four periods 1990, 2000, 2010 and 2014 is captured in Figure 2. Data related to the composition of energy dependence indicator according to the above mention Equation 1 are provided and easily accessible in Eurostat database (see Eurostat, 2016 [online]).

Figure 2: The Evolution of Energy Dependence of selected EU member states (%)

Source: Eurostat database [online] (2016), own proceedings

Although, the *Czech* energy dependence is gradually growing and almost doubled since 1990, it remains below the average of EU28 import dependence. The Czech Republic performs rather well and at acceptable level. Despite the fact that the Czech Republic is actually a net exporter of solid fuels, it is predicted that there will be an increase in import of coal products. This is caused by the gradual shortage of domestic coal, namely brown coal, and increasing imports of hard coal that will be needed to supplement the decline of coal mining. Due to, the lack of disposal of nuclear fuel and possible construction of another nuclear unit to compensate the decommissioning of the Dukovany nuclear power plant, the increase in uranium import is expected (Ministerstvo průmyslu a obchodu, 2014). It is also anticipate that noteworthy and unchanged oil dependence and very high and growing gas reliance will deepen the overall dependence of the country on energy imports in the future. Enhancing use of renewable sources should largely help to decrease energy dependence. Recently, the limited available stocks of brown coal and the decline in hard coal mining remain significant challenges.

French overall energy import dependency has moderately diminished over time and is slightly under the average of the EU. The long-term dependence on petroleum products and gas points out almost full insufficiency of these energy sources. Nevertheless, in last two decades France has got almost fully reliant even on solid fuel. It has been caused mainly by the closure of hard coal mines and France's phasing-out of solid fuel heating plants in favour of nuclear plants. Although, the nuclear heat in power and heat generation contributes significantly to the French overall energy independency, France is actually standing on the energy crossroad due to the fact that "by 2020, 22 of 58 nuclear power reactors will have operated for 40 years" what is over their operating lives (Schneider, 2013b, p. 19). The question of nuclear power is also deepened by the aftermath of Fukushima disaster that has again opened the discussion about risks associated with accidents at nuclear power plants and that has changed the French perspective on nuclear power (Schneider, 2013a).

The energy dependence of *Germany* is above the EU level and since 2000 is marginally increasing over 60%. While oil needs remain unchanged and gas dependence rose slightly, solid fuels dependency has grown dramatically since 1990. Nevertheless, Germany plans to phase-out nuclear energy in short-term in order to reduce and eliminate the risk of nuclear power (Hake et al., 2015). To decarbonize the economy, Germany has taken also the decision to withdraw from the use of coal (in mid-term), and finally to replace coal and nuclear energy by renewables (Morris and Pehnt, 2015). The key to significantly decrease energy dependence of Germany should be in the energy efficiency and expansion of renewable energy sources.

However, Germany is actually facing the criticism for high cost of promotion of renewables that according the statement of environmental Minister Jürgen Trittin in 2004 should not cost an average German household more than about one euro a month, whereas in 2013 these costs were almost 20-times higher (Hake et al., 2015).

Hungary is over the years remarkably dependent on oil, but since the country has refrained from deep coal mining at the end of nineties, it has become significantly reliant also on natural gas. And therefore, since 1990 the country has recorded almost doubled gas dependence. High petroleum and natural gas dependency hence represent a major challenge, but Hungary also seeks for its energy independence by the mean of energy savings; increasing shares of RES; saving nuclear energy; electrification of transport; establishment of bipolar agriculture; and integration to the European energy infrastructures (Ministry of National Development, 2012).

The energy dependence of *Poland*, despite the significant dependence on natural gas and almost full dependence on crude oil, is rather low, however growing. Low energy dependence is given predominantly by domestic coal that contributes considerably to independency of heat generation from external supply sources. Another significant contribution to the Polish energy independency is the fact that Poland is still one of the biggest European hard coal producers and even if Polish exports are gradually decreasing, the country still remains a net hard coal exporter. Since Polish coalmines are deep, out-dated (more than half of them are older than 25 years) and costly, Poland faces the same problem related to hard coal production as the Czech Republic – an expensive indigenous production of coal and cheap imported coal. Hence, also for the reason of meeting EU environmental standards, Poland assumes diversification of the electricity generation structure by introducing nuclear energy and increase in the share of renewable sources until 2030 (Ministry of Economy, 2009).

Despite the fact that overall energy dependence of *Slovakia* decreased over time, the country is considerably dependent on solid fuels and is fully dependent on gas imports. The overall dependence on imported energy sources counts almost two thirds. The energy source contributing significantly to current energy independence lever is nuclear heat that plays a major role in power generation (around 55% of total power generation). Slovakia does not have a principal tool to reduce dependence on imported sources and the country see its pathways to enhance energy security through other instruments of energy security, as strengthening regional cooperation, and increasing the security and reliability of gas, crude oil and nuclear fuel supply etc. The potential of future gas extraction and shale gas in the diversification of the energy imports could significantly lessen the dependence on gas imports.

4. Conclusion

The growing EU's energy dependence that reached about 53% in 2014 remains obviously its biggest energy security threat. The EU strives for a secure, competitive, and sustainable energy and in the forefront of its goal is actually an establishing European Energy Union that represents a promising tool that will ensure secure, affordable and climate-friendly energy. Within the target to ensure secure energy, the EU aims to reduce its dependence on imported energy. However, despite the set of tools to reduce its energy dependence, during these last years this indicator has shown a slightly rising trend.

The energy dependence can be reduced by lessening energy intensity and improving energy efficiency, but also by diversification of the energy mix, and to increase the geographical diversification of energy import sources.

The analysis of selected EU member states revealed interesting findings:

- The EU energy and climate targets may be in conflict with efforts to increase energy independence. For instance, the country that gradually refrain from use of solid fuels in order to reduce the GHG emissions that at the same time do not supply its needs by other alternative or nuclear energy (as France), can increase its dependence on another imported energy source such as a gas (case of Poland).
- Poland shows similar characteristics in structure of energy dependence as the Czech Republic, but other Visegrad group countries perform differently what is given by dissimilar energy policies that these countries have chosen
- Use of nuclear energy, despite the potential risk and notable dependence on uranium, decrease significantly the energy dependence
- The introduction/expansion of the nuclear heat and increase in renewable energy sources use are seen as most effective solution to reduce energy dependence.

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Migration Policy – the Link Between the Visegrad Group Countries and the European Union

Peter Horváth

University of Ss. Cyril and Methodius in Trnava
Faculty of Social Sciences
Bučianska 4/A, 917 01
Trnava, Slovakia
e-mail: peter.horvath@ucm.sk

Abstract

The rise of the migration wave has presented diverse problems and new points of view into the policy of the European Union. Referring to this fact it is a challenge to look at the changing attitudes of the countries that have formed the Visegrad Group for 25 years. It is clearly seen that after the last Parliamentary election held in Poland, the countries have gained a mutual attitude towards a unified European policy conducted by the German Chancellor Angela Merkel. Based on the current conflict caused by the migrants' distribution among the EU countries according to a special key, another conflict referring to the future European Union direction may arise. Therefore, there is a challenge to look at the Visegrad group's attitude towards other issues. Are they able to keep up the unified attitude and can the "old" countries tolerate their diverse attitudes?

Keywords: European Union, Visegrad Group, Cooperation, Migration

Jel Classification: F51, F55, J61

1. Introduction

“The migration crisis has distinctively influenced not only individual societies within Europe, their governments or decisions, but it has also stroke to activities, content, context of various types of media. As soon as the migration crisis has begun to escalate in Europe and the old continent has tried to cope with float of refugees from the war threatened Middle East, not only individual statements of politics and influential individuals but also communication flows themselves, that have created content and context expanded within networks, have begun the center of interest.” (Žúborová, 2015, p. 560)

So this particular topic is under current discussion and widely seen as an Achilles heel amongst the single membership countries is the view on the problems of the migration policy. This topic, has been occupying all of the European representatives more than a year now as it is under constant discussion and scrutiny. It creates tension on the European continent at an unprecedented scope. It is no longer just a discussion in regards to migrants, their social status and influence on daily life in the refugee camps. It is becoming quite apparent that this whole process is starting to be connected with terrorism in individual European countries.

Until now the migration policy was solely in the hands of the governments of individual respective membership countries of the European Union. It has now become widely recognized that this way of tackling and implementing measures to deal with the migration policy is not successful. It is probably now a necessity to adopt a common approach in

European countries, which would be possible to carry out and implement to address this issue with resolve. Nowadays there are already too many treaties but without clear and specific execution of them. Currently the approach of the countries of the Visegrad group is often in conflict with the policy of the so called old countries of the Union. However, in the framework of the European Parliament is the vote of Central European countries according to the number of their members of parliament neglectable, through institution of the European Council they have enough blocking or veto potential towards the other countries. So to solve the problem with the migration policy will be not possible without finding a compromise and resolute solution between the Visegrad countries and the rest of the European Union.

The formation of the Visegrad group in 1991 was oriented specifically as the tool for gaining membership of these countries into European structures. This process was successfully finished on 1st of May 2004. This partnership has never had a solid basis as the European institutions, for the ability to push through has always an important influence on the personal relations between individual political leaders. Visegrad group survives also the period of the „clinical death” between 1994 -1998, when its single countries could not communicate together. The last decade is the period, when all four countries realized, that they are too small for that, that they would be able individually to put through their agenda in the bodies of European Union. Especially the case of migrants which is one of the newest challenges against the representatives of European Union, could join these countries to one common vote in this agenda. Only thing that is left is to persuade, if their statements and opinions are in the interests of the common European values (Thousands, 2015).

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. The risks of illegal migration is not only connected to unlawful profit of organizers, with inhuman conditions of transported people, but also with economic and social impact of this activity on the whole society of the "host" country (UNHCR Poland, 2015).

Due to the nature of irregular migration it is very difficult to determine the exact number of illegal migrants in the V4 countries. An important moment of combating illegal immigration is to identify statistical sources containing relevant data on the number of illegal foreigners, the legal definition of the problem and the reunification of statistical methods, which are enabling to estimate the size and dynamics of migration flows. Overall estimations of newly arrived illegal migrants, based on the number of foreigners captured at the borders of individual V4 countries (or disclosure of such foreigners in the hinterland) with invalid visas may differ from one another. The above findings led us to carry out research on illegal migrants and related social impact on the V4 countries (UNHCR Hungary, 2015).

2. Social Impact in Terms of Legislation

As shown in statistical surveys, the majority of illegal migrants were entering in the past the territory of V4 countries (the EU) legally on short-term visas, but exceeded authorized length of stay. Currently, however, the huge onslaught of illegal migrants caused irregular migrants entering the territory of these countries without any documents or permits. It is therefore necessary that all Member States of the V4 address the problem of illegal migration together

through the same adopted legislation. Member States are free to grant residence permits to victims of trafficking, who cooperate with the authorities in dismantling of criminal networks.

Due to the fact, to avoid targeted transfer of illegal migrants (to find transit or final destination countries with "most plausible" legislation) should be considered as necessary to harmonization of the legislation in this area and aimed precisely against those, who help illegal migrants to (unauthorized) illegal entry (Universal, 2015).

3. Social Impact in Terms of the Financial Burden on the V4 Countries

One of the main challenges for contemporary Europe is the increasing influx of migrants into the developed European countries, principally motivated by economic reasons. Individual European Union countries therefore gradually adopted a new regime which is regulating residence of foreigners, among other things, pursuing an aim to strengthen the conditions of immigration of foreigners. To eliminate negative phenomena associated with international illegal immigration based on European states and multinational mechanisms, for example in the form of a uniform visa policy and readmission agreements, as well as other joint measures (Universal, 2015).

Care for Migrants, for example includes costs which covers each country from the state budget, from funds earmarked directly for this purpose. National expenditures of individual countries are made from finances of their migration authorities and are used for asylum policy, and the integration process. Migration authorities are funded from national budgets of V4 countries however, the state budget funds are not sufficient to cover all costs incurred (Universal, 2015).

Another important cost for the V4 countries in the field of illegal migration with a strong social impact are also costs associated with the Dublin transfers. In situations where, pursuant to the relevant regulations of the EU shows that the V4 country is not responsible for the adoption and examination of the asylum application, it is needed to transfer a third-country national to the concerned Member State, where such transfers may be implemented by air or by land (Statistical, 2015).

In the case of using of both of these methods of transfer arise other costs related to the placement of migrants in the competent facilities of police custody, including accommodation, food, energy, maintenance, interpretation, staff salaries, fuel associated with the transfer of the migrant not only at the department of police custody, but also from the body to the airport and flights tickets, in appropriate cases, including the escort.

Even with regard to these facts, the European Union, respectively the European Commission adopted several instruments (already named above), by means of which helps to EU Member States to assist in the management of illegal migration. One of the tools is also the Asylum, Migration and Integration Fund 2014-2020 AMIF, hereinafter "the Fund" (The position, 2008)

The general objective of the Fund is to contribute to the effective management of migration flows and to implementation, strengthening and development of a common policy on asylum, subsidiary protection and temporary protection and the common immigration policy with full respect for the rights and principles enshrined in the Charter of Fundamental Rights of the European Union. To V4 countries were for the years 2014 to 2020 address to this area aside from a total of 2,392 million euros (Statistics, 2014).

4. Social Impact in Terms of Coexistence with Native Population

In present time it is possible to consider the current social impact as one of the most important. As examples could be used riots of illegal migrants or expression of native population in referendums of local governments.

In June 2015 were reported several riots of illegal migrants in Hungary, especially in the accommodation and asylum camp Röszke. Used have been vehicles and helicopters to suppress these riots by the police. Migrants demanded release and possible departure to Germany. In July 2015 there was a similar incident in Czech in Bela pod Bezdězom. Migrants demanded the immediate release from the facility, refund of their money and mobile phones, which the competent authorities seized after their arrival to the facility. As well as illegal migrants in Hungary, they demanded immediate deportation to Germany (Riots, 2016).

It could be stated, that protests and riots in the refugee facilities are not isolated, they are also demonstrated attempts of self-harm or holding of hunger strike. These situations, however, are very closely and sensitive observed by local people, who also revolve and are against it that in towns and villages are constituted temporary camps for asylum seekers. Similar opinion was expressed in the July 2015 referendum by citizens of Gabčíkovo in Slovakia, who have clearly rejected the location of 500 asylum seekers from Austria. This view, however, may hold citizens in other towns and villages, not only in Slovakia but also in European countries, including other Member states of V4 countries (UNHCR Slovakia, 2015).

It is not surprising that the local population has a fear of the unknown and unwilling to accept foreigners on their territory. However, it should be considered as important that in this area, raise awareness, since the lack of information causes a variety of simple explanation of the facts and misunderstandings. We think that among those who came to Europe and Slovakia in the last 25 years, living and working together with indigenous peoples, is not increased crime or other hazards (Ministry, 2015). It should be understood that illegal migration is a problem throughout the whole European Union and, for example, mandatory quotas are not the solution. From that point of view should be taken by the competent following measures (Brussels, 2015):

- to increase interest in migration in general, and to understand the motivation of migrants (mainly illegal) from the public through the dissemination of objective information,
- increase the interest and initiate a wider discussion on aspects of irregular migration in the V4 countries between politicians, experts, the media and the public,
- strengthen national and international cooperation between the relevant actors responsible for protecting of internal and external borders of the EU, to combat smuggling of migrants and combat cross-border crime, coordinating and strengthening the Coast Guard with the goal to prevent further deaths of illegal migrants in the Mediterranean Sea,
- bigger offer of statistical data,
- strengthening cooperation between the actors responsible for the management of border protection of V4 countries,
- more frequent implementation of joint inspections of undeclared work in these countries all relevant institutions, such as police, labour offices, labour inspectorates, financial authorities, employers' associations etc.,
- give due attention to solving the problems of irregular migration in the context of other challenges of migration components (immigration for work, family reunification, asylum, migration, integration of immigrants and others)

- conclusion of readmission agreements and expansion of cooperation with relevant countries of migrant origin,
- carrying out returns procedures of illegal migrants faster in the country, more efficient and more accessible to them,
- support of the active participation of representatives of the V4 countries and the EU and other international or regional institutions and initiatives dealing with the issue of illegal migration (The position, 2008).

However, considered as it necessary is that competent representatives of the V4 countries and the EU are also initializing such activities, which would help eliminate the increased illegal migration from countries of origin of migrants and to reduce the social impact of illegal immigration in their own country (V4, 2016):

- need to adopt common, harmonized and mutually coordinated migration and asylum policy, which will be common and binding to all EU Member States,
- solve who from the migrants who are already in Europe from Africa and Asia gets asylum and who not, while the criterion must be strict and the priority clearly must be given to political migrants (those, which would be at home at risk of death, torture, other cruel punishment or disadvantaged), respectively. mothers and their children,
- humanitarian assistance to migrants in their countries of origin,
- increased of Official Development Assistance and other (technical, advisory, expert, research) assistance to countries of origin that produce large flows of illegal migrants into the V4 countries (and into the EU)
- actively engage with irregular migration through better cooperation with third countries,
- help to streamline the process of returning illegal immigrants to their country from which they came,
- more than urgently address from a global perspective the problems which are facing the countries of North Africa and Southwest Asia, as much as possible to eliminate the causes that the people from these countries fled, because only in this way can the current huge influx of migrants to Europe decreased (Czech, 2015).

In regards to asylum system, it is also necessary to implement radical changes, while better coordination of activities between the individual Border and Foreigner Police Offices of the V4 countries with the competent Migration Offices a of these countries will assist to the total acceleration in registration process, interviews and the examination of the cases. From that point of view should be considered to substantially increase the number of decision makers, interpreters, analysts and other professionals, including social workers, who are significantly involved in the asylum process with illegal migrants in the V4 countries. “However, this idea is for now far from a consensus. The International Community and the domestic political forces must carry on still lengthy negotiations.” (Meluš, 2016, p. 1817).

5. Conclusion

International migration is now considered as one of the civilizational challenges due to its population, economic, cultural, social, political, security and other impacts, although it is seen as a natural and largely positive phenomenon (Immigration, 2015, see also Lukáč, 2016). In the field of international migration, however are manifesting and remain serious problems, such as increasing and strengthening onslaught of illegal immigrants to European Union countries, unsatisfactory efficiency in the fight against smuggling and trafficking in human beings, obvious difficulties in the integration of foreigners into society, illegal residence and illegal employment of foreigners, differing practices in the allocation of refugee status,

xenophobia, intolerance and discrimination against migrants, lack of cooperation with countries of origin etc (Until the end, 2015).

In the V4 countries (and globally in the EU) in general need to be increased interest in the issues of migration and illegal migration. Half of illegal migrants in the territory of these countries are people, who are crossing and have crossed the border unlawfully. In this context play a significant role those asylum seekers, who break the asylum procedure and try to go again across the border illegally, however, on which are provided only minimum information (Slovakia, 2015). Within the migration we can observe not only official and formal problems but also informal and societal problems. As Mihalik observes, migration and its relation to the extremism is growing in those countries that are relatively ethnically and linguistically homogeneous.

In present, mainly European countries, respectively European Union countries are facing increased pressure from migration, especially illegal. The growing influx of migrants is felt by the whole of Europe (including V4). There is an increase in the numbers of people with residence permit, in particular from crisis areas of the world - for example, Syria, Kosovo, and so on. At the same time, there is a growing number of attempts on illegal entry of foreigners into the territory of the V4 countries through illegal border crossing. Currently has the highest number of illegal migrants has Hungary (A Magyarországra, 2015).

Until the increased number of the current wave of illegal migrants at the end of 2014 and the first half of 2015, we can conclude that by V4 countries (and their representatives) was the issue of foreign - particularly illegal migration, paid only very little attention. Likewise, the media in our countries did not inform on illegal immigration, only occasionally and to the viewers (resp. Reader) were presented particularly negative attributes (Brussels, 2015).

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Which Government Bond Spread Predicts the Future Economic Growth the Best?

Jana Hvozdenská
Masaryk University
Department of Finance
Lipová 41a
Brno, Czech Republic
e-mail: 174974@mail.muni.cz

Abstract

The spread between long term and short term interest rates is a valuable forecasting tool. The steepness of the yield curve should be an excellent indicator of a possible future economic activity. A rise in the short rate tends to flatten the yield curve as well as to slow down real economic growth the near term. The relationship between the spread and future GDP activity was proved already before. One question remains – which spread is the best for the future prediction? Is it the spread between sovereign 10-year bonds and 3-month bonds or 15-year and 3-month or 10-year and 1-year sovereign bonds? This paper aimed to analyze which spread is the most suitable for predicting of future economic growth in countries of V4 (Czech Republic, Hungary, Poland, Slovakia) between the years 2000 and 2015. We proved that in these selected countries the best spread is a spread of 5-year and 3-month government bonds. The second best spread is spread of 5-year and 1-year government bonds. The results show that dividing of the sample made a difference between pre-crisis and after-crisis period and it showed the different relationship of spreads and the models. The finding that the best spread is spread of 5-year and 3-month eventually 5-year and 1-year is in contradiction with the theoretical background when almost everybody who predicts the future GDP growth uses a spread of 10-year and 3-month of government bonds.

Keywords: Bond Market Integration, Slope, Spread, Yield Curve

JEL Classification: E43, E44, E47, G01

1. Introduction

The financial turmoil during 2007-2009 affected the euro area financial sector in ways that differ considerably across market segments and countries. A consequence was a temporary reduction of market activity within national borders. The impact was felt most strongly in the money markets, and relatively less in bond activities. However, economic growth stopped and still many countries are not able to follow Maastricht Convergence Criteria.

On one hand, the integrated financial markets and the common currency may help protect the countries from the negative impacts of a financial crisis, because the countries are part of a large, stable economic unit. On the other hand – financial instability may spread easily from country to country, since barriers to the capital movements have been reduced.

Many market observers carefully track the yield curve's shape, which is typically upward sloping and convex. However, when the yield curve becomes flat or slopes downward (the spread between sovereign 10-year and 3-month bond is negative) it may signal GDP decrease

(recession). The spread of 10-year and 3-month government bond is widely used and it is the most common measurement of the yield spread.

The yield curve simply plots the yield of the bond against its time to maturity. The yield curve – specifically the spread between long term and short term interest rates is a valuable forecasting tool. It is simple to use and significantly outperform other financial and macroeconomic indicators in predicting recessions four quarters ahead.

This paper builds on a wide range of previous researches, but differs in some ways. Bernard and Gerlach (1998) in their paper showed empirically on eight countries that the slope of the yield curve is a good predictor of the real economic activity. Berk and van Bergeijk (2001) examined 12 euro-area countries over the period of 1970-1998 and found that the term spread contains only limited information about future output growth. Their work is based on the previous theoretical researches of Estrella and Hardouvelis (1991), Estrella and Mishkin (1996). There was proven the evidence that the slope of the yield curve and the future GDP activity are related together. However, it is necessary to say that this rule was true until the end of 20th century and it mostly disappeared at the beginning of 21st century and appeared again during the financial crisis (from 2008) and later on (De Pace, 2011; Giacomini and Rossi, 2006; Chinn and Kucko, 2010). Most of the studies are focused on the relationship of the yield curve and GDP activity of the United States of America. All the authors used as a spread, which was analysed in their works, the spread of 10-year and 3-month government bonds. This relationship was proved to be the best in the past (Estrella and Hardouvelis, 1991, Estrella and Mishkin, 1996).

This paper aims to analyze which spread is the most suitable for predicting of future economic growth in countries V4 (Czech Republic, Hungary, Poland, Slovakia) between the years 2000 and 2015 and if this relationship has changed after the financial crisis.

The possible spreads are as follows: 15-year and 1-year, 10-year and 1-year, 5-year and 1-year, 15-year and 3-month, 10years and 3-month and finally 5-year and 3-month. Of course there are other possibilities, but it is very hard to get a different data for a chosen time period.

2. Problem Formulation and Methodology

There are many ways of using the yield curve to predict the future real activity. One common method uses inversions (when short term rates are higher than long term rates) as recession indicators. Obtaining predictions from the yield curve requires a lot of preliminary work. There is the principle which needs to be held: keep the process as simple as possible.

A yield curve may be flat, up-sloping, down-sloping or humped. The standard solution uses a spread (difference between two rates). The problem is to choose the spread between the right terms. The most used spread is between 10-year and 3-month bonds. The problem is that there are rarely bonds which mature exactly in 10 years (or 3 months). In that case the best solution is to use the yield curve, which shows the yield of each maturity. Creating and calculating of the yield curve is a rather difficult task because there are many ways how to do it and every country uses a different model of construction.

The yield curves are constructed by Bloomberg, therefore the data for spreads were gained from Bloomberg. For the spreads 15-year and 1-year, 10-year and 1-year, 5-year and 1-year, 15-year and 3-month, 10years and 3-month and finally 5-year and 3-month government bond rates were chosen. Quarterly data were used for the spreads because the data of the economic activity growth are taken on quarterly basis as well. The data of real GDP growth can be found

at Eurostat, OECD statistics or Bloomberg. The data of real GDP obtained and used in this paper are from OECD statistics.

The selected countries are countries of Visegrad group (Czech Republic, Hungary, Poland, Slovakia).

There is no recent previous research in European Union which would prove or reject the hypothesis that the spread between 10-year and 3-month government bonds is the best for predicting of the future economic growth.

2.1 Model and Data

As a measure of real growth four-quarter percent change in real GDP was used (thus the percent change of the quarter against the last year's same quarter was calculated, e.g. the change from 1Q2004 and 1Q2003 real GDP was used). GDP is standard measure of aggregate economic activity and the four-quarter horizon answers the frequently asked question – what happens the next year?

The sample period starts from 1Q2000 and ends on 4Q2015. This time range covers the period before financial crisis, period of financial crisis and period after financial crisis. The basic model is designed to predict real GDP growth/decrease four quarters into the future based on the current yield spread (Bonser-Neal and Morley, 1997).

This was accomplished by running of a series of regressions using real GDP activity and the different spreads lagged four quarters (the interest rate spread used for 3Q2001 is actually from 3Q2000).

The last step is to find out which bond spread is the best for which country and to prove the hypothesis that the spread between 10-year and 3-month is the best one.

To generate the GDP predictions with the different spread the regression using the whole sample was run, and later on two divided samples of real GDP and spreads of each selected country (the sample is divided in 4Q2007/1Q2008, because this period preceded financial crisis and should show some changes in prediction of the yield curve spread) were run. Time series data structure and ordinary least squares (OLS) method was used. All calculations were carried out in Gretl software.

The coefficients α and β were estimated for each country:

$$Real\ GDP_{t+4} = \alpha + \beta * spread_t + \varepsilon_t \quad (1)$$

Where:

$Real\ GDP_{t+4}$ is a prediction of the future real GDP in time $t + 4$ quarters

$spread_t$ is spread between 10-year and 3-month state bonds in time t

ε_t is a white noise

3. Problem Solution

The tests of normality were carried out. For the evaluation of the normality test is probably the easiest to observe the result from graph of the assumed normal distribution in comparison to the actual distribution of residues and analyse p-values of Chi-square test. We test the hypothesis H0: Residuals are normally distributed, against the hypothesis H1: Residuals are not normally distributed, the significance level of α was chosen as 0,01. If the p-value is greater

than α then we cannot reject the H_0 , therefore the residuals are normally distributed. The test contributed that the data have normal distribution.

For the testing of heteroscedasticity we chose the White's test. We test the hypothesis H_0 : Constant variances of residuals – homoscedasticity, against H_1 : Heteroscedasticity. The significance level of α was chosen as 0.01. If the p-value is greater than α then we cannot reject H_0 , therefore it contributes homoscedasticity.

The whole sample of dataset contains the real GDP from 1Q2000 to 4Q2015. A regression of the whole sample was run and we got the results as seen in Table 1.

Surprisingly we got the best results of the models mostly for spread of 5-year and 3-month government bonds (Czech Republic, Hungary and Poland). The spread of 15-year and 1-year government bonds is the second best choice (Slovakia).

We can say that all models are statistically significant, because the p-values are under 1% (***) or 5% (**), however the R^2 are not very high except of Hungary.

Table 1: Results of All Countries and Whole Sample from OLS Regression

1Q00 – 4Q15	Constant	Spread	P – value (F – test)	R^2
Czech Republic (5Y-3M)	0.00705186	1.44957	0.0287 **	0.079846
Hungary (5Y-3M)	0.0177949	-1.08699	2.68e-05 ***	0.263989
Poland (5Y-3M)	0.0327194	0.417201	0.0037 ***	0.136037
Slovakia (15Y-1Y)	0.0517619	-1.01688	0.0013 ***	0.163876

Source: author's own calculations

The R^2 coefficients (coefficients of determination) show us how many percent of the sample can be explained by these models.

For example we can say that future real GDP of Hungary will be:

$$\text{Real GDP}_{\text{Hungary } t+4} = 0.0177949 - 1.08699 * \text{spread}_{\text{Hungary } t}$$

By this model we can predict future real gross domestic product for Hungary four quarters ahead.

We can test the hypothesis that the behavior of the spread and gross domestic product has changed during the financial crisis, therefore the sample was divided into two samples in order to prove this hypothesis.

3.1 Results of Regression – Divided Samples

The research continued as follows – the whole sample was divided into two samples. The first one is from 1Q2000 to 4Q2007, the second one is from 1Q2008 to 4Q2015 in order to show if there is any change of behavior and dependency between the variables before or after the financial crisis.

Regressions of the first sample and the second sample were run. The results for the time span of 1Q2000 – 4Q2007 (first sample) are possible to see in Table 2, the results for the period of 1Q2008 – 4Q2015 (second sample) are in Table 3.

In the first period the best results were gained for 5-year and 1-year government bond spread (Czech Republic and Hungary). The second best results we got for the spreads 15-year and 3-month (Poland) and 10-year and 1-year (Slovakia).

Table 2: Results of All Countries and Sample from 1Q2000 to 4Q2007

1Q00 – 4Q07	Constant	Spread	P – value (F – test)	R ²
Czech Republic (5Y-1Y)	0.0256986	2.71662	2.59e-05 ***	0.499993
Hungary (5Y-1Y)	0.0307831	-1.21255	0.0066 ***	0.250968
Poland (15Y-3M)	0.0496642	0.452182	2.15e-07 ***	0.650937
Slovakia (10Y-1Y)	0.0686636	1.49975	0.0492 **	0.140696

Source: author's own calculations

We can say that all models are statistically significant, because the p-values are under 1% (***) or 5% (**). R² are higher than in the time period of whole sample – 1Q2000 – 4Q2015 (especially in the case of the Czech Republic and Poland).

Table 3: Results of All Countries and Sample from 1Q2008 to 4Q2015

1Q08 – 4Q15	Constant	Spread	P – value (F – test)	R ²
Czech Republic (15Y-3M)	-0.0270971	1.22776	0.0067 ***	0.220138
Hungary (15Y-1Y)	-0.009808	1.44297	0.0024 ***	0.268073
Poland (5Y-1Y)	0.0176582	1.08816	0.0124 **	0.191084
Slovakia (5Y-3M)	-0.00453117	1.67261	0.0111 **	0.196409

Source: author's own calculations

In the second period the best results were gained for all spreads mentioned in the Table 3 – 15-year and 3-month (Czech Republic), 15-year and 1-year (Hungary), 5-year and 1-year (Poland) and 5-year and 3-month (Slovakia). All of them are mentioned equally once, therefore we cannot say which spread is the best one for this time period 1Q2008 – 4Q2015.

All models are statistically significant. R² are lower than in the previous time span, which is interesting. This change in prediction possibility may be caused by different behavior of financial markets after the financial crisis (after year 2008).

At the end we can summarize the new theoretical finding according to which spread is the best for predicting of the future GDP growth. We proved that in these selected countries the best spread is a spread of 5-year and 3-month government bonds (we have added all results together and this spread showed up four times in total). The second best spread is spread of 5-year and 1-year bonds (totally three times in our calculations). The results showed that dividing of the sample made a difference between pre-crisis and after-crisis period and it showed the different relationship of spreads and the models. The finding that the best spread is spread of 5-year and 3-month eventually 5-year and 1-year is in contradiction with the theoretical background when almost everybody who predicts the future GDP growth uses a spread of 10-year and 3-month government bonds. This was found out on data of United States of America (from 1970 to 2000). We must say that to collect data of 10-year and 3-month government bonds is the easiest possible way, when you want to use them for calculations, because they are all published in

Bloomberg database, however to get data for 30-year, 20-year, 6-month and 1-month yields are almost impossible in demanded time period and a good quality (there are many blind values from 1Q2000 to 4Q2015).

4. Conclusion

Does the yield curve accurately predict the real economic growth? Answering this seemingly simple question requires a surprising amount of preliminary work. The 10-year - 3-month spread has substantial predictive power and should provide good forecast of real growth four quarters into the future. We showed that the best predictive spreads are the spreads of 5-year and 3-month and 5-year and 1-year government bond yields. The results presented above confirm that these spreads have a significant predictive power for real GDP growth and the behaviour of the models changed during and after the financial crisis. The results show that the dividing of the sample made a difference in usage of the best predictive spread.

The simple yield curve growth forecast should not serve as a replacement for the predictions of companies, which deal with predicting of many economic indicators, it however does provide enough information to serve as a useful check on the more sophisticated forecasts.

Future research could be extended to a wider examination of the best spreads in more countries around the world and especially in European Union. It would be interesting to see if there is any rule which would prove the hypothesis that the spread of 10-year and 3-month bond yields is the best for predicting future GDP growth in the countries of the European Union.

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Quality of Higher Education as a Factor of European Companies' Competitiveness – Case of Poland-Czech Republic Cross-Border

Marcin Jakubiec

University of Bielsko-Biala

Faculty of Management and Transport, Management Department

Ul. Willowa 2

Bielsko-Biala, Poland

e-mail: m.jakubiec@ath.bielsko.pl

Abstract

The paper constitutes the theoretical-empirical study concerning competitiveness of European companies functioning on Polish-Czech Republic cross-border with special attention put on quality of higher education, in the area of European education frameworks. The main purpose of the paper is to present how quality of higher education affects on competences of employees of cross-border companies, which possessing trained staff could develop their resources and be more competitive. In the paper discussed: aspects of cross-border competitiveness, determinants of cross-border competitiveness, elements of higher education (European integrated higher education standards), results of the questionnaire conducted in the framework of the European program, concerning: role of universities in forming of employees' competences and improving of these competences in the aspect of companies' competitiveness. In the questionnaire participated representatives of companies of analyzed cross-border and students of University of Bielsko-Biala (Poland) and Technical University of Ostrava (Czech Republic).

Keywords: *Quality of Education, European Education Frameworks, Cross-border Competitiveness*

JEL Classification: *A20, L11, O10*

1. Introduction

Through many years in the European tradition, citizens, students or employers have not had a lot to say in the area of education. Nowadays, a situation is different. Teaching programs are adjusted to market needs, expectations of young people, future students, so that universities could do their social mission for society, in which their function.

Within the space of higher education changing, stay basic and unchanged questions: How to teach students, that after graduating studies they will find a job on competitive market?, What contents, tools, educative techniques to use, so as to equip students with knowledge, skills and competences required to work? The system of quality education assurance could be helpful to find answers for them. A few years ago this system, in the context of higher education, was treated as something unneeded. Today, successfully, solutions used in companies are transformed to universities. Many management methods, like benchmarking, reengineering, process approach, quality management systems are used by universities. Universities like companies possess mission, vision and defined goals.

Education of highly qualified graduates and responsible citizens, able to meet needs of different domains, offering proper qualifications, including professional teaching, combining levels of knowledge and skills, with simultaneous use of subjects and contents adjusted to present and future social needs, constitute purposes of university. Higher education gives fundamentals for proper employees in companies. Qualified staff could create innovative processes, activities and tasks. Companies could achieve good market position, superiority over competitors, meet customers' requirements thanks to gifted employees.

The article realizes the purpose concerning influence of higher education, through the talented and entrepreneurial graduates, on competitive positions of European companies, based on Poland-Czech Republic cross-border case. The main topics discussed in the following article are as follows: aspects of cross-border competitiveness, determinants of cross-border competitiveness, European integrated higher education standards, results of the questionnaire concerning role of universities in forming of employees' competences and improving of these competences in the aspect of companies' competitiveness. The questionnaire conducted within the project *Program of preparation of specialists-leaders of innovation and modern technologies transfer to companies on Polish-Czech cross-border*. The project was covered by European Regional Development Fund in the framework of Program of Operational Cross-border Cooperation Poland-Czech Republic 2007-2013.

2. European Education Frameworks – Integrated Higher Education Standards

Solid fundamentals for quality education in the Europe constitute European Qualifications Frameworks for Higher Education (in case of Poland, Polish Qualifications Frameworks). They concern description of education process, which universities offer students. Descriptions are formulated as education effects, concerning requirements, which students should meet at the end of education process. Descriptions (thanks to European common system) let to compare diplomas achieved in different universities in whole Europe.

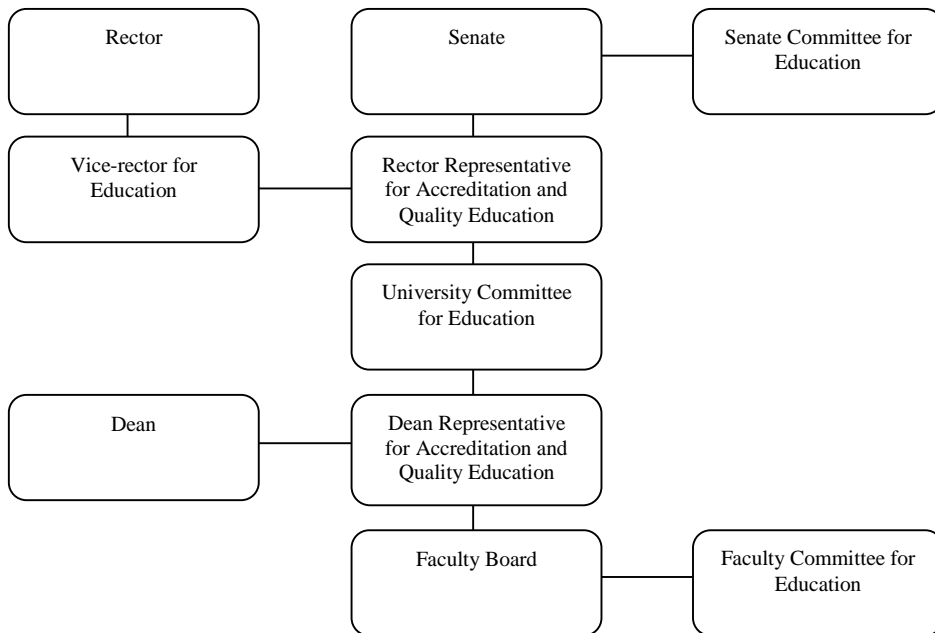
The Europe goes back again to the best academic traditions, it means possibility to achieve knowledge in different academic units. Benefits from students and doctoral students mobility were quickly perceived and analysed. It created the concept of European Area of Higher Education, in which superior role will play prepared commonly rules of higher education system organization, accepted with respect to different programs, institutions and tradition of education in diverse countries. Easiness of travelling let students for mobile studying. The problem occurs: how to assess a level of knowledge in case of receiving institution. Different persons could attend in the same process and achieve diverse education effects. More suitable seems to be a method concerning mentioned effects. If the verification of effects in all universities will be realized according to similar methodology, it will be easier to assess a level of knowledge of applicants. To realization of this condition is required a schedule of education levels, so called "frameworks", to which universities will put descriptions of education effects and common methodology of verification of achieved results (Chmielecka, 2010).

National Education Frameworks departs centrally defined education process. Universities achieve the autonomy to prepare education programs being the most efficient toll to pass knowledge. Inflexible list of courses is not enough answer on market needs and requirements of young people. Universities create new, original courses and define for them intended education effects. On their base education program should be designed, leading students through different paths and its modulus, so as to achieve planed effects the most effective. The most difficult stays at the end, to design and implement the system of quality education

assurance. The system should monitor and correct education effects in education process. The system should identify strong and weak points of education process, because it constitutes basic source of information for external system of quality assessment (Jakubiec, Kurowska-Pysz, 2013; Bobakova and Chylkova, 2014).

University system of education quality assurance in a toll in hands of universities’ managers to guarantee proper development of education. Figure 1 presents classic diagram of quality education assurance system, based on solution at the University of Bielsko-Biala.

Figure 1: University of Bielsko-Biala Diagram of Quality Education Assurance System



Source: (Senate Resolution, 2007)

Main purposes of University of Bielsko-Biala quality education assurance system are as follows:

1. Monitoring and improving quality education.
2. Improving of teaching meaning.
3. Informing society, young people, high schools pupils, candidates, students, doctoral students, employers, external units, local and regional governments, teachers and all interested bodies about education quality at the University of Bielsko-Biala.
4. Creating programs and procedures assessing methods and conditions of education, letting University of Bielsko-Biala towards presence and vivid activity in European Area of Higher Education.

Functioning at the University of Bielsko-Biala quality education assurance system, through its records and directions, leads to create culture of education quality. Quality culture is one step further than management. It builds university union, concentrated around set university values, integrated in acting, taking innovative challenges, characteristic for present entrepreneurship.

3. Cross-Border Companies' Competitiveness

Experiences of high developed countries point out, that competition being fundamental link of market mechanism, is a value creating region's economy. Competition processes in region lead to new region structuring. New production abilities, new businesses, new knowledge and new ways of communication between business and territorial authorities appear, a climate of innovativeness creates. Participants of regional markets learn permanently ways of competitive behaviours, techniques of accommodation to diverse changes and restricting or improving efforts for better results. Changeability and continuity of new situations appearing constitute important element of power determining competitive processes (Strużycki, 2011).

The most important determinants of modern competition are as follows (Kasiewicz and Rogowski and Kicińska, 2006):

- mass individualization, meaning changing over from big scale production of standardized products for unknown customers to organization of production on big scale, but respecting demand and needs of individual customers,
- offering of value instead exact products and services,
- directing of company's purpose on growth of value for shareholders and stakeholders,
- using of capital market,
- company's activity dominated by introducing of new technologies, which are main factor of development,
- growing role of soft determinants and immaterial assets in success's achieving,
- improving of competition and reducing of entering barriers onto the market by use of the Internet.

Taking under consideration above mentioned determinants, a position of competing companies on regional market depends on (Strużycki, 2011):

- use of knowledge and innovation of research units, including universities,
- potential of entrepreneurship and creativeness of managers and employees,
- control of marketing knowledge letting in proper time meet customers' needs, react on their market behaviours, use of promotion instruments properly.

According to research, constituting the fundament of research part of the article and realized within the mentioned European project, following barriers in relations of universities with companies on Polish-Czech cross-border exist (Compare, Gajdová and Tuleja, 2014):

- lack of cooperation tradition of companies and universities (R+D units),
- lack of capital covering cooperation,
- lack of proper offer, satisfying a company,
- long-time decisive process and bureaucracy at universities,
- small knowledge of companies about R+D offer of universities,
- lack of common understanding and encouragements to cooperation,
- quite high costs of cooperation for companies,
- poor research infrastructure at universities,
- scientists do not know real needs of companies in area of research,
- not enough commercial possibilities to use realized research,
- low trust to conducted researches,
- general risk of cooperation.

Concluding the following point of the paper, it is worth to mention main barriers stopping improving of competitiveness in regional scale (Jakubiec and Kurowska-Pysz, 2013):

- limited public money for territorial government units,
- complicated and bureaucratic procedures of public orders,
- difficulties in defining of competences and responsibilities of institutions responsible for local and regional development,
- regional differentiation and disproportion of growth,
- no acceptance for local governments' activities and problems with communication among local societies,
- improper decisions of managers of local governments and blockade of their change,
- limited access to information.

4. Selected Results of Conducted Research – Influence of Professional Education on Companies' Competitiveness (Meaning of European Integrated Education Area)

The issues discussed in the previous point highlight key role of well-educated staff in achieving by companies' proper level of innovation in acting and competitive superiority over other companies on the market. Many problems mentioned above could be solved by people, talented employees, possessing skills gained during education process. The following point of the paper concerns the role of universities in creating employees' competences and improving these competences in the context of companies' competitiveness.

According to the acknowledgements the research was realized within the project *Program of preparation of specialists-leaders of innovation and modern technologies transfer to companies on Polish-Czech cross-border*, in which a group of 60 students was engaged, representing University of Bielsko-Biala and Technical University of Ostrava. Students represented technical courses and last year of studies.

The research was helpful to find answers for following questions:

- what kind of education offer is required by students from both universities?
- how to educate students according to requirements of Polish-Czech cross-border companies?
- what from the future graduates require employers of analysed cross-border?

Results of the research are the starting point to further, deeper analysis of trends on the cross-border market, to define education conditions at analysed universities to teach specialists for technology and innovation transfer to cross-border companies.

The table 1 shows selected results and comments of analysed research.

Properly educated and prepared to work employees are crucial resource of the company. They constitute about its knowledge, potential and ability to compete. Creating of intellectual capital is possible when the company invest in and motivate staff. Preparation of future employees is a task for university. Quality of professional education creates present and future social and economic position of region, including cross-border area and companies acting in it.

Table 1: Influence of Professional Education on Companies' Competitiveness – Selected Results of the Research

Criteria	Description
Role of universities in creating employees' competences	Course 68% of the questioned said they are satisfied from studying course. Only 5% of them expressed dissatisfaction. The Universities meet their requirements in this area. Important reasons influencing choice of the course are as follows: interests, finding a good job, need of knowledge exceeding, realized modulus during the course.
	Knowledge More than 80% of the questioned consider they will use knowledge and competences gained during studies. This information means that universities realize proper education program. Moreover, 60% of them assess the level of achieved knowledge as over average and 13% as high.
	Professional career For 90% of the analysed students professional career is important. Future employers should guarantee good work conditions, in return employees will improve their development, feeling they are fulfilled at work.
	Market Universities prepare students to enter the market in a good way, according to 82% of the questioned. Students answered that relevant for them are: practical lectures, high level of education, possibility to use gained knowledge and skills, resulting better orientation in the future.
	Work in international team Questioned students want to work in international team, 32% marked this answer. Majority of them is not decided, 52%. Students plan their professional career and in a few years they want to work on better position. This is synonymous with development of the company.
	Factors of professional success According to the questioned important factors of professional success are as follows (percent of answers): diligence, ability to solve problems, stress resistance, strong personality, creativeness, elasticity in acting, professional contacts, regularity, proper education background, personal skills, continuous training and independence in acting. The questioned consider following forms of professional experience achieving as preferred: internships, part-time contract work, holiday work offers, programs travel&work, Erasmus programs and voluntary service.
Improving of employees' competences in the context of companies' competitiveness	Professional competences development Universities could play relevant role in improving of employees' competences in companies, which possessing well-educated and trained staff could be more competitive. Ways of improving concern development of professional qualifications and preparation to enter the market. 67% of the questioned want to exceed their professional competences. Ways of this exceeding according to the analysed students are following: language course, post-graduates studies, Ph.D. studies, different trainings and so on.
	How to prepare students to enter the market The questioned pointed out following ways of preparation graduates to enter the market: more internships, meetings with potential employers, topics of thesis adjusted to local market expectations, trainings during studies, proposal of lecture concerning this issue.
	Characteristics of future employer For analysed students following factors concerning a choice of future employer are essential: personal development, full-time contract, possibility of further education, balance between professional and private work, a way of company management, equal chances for everybody to develop, company's social responsibility, respect for employees, tasks and others.

Source: personal elaboration based on the research's results.

5. Conclusion

In the paper, the author made an effort to show following chain of events: role of universities in creating proper knowledge, skills and competences of future employees for companies, well-educated employees using their gained knowledge and competences to create new, innovative concepts, ideas, activities, cause that companies are more competitive on the market, achieve better economic indicators and meet expectations of their customers. All of these concerns were placed into aspects of European integrated education frameworks and an area of Polish-Czech cross-border.

The results of the conducted research highlight importance of universities in creating future employees' competences. The questioned students were asked to assess realized courses, lectures, gained knowledge and other aspects of practical education. Analysed universities received positive answers in these areas. Universities should also prepare future employees to plan their professional careers, in the aspect of cross-border area to work in international teams and to enter onto the market. During results discussed also development of professional competences and relevant characteristics of future employers.

Nowadays, development of companies is determined by immaterial resources. Human capital, intellectual capital, knowledge constitute examples of these resources. Thanks to them innovative activities are taken under consideration in companies. Innovation means new open. Open for market, customers, new ways of cooperation and so on. It leads to competitive position of the company. Universities (analysed ones) could attend in this process of innovation creating. Courses open for students' needs, passing on practical competences and proper level of knowledge build future employees responsible for development of companies, analysed region and cross-border.

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Banking Union and the Stability of the Financial System in EU

Eva Jančíková¹, Janka Pásztorová²

University of Economics in Bratislava

Faculty of International Relations¹, Faculty of Commerce²

Dolnozemská cesta 1

Bratislava, Slovakia

e-mail: eva.jancikova@euba.sk, pasztoro@euba.sk

Abstract

The stability of the financial system plays an important role in the development of real economies and it is the precondition for growth and prosperity. We could learn from the financial crisis that for improvement of stability and resilience of the banking system we need stricter regulations and better international supervision coordination in the European banking system. Within the Eurozone the start of Banking Union in 2014 launched two powerful European organizations – the Single Supervision Mechanism and Single Resolution Mechanism. All financial actors in EU are now bound by single supervisory rule book, monitored by the European Banking Authority. The aim of this paper is to define the main pillars of the Banking union and their impact on the European banking industry.

Keywords: Banking Union, Supervision, Single Resolution Mechanism, Supervisory Rulebook

JEL Classification: F36, G21, G28

1. Introduction

During 2008, it was evident that economies of EU member states would not be saved from the worst economic and financial crisis since the Great Depression which started soon after the stock market crash in 1929. The crisis hit in a very short time the largest EU economies and destabilized their financial markets, monetary policies and thereafter the overall economic situation. Its main features were the increasing indebtedness of countries, the rising cost of public finances, rising inflation, unregulated movement of capital, speculative investments in risky bonds in unlimited volume, lack of liquidity of banks, rising indebtedness of the population, rapidly falling demand for products and services, the slowdown in economic growth and rising unemployment.

Epstein and Rhodes examine the political dynamics behind Europe's new banking union in two stages. First they examine the accretion of political power to two European institutions – the European Commission and the ECB – during the financial crisis, emphasizing the ways in which the ECB (especially under Mario Draghi) altered the relationship between principals and agents in the European institutional architecture. Second, it process-traces the policy conflicts and compromises that led to a Europeanisation and centralization of bank supervision, recapitalization, recovery and resolution in a remarkably short two years – a transfer in sovereignty to the supranational level equal to that involved in the creation of Economic and Monetary Union. (Epstein, Rhodes, 2016).

The Britain approach to such a transformational change in the banking policy is represented by Rynck who identifies the supranational ECB as an effective entrepreneur which also played an active role in political bargaining. (Rynck, 2016).

Spendzharova is focusing on the question, what is the optimal scope of regulatory harmonization in European financial sector governance? She is arguing that the levels of foreign ownership and domestic bank internationalization are important determinants of the extent to which governments are prepared to endorse European solutions in banking supervision or prefer national ones. (Spendzharova, 2014)

The EU legal and institutional structure of the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM) of the European Banking Union (EBU) is analyzed by Kern. He examines the legal basis of the SSM in the Lisbon Treaty and considers whether the ECB's strong form of independence is appropriate for its role as a bank supervisor, and whether its limited powers to take macro-prudential regulatory and supervisory measures are adequate to ensure banking sector stability. (Kern, 2015).

The aim of this paper is to define the main pillars of the Banking Union and their impact on the European banking industry.

2. The Financial Crisis in the EMU and the Response of EU

European Monetary Union is based on the transfer of competencies in monetary policy from the participating Member States to the European Central Bank and on the preservation of the sovereignty of the Member States in economic and fiscal matters.

EMU worked in the first ten years very successfully and managed to fulfill its main objective, which was to maintain stable monetary policy with inflation around 2%, with a stable exchange rate of the euro against other key world currencies, as well as the positive development of GDP. The global economic and financial crisis, which led then to the euro area debt crisis revealed weaknesses of EMU. EMU experts were aware of the hazards related to the asymmetry of the model in the monetary but also in the economic field and therefore to ensure the stability required by the euro area strict adherence to fiscal discipline, which was agreed already in the Maastricht Treaty in the excessive deficit (Excessive Deficit Procedure, EDP) the limit was set at an annual level of the budget deficit (3% of GDP) and debt (60% GDP). To ensure fiscal discipline of States after joining the Monetary Union, in 1997 the Stability of Growth Pact (SGP) was adopted and the euro area countries committed to stronger fiscal discipline in national budgets to be able to approach the equilibrium or the surplus (Lipková, 2012).

National responsibilities in economic and monetary policies allow Member States to increase government spending, and hence to create budget deficits and national debts, which inevitably require additional government loans. The pressure on euro area countries fiscal discipline ensures to prohibit the ECB or national central banks from providing governments with any credit or directly buy their debt and also take over the financial commitments of other governments. The SGP was at the existing imbalances between countries an important requirement for the ECB to maintain price and financial stability and to ensure healthy public finance.

We can also notice that the decrease of economic growth hit also the euro area largest economies (Germany and France). In most euro area countries increases in government spending and revenues shortfalls led to a further rise in the government deficit. ECB urged states to reduce their deficits and respect the stability and growth pact.

The most vulnerable economies (e.g. Greece, Ireland and Portugal) could no longer sustain their growing debts and declining in terms of GDP and face the financial crisis. Investors on

financial markets lost confidence in the ability of these countries to repay obligations and this resulted in an increase of interest rates on government bonds to two-digit numbers and the inability of these countries to borrow on financial markets by selling new bonds. Banks began to have problems with liquidity and subsequently started to restrict lending to corporate customers and individuals, which then led to the so-called credit crisis. To overcome the crisis it was necessary to stabilize the situation and tightening compliance deficit in public finances and carry out the necessary structural reforms needed to restore confidence and competitiveness. Euro area Member States have set up the European Stability Mechanism, which provided crucial loans to countries whose public debt and related economic parameters have reached critical level (Greece, Ireland, Portugal and Cyprus)(European Commission [online], 2014).

The European Central Bank and the national central banks of the euro area relatively quickly identified the critical development of the financial indicators in the monetary union, but rules and responsibilities were limited. The ECB together with the EU institutions and national governments use all the tools available to try and alleviate the impact of the financial and later economic crisis in the euro area by defining recommendations and measures in the field of monetary and financial policy in the EMU and the Member States. Individual national governments also prepared different set of measures to combat the financial and economic crisis.

In the monetary and financial policy, the measures of the ECB concerned especially financial market operations through decreasing of interest rates, affecting liquidity, creating a rescue package to help vulnerable economies and setting rules for financial discipline to stabilize public debt and restore confidence in the financial market. Furthermore, it is necessary to improve the cooperation of national governments and ECB to ensure consistent liquidity management and banking system supervision. EC has also created a framework to define measures in the area of taxes on financial transactions, greater competencies to the ECB, euro bonds to finance large projects or reconsider the unused structural funds (Kostelný, 2014).

The ECB, together with the European Commission and Council of Ministers implemented three Instruments which are designed to provide to EMU protection, stability and rescue if necessary: European Financial Stability Facility (EFSF), European Sovereign Bond Protection Facility (ESBPF) and European Financial Stabilization Mechanism (EFSM). In addition, the European authorities have introduced a number of measures such as the European semester (since 2010), which aims to coordinate economic policies between the EU and national governments valid for all Member States. Then there is stability and growth pact to coordinate economic and budgetary policies and surveillance of budgetary discipline and avoiding excessive deficits and debt. For the EMU, it is also monitoring national budgets and penalties for non-compliance with specified parameters. Another element is the fiscal compact, which was established by the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union in order to keep national budgets in balance. This agreement is valid for all EU countries (except Croatia and Great Britain). Last instrument is the European Globalization Adjustment Fund (EGF) which provides support for people losing their jobs as the result of major structural changes in world trade patterns due to globalization, e.g. when a large company shuts down or production is moved outside the EU, or as a result of the global economic and financial crisis (European Commission [online], 2016).

3. Banking Union and its Impact on Banking Sector

Since the crisis has started in 2008, the EC has proposed 28 new rules to better regulate, supervise, and govern the financial sector so that in future taxpayers will not foot the bill when a bank makes mistakes. That is why, in June 2012, Heads of State and Government agreed to create a banking union, completing the economic and monetary union, and allowing for centralized application of EU-wide rules for banks in the euro area (and any non-euro Member States that would want to join). The new regulatory framework with common rules for banks in all 28 Member States, set out in a single rulebook, is the foundation of the banking union. This rulebook contains common rules to prevent bank crises, to set out the common framework to manage the process, if banks do end up in difficulties. Common rules will also ensure that all savers in EU have the same guarantee for their deposits up to €100.000 (per depositor/per bank). The banking union ensured the common implementation of those rules in the euro area. From November 2014 the ECB is the supervisor of all banks in the euro area in the framework of the Single Supervisory Mechanism (European Commission [online], 2014b).

In 2013 in EU Member States stress tests and comprehensive evaluation of selected commercial banks were carried out. Based on the results, published by the ECB in the event of another crisis problems could appear with almost twenty-five banks. The testing concerned 123 major banking groups in Europe and the results helped to identify possible problems in banking sector. The testing carried out under the supervision of the European Banking Authority (EBA) has shown that up to 25 banking groups could have problems in future. Twelve of them had to take measures to improve their positions. According to EBA calculations the missing capital represents the amount of € 24,6 bn. Banks in Slovakia are among the most stable in the EU (Euroactiv [online], 2014).

At the end of 2013 the biggest problems were found in Italy, Cyprus and Greece. Nine Italian bank didn't reach the European average. Most of these Italian banks managed to settle the problems but two of them needed additional capital. In the case of Monte dei Paschi it was about € 2,1 bn. The testing showed problems also in two Belgian and two Slovenian Banks and some difficulties were noticed in Austria, France and Ireland. In the case of crisis also German Munich Hypotheken could have problems. In Slovakia three banks were investigated: Slovenská sporiteľňa, Všeobecná úverová banka a Tatra banka. Results confirmed that all tested Slovak banks had an indicator on equity significantly over the benchmark of 8%, very good capital position and long-term stability (Euroactiv, 2014).

Banking Union represents strong interference in the sovereignty of the banking sector in Member States and that was the reason for very strong opposition either by national central banks or by commercial banks. Germany in spite of some doubts and criticism from Monopoly Committee and major commercial banks in the country decided to implement the rules a year before the original plan. The main cause of concern of commercial banks was connected with threats from the possible worsening of their position in the competition.

From November 2014 the ECB has taken over the obligation of implementation of the single banking supervision in the euro area. The Single Supervisory Mechanism (SSM) is based in Frankfurt am Main, separately from the seat of the ECB. Its aim is to anticipate and quickly resolve crises in the banking sector. SSM will follow the 129 largest banking institutions, which together represent more than 80% of banking assets in the region. Number of monitored banks will increase, if the other EU countries not using the euro, decide to join the euro area. The rest of banks with smaller strategic importance will remain subject to supervision by national regulators; the ECB reserves the right to take control of them in case of problems.

According to Lombardi and Moschella the creation of SSM does not simply reflect the material interest of governments and domestic financial firms, but that regulators' positions were also significantly affected by the institutional environment in which they operated.

In the Table 1 we present the numbers of credit institutions in Member States and the share of credit institutions supervised by ECB.

Table 1: The Share of Credit Institutions Supervised by ECB

	NUMBER OF CREDIT INSTITUTIONS	NUMBER OF CREDIT INSTITUTIONS SUPERVISED BY ECB	SHARE
BELGIUM	98	7	0,0714
GERMANY	1768	22	0,0124
ESTONIA	36	2	0,0556
IRELAD	407	4	0,0098
GREECE	40	4	0,1000
SPAIN	214	14	0,0654
FRANCE	463	13	0,0281
ITALY	647	15	0,0232
CYPRUS	55	4	0,7272
LATVIA	61	3	0,0492
LITHUANIA	61	3	0,0492
LUXEMBURG	89	6	0,6742
MALTA	28	3	0,1071
NETHERLAND	102	7	0,0686
AUSTRIA	678	8	0,0118
PORTUGAL	148	4	0,0270
SLOVENIA	21	3	0,1428
SLOVAKIA	27	3	0,1111
FINLAND	278	4	0,0144
	5221	129	0,0247

Source: Author's calculations (ECB [online], 2016) and (Banking Supervision [online], 2015)

The ECB annually assesses credit institutions to make a List of Supervised Entities where those supervised by ECB can be found and those which remain under the supervision of national central banks.

In table 2 we analyzed the List according to Ground for Significance:

1. *Size of Total Assets* – credit institutions are divided in to ten groups and this is the most important criterion including 101 banks i.e. 78 % from all supervised banks in 12 countries. Analyzing this criterion we can also find out that in 7 countries don't have any banks with size of total assets over 30 bn. (Estonia, Cyprus, Latvia, Lithuania, Malta, Slovenia and Slovakia).
2. *Significant Cross Border Assets* – 3 credit institutions from 2 countries (Belgium, Austria).
3. *Total Assets above 20 % of GDP* – 13 credit institutions from 6 countries (Estonia, Cyprus, Latvia, Luxemburg, Malta and Slovenia).

4. *Among the Three Largest Credit Institutions in the Member State* – 12 credit institutions from 6 countries (Latvia, Lithuania, Malta, Slovakia, Slovenia and Finland)

Table 2: Ground for Significance

B E	D E	E E	I E	G R	E S	F R	I T	C Y	L V	L T	L U	M T	N L	A T	P T	S I	S K	F I
1. SIZE OF TOTAL ASSETS (in bn)																		
6	2		4	4	1	1	1				3		7	6	4			3
2. SIGNIFICANT CROSS-BORDER ASSETS																		
1														2				
3. TOTAL ASSETS ABOVE 20 % OF GDP																		
		2						4	1		3	2					1	
4. AMONG THE THREE LARGEST CREDIT INSTITUTIONS IN THE MEMBER STATE																		
									2	3		1				2	3	1
7	2	2	4	4	1	1	1	4	3	3	6	3	7	8	4	3	3	4

Source: Author's calculations (Banking Supervision, 2015)

Number of credit institutions supervised by ECB in member states can be influenced by banks which are connected with Bank group on the List. In Slovakia there are three banks included in the list by being one of the largest banks in the country: Slovenská sporiteľňa, Tatra banka and Všeobecná úverová banka. Moreover, we can find under ECB supervised banks also Československá obchodná banka as a member of KBC Group.

The ECB has adopted five high-level priorities to guide its supervision in 2016. The aim is to ensure that directly supervised banks address key risks effectively. The priorities are: business model and profitability risk, credit risk, capital adequacy, risk governance and data quality and liquidity. (Banking Supervision, 2015).

In November 2015 the European Commission presented specific steps for creating a deposit protection scheme. There were concerns caused about the Deposit Guarantee Scheme, especially in Germany by fears that funds built to protect German savers will be used to guarantee deposits in other, less disciplined countries. A similar approach is noticed in several other Member States.

DGS will consist of two components. On the one hand, there will be the already existing national deposit guarantee schemes, and, on the other hand, subsequently the deposit protection system (EDIS). The whole process starts with filling of national deposit guarantee funds which banks themselves implement their annual contributions to reach 0,8% of the value of protected deposits. Banks will then also contribute to EDIS, and contribution will depend on the riskiness of a particular bank. In Slovakia, bank deposits are institutionally covered by the Deposit Protection Fund. In 2014 the bank contribution was 0,12% of the value of protected deposits and exceeded €28 bn. Protected deposits represent more than 57% of all bank deposits in Slovakia (Euroactiv [online], 2015).

4. Conclusion

The representatives of European Institutions and financial experts are aware that EU needs deeper economic and monetary integration. The creation of the Banking Union is one of the most important steps on this way and allows protecting the financial sector in Member States.

The banking sector is the key element in the functioning of the market economy. Currently, we can see the creation of global banking institutions that operate in several countries and it is quite difficult to carry out the supervision of these institutions for the national regulator. In addition, problems in commercial banks have an impact on the functioning of the entire economy, not just in the country where the bank is located. The financial crisis in the euro area showed clearly that bank regulation is not sufficient.

Last year the Banking Union started a very important issue: the cooperation with national regulators and proper assessment of credit institutions supervised by ECB and national central banks. This process is a very complexed one because banking sectors are so different in Member States and to find the proper way of supervision represents great challenge.

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Eurozone Housekeeping – Stock and Flow Perspective

Jan Jonáš, Ondřej Komínek

Masaryk University

Faculty of Economics and Administration, Department of Economics

Lipová 41a,

Brno, Czech Republic

e-mail: jonas@econ.muni.cz, calton@mail.muni.cz

Abstract

The questions of European integration have been influenced by various aspects of debt and deficit in recent years. Economist and policy makers discuss mostly the so called twin deficits consisting of government budgeted and imbalances in balance of payment. In this paper we take a perspective of national accounts to investigate the question of macroeconomic imbalances connected with the European sovereign debt crisis. More specifically we utilize the methodology of sectoral balances lying behind Flow of Funds statistics and Post Keynesian macroeconomic analysis. We use a simplified, highly consolidated accounting model of an economy consisting of three sectors i.e. domestic private sector of households and firms, government sector and foreigner sector. Since every debtor has to have a creditor by definition, the interconnections among sectoral financial balances get interesting views and implications for Eurozone's housekeeping, like deficits at periphery and surpluses at core countries or limitations on private sector balances by various fiscal constraints.

Keywords: *Stock Flow Consistent Models, Sectoral Balances, State Deficit, Trade Deficit*

JEL Classification: *E12, C69, N14*

1. Introduction

Generally speaking, the Eurozone crisis is mainly about finance, debts and credits. The discussion turns from the stability and fragility of large balances of banking and other financial intermediaries sector, the indebtedness of government sectors in some countries (Reichlin, 2014), the wrong setup of currency union (DeGrauwe, 2013, Kelton, 2009), through the indebtedness of households to finish with international relations in the questions of mismatches on balance of payments among various states. With these issues are naturally connected the questions of wealth redistribution and economic growth. All in all we could say that money matters and Europe needs to settle the question of debts and credits that is interlocking its members on many levels.

The debt and credit perspective will be the main view point of the present paper. Its aim is to capture debt/credit interdependencies among selected sectors of the Eurozone member states, to stylize their concrete positions and to infer some economic and policy implications.

We will look at the Eurozone as a larger system of interdependent units and explore their financial conditions and constraints. In order to examine interdependencies among units we make two kinds of breakdowns. First we split the economy into three sectors, i.e. domestic private sector constituted of households and firms (financial as well as non-financial), government sector (general government and central bank) and rest of the world. Then we

describe logical and mathematical relations among them. The second and correlative division of Eurozone is into individual member countries. We shortly examine the sectoral balances of selected member states and their options for growth or for correction of its respective imbalances. Finally, we shortly examine what does budgetary criteria like that imposed by Maastricht Treaty or Stability and Growth Pact means for individual states and sectors.

In economic theory the logic of interdependencies among parts gave rise to the so call national accounting models and we will utilize the methodology of stock flow consistent (SFC) models to capture them. More concretely we draw upon the work on sectoral balances by W. Godley and Modern Money Theory approach as represented mainly by R. Wray (2015). To monitor the concrete positions in time and place of individual sectors and member countries we will use the data from The European System of National and Regional Accounts (ESA 2010).

2. Sectoral Accounts, Theoretical Perspective

Macroeconomics can be divided into two broad branches. The mainstream one is characterized by the so called equilibrium models, like for example Dynamic Stochastic General Equilibrium one. Their characteristic is that they concentrate primarily on the real sector of the economy while monetary and financial sides are rather neglected. The second stream on the other hand does not focus on equilibrium but rather on processes. These models use mainly accounting approach and have some advantage for modelling economic crisis mainly in the fact that they naturally encompass the financial side of the economy. Their usage is more common in evaluating vulnerabilities in financial variables development, as clarified for example by IMF report by Allen et. al (2002). The accounting approach is considered also to be successful in forecasting the financial crisis of 2007-2008, see (Bezemer, 2010).

On the grounds of accounting principles, there are build the so called stock flow consistent models (SFC) in the last ten years, as represented mainly by Godley, Lavoie (2007). A SFC model is macroeconomic approach which models stocks and flows of fund within economy. These models divide the economy into various sectors, according to relevance and researcher interests, and then study the interdependencies among them.

One of the simplest but very informative SFC model based on accounting identities has been widely elaborated by Wray (2015). It divides the economy into three sectors consisting of domestic households and financial as well as nonfinancial firms (domestic private sector), government sector and foreign sector or rest of the world. Its underlying logic is quite simple, resting on two general assumptions of national accounting. These are that every borrower has to have by necessity its debtor and that every spending must be equal to someone's income. This also holds on the aggregate level when the three sectors are combined and thus aggregate spending is always equal to aggregate income. Furthermore, the theory claims as follows from the accounting identities that if one sector of economy is in surplus there must be at least one sector in deficit.

This gives interesting and important implications for economic policy since it allows us to understand financial balances on aggregate level and explains the consequences of fiscal and monetary policy over private sector indebtedness. For example, it implies that budget deficit is always accompanied of surplus either in private sector or in foreign sector. Notice that this implication is in contradiction with loanable fund theory with its general claim that budget deficits will crowd out private savings. By focusing not only on real balances as loanable fund theory but on the financial balances as well, Wray (2015) argues that every government deficit covered up by issued bonds adds financial wealth to the private sector or to the foreign sector.

2.1 Mathematical Expression

The sectoral accounting approach can be expressed by mathematical derivation taken from standard economic textbook equation of GDP and aggregate expenditure in an open economy:

$$Y = C + I + G + (X - M) \quad (1)$$

where Y is GDP (income), C is consumption spending, I is investment spending, G is government spending, X is exports and M is imports (so $X - M = \text{net exports}$).

From another perspective we may account the national income (Y) by its uses to which income may be allocated by households and then we get:

$$Y = C + S + T \quad (2)$$

where additional variables S is total saving and T is total taxation

The both equations can be viewed only as different expression of income, thus we can rewrite them and show that these equations should be equal by definition:

$$C + S + T = Y = C + I + G + (X - M) \quad (3)$$

Using mathematical adjustments, we can drop the consumption (C) from the equation thus to get new equation:

$$S + T = I + G + (X - M) \quad (4)$$

By arranging the variables, we are allowed to convert this expression into familiar sectoral balances accounting relations:

$$(S - I) = (G - T) + (X - M) \quad (5)$$

The result is the accounting identity for the three sectoral balances – private domestic ($S - I$), government budget ($G - T$) and external or foreign ($X - M$). In other words, the sectoral balances equation may be interpreted as a balance between private domestic sector and government sector plus external sector. Again by rearranging this equation we can get:

$$(G - T) + (I - S) + (X - M) = 0 \quad (6)$$

This final formula is a matter of arithmetical reformulation of accounting identity and therefore it must hold by definition. The useful point of it is that when there is a difference between uses and sources of income for one sector, there have to be by necessity the difference between uses and sources of at least one other sector. This difference is covered by financial assets and liabilities. So for example in the case of external sector being in balance (current account is in balance and hence there is no change in net financial positions with foreigners) then it must hold that government deficit is equal to private saving. In this case government would issue a financial liability, say bond or money, and private sector becomes its holder. For more details, see Mitchell (2016) or Ritter (1963).

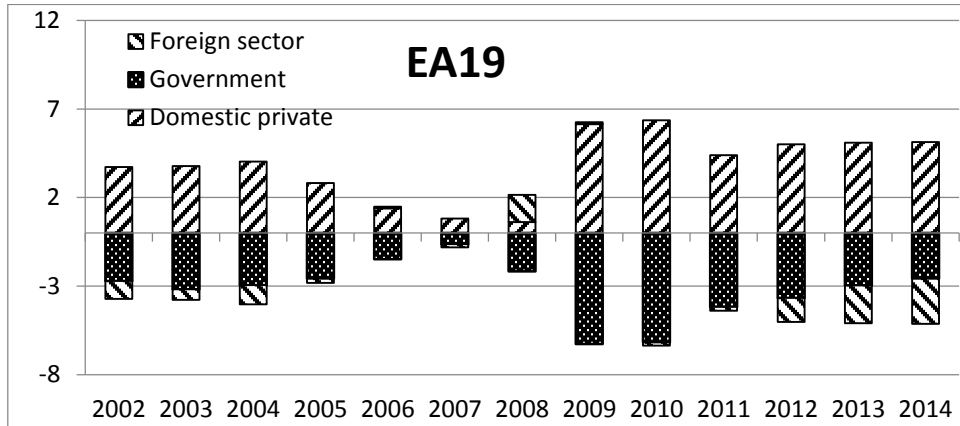
3. Eurozone Countries Housekeeping

In the present section we will use the above specified SFC model to identify sectoral balances and their interrelations for selected Eurozone members and for analysing some of their economic implications. In what follows we hold a Keynesian assumption that when private sector went into deficits than the growth prospects of market economy are unsustainable in the longer term, see for example (Godley 1999, Godley 2000).

The figures presented below, that quantify the net lending and net borrowing positions of selected economic sectors, are based on the so called flow of funds account or financial account data. Financial account data extends national accounting by financial side of economy. The

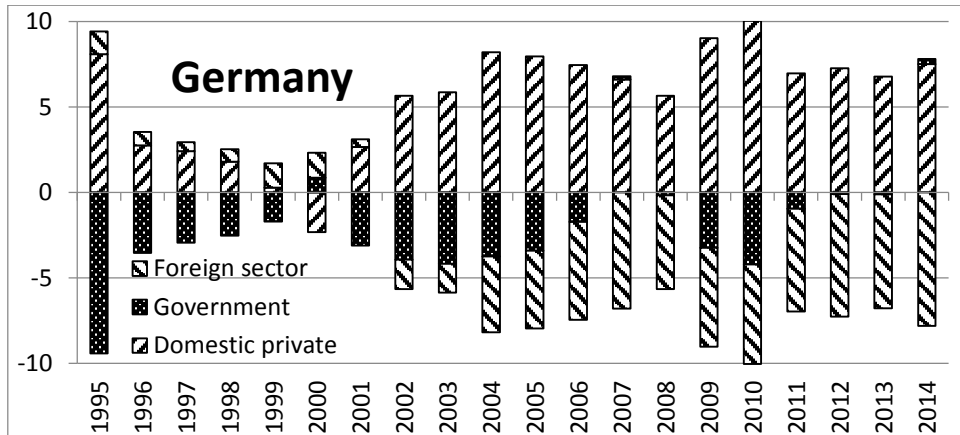
flow of funds accounts is useful in documenting general economic trends, for example, the growth of debt for each sector, changes in the sources of credit to households, businesses, and governments. The European Union started to release them in 2002 (Bê Duc, 2009).

Figure 1: Sectoral Balances of Eurozone and Selected Eurozone Members as % of GDP



Source: <http://ec.europa.eu/eurostat/web/sector-accounts/data/database>, author’s calculations

Figure 2: Sectoral Balances of Germany as % of GDP

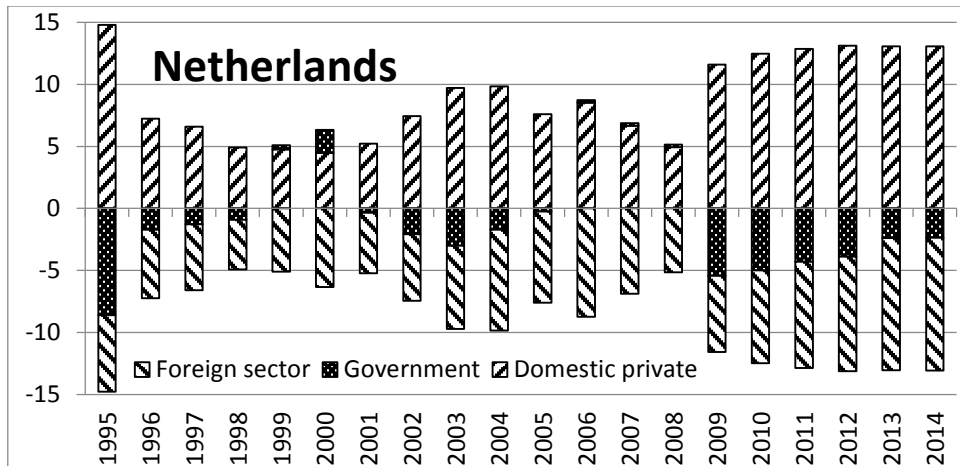


Source: <http://ec.europa.eu/eurostat/web/sector-accounts/data/database>, author’s calculations

The figure 1 shows that on the aggregate level Eurozone members manage public sector deficits year to year that allows domestic private sector to save financial claims against governments. As far as balance of payment is concerned EA19 was primarily in balance with rest of the world. However, since sovereign debt crisis EA19 incurs trade surpluses. This help to ensure reduced government sector indebtedness while preserving financial surpluses of households by accumulating financial claims on foreigners. We could raise a speculative question whether the effort to lower government deficits before crisis contribute to pressures on household financial wealth and to crisis.

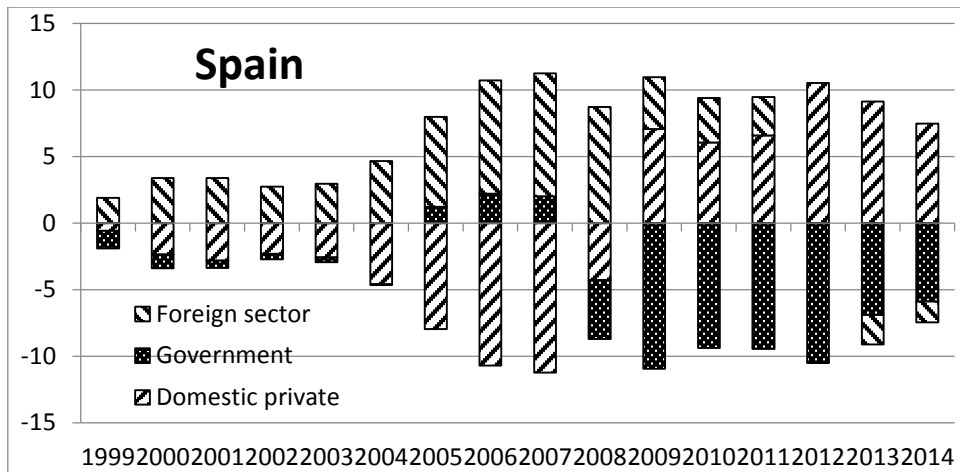
Next two figures concern two countries from the so called core of Eurozone, namely Germany and Netherlands. Both of these economies show continuing private sector surpluses that are allowed by accumulating financial wealth against foreign sector. In this situation public sector need not to create budget deficits in order to ensure private sector not going into debt. In this situation export is an important source of aggregate demand which confirms overall orientation of these two selected countries that are traditional net exporters at least in recent years. Notice that net export success of Germany started after the introduction of Euro currency.

Figure 3: Sectoral Balances of Netherlands as % of GDP

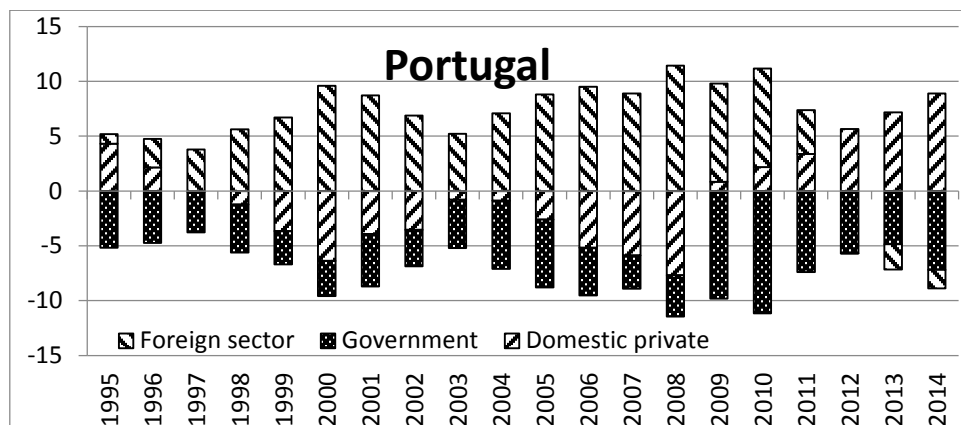


Source: <http://ec.europa.eu/eurostat/web/sector-accounts/data/database>, author's calculations

Figure 4: Sectoral Balances of Spain as % of GDP



Source: <http://ec.europa.eu/eurostat/web/sector-accounts/data/database>, author's calculations

Figure 5: Sectoral Balances of Portugal as % of GDP

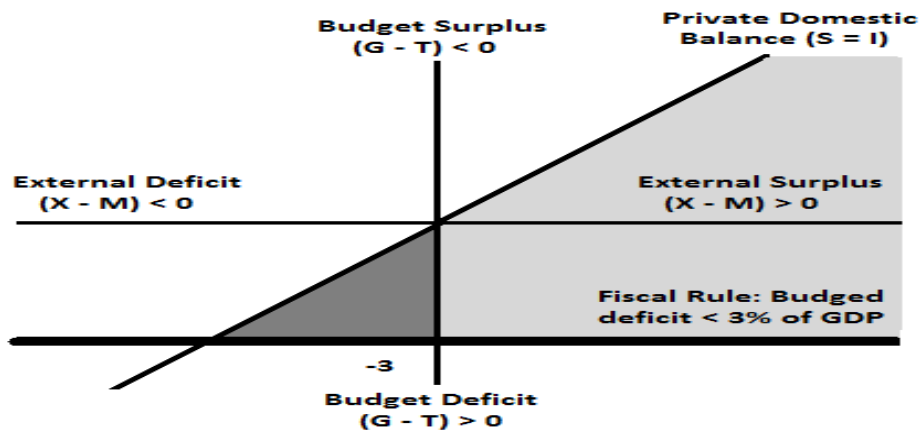
Source: <http://ec.europa.eu/eurostat/web/sector-accounts/data/database>, author's calculations

The last two figures show sectoral balances for two countries of so called periphery, Spain and Portugal (we do not select Greece because of data availability). The clear difference is that these countries recorded negative current account before 2007 and hence were issuing financial debts to remunerate importers. This means that at least one domestic sector has to have its net financial balance negative. In many years this holds for both government as well as private sector. In terms of aggregate demand, the growth before economic crisis was not pulled up by exports but by household or government consumption on debt. Notice that in case of Spain the figure illustrates the negative balance for private sector while the public sector was rather fiscally prudent, incurred even modest surpluses. The figures also show typical reaction to recession when (indebted) households start to save more than consume and government automatically goes into deficits.

4. Divorcing Currency from a Country and Fiscal Constraints

Theoretical analysis of interrelations among sectoral balances provided above is also useful for implications concerning various fiscal policy constraints. Since Eurozone member countries agreed to have a common currency issued by independent supranational central bank they in effect got into situation of issuing debts in currencies that they have not under their control. In this position they are similar to less developed nations that need to accommodate their deficits by issuing their bonds in foreign currency denominations. This means that individual member states should be careful about their Euro reserves to avoid insolvency. From this perspective it is therefore necessary to ensure their prudence by various fiscal rules like the ones imposed by Stability and Growth Pact or Fiscal Compact. However, this not only means increasing interest rates as shows De Grauwe and Ji (2013) but as pointed out by Godley (1992) it dangerously limits fiscal space to cope with economic crisis (and related phenomena such as unemployment).

Looking through the lenses of the previous analysis of sectoral balance sheets, we will shortly illustrate what possibilities are offered to individual sectors under the fiscal requirement of having a balanced budget not exceeding 3.0% of the GDP. This is illustrated by the Figure 2 that contains three axis representing balance sheet positions for each sector. The fact that the government is forced to operate under a fiscal rule that bans budget deficits greater than 3% of GDP is marked by the bold line.

Figure 5: Sustainable Space for Governments Constrained by Fiscal Rules

Source: own redrawing of the picture from Mitchell (2016)

The graph illustrates the theoretical sustainable space for any economy when private sector is not increasing its indebtedness but accumulates financial wealth (the combination of dark and light-shaded areas). The light shaded area shows the sustainable space available to policy makers if the state runs external surplus. The dark-shaded area shows the sustainable space available to nations that run external deficits.

From this it follows that states like Greece, Spain or Portugal which run external deficits and simultaneously have to operate under fiscal rules have very inflexible or limited fiscal policy space. They have to be very restrictive in order to ensure not to break the rules so they are very limited in their ability to promote aggregate demand and economic growth or to allow private sector to accumulate financial demand when this sector needs to deleverage. On the other hand, the state like Germany that manage to run external surpluses can more easily achieve budget surpluses that do not decrease domestic private financial wealth. Since we make a Keynesian assumption that negative private sector balances are unsustainable in the longer term, the states with external deficits that are not allowed to create public deficits have very limited possibilities for economic growth.

5. Conclusion

We have used a simplified SFC model with accounting interrelations to show net financial positions for private, government and foreign sectors for Eurozone and for its member states. In assessing policy implications, it is necessary to consider the mutual interdependence of credit and debt. Since every debtor has to have its creditor and every spending is someone's income and with the assumption that positive financial balance of private sector is necessary for sustainable growth, we have shown that exporting countries have more fiscal space to ensure its economic policy goals. In other words, restrictive fiscal criteria are more limiting for countries that face current account deficits. However, by the same logic not all countries can afford to have current account surpluses.

Economists often presuppose that government debt is bad, but this depends on concrete situations and institutional settings. Although it is necessary to have budgetary criteria for states that cannot issue its own currency, it is also useful to reflect that in situation of large private sector deficits government deficits are important source for increasing private sector

financial wealth. In this respect fiscal federalism that allows increasing public sector debt is a reasonable solution for debt crisis in Eurozone. What is also important and is a good topic for further research is the question of causalities, like whether government is in deficit because of profligacy or because it wants to allow private sector to save.

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Chosen Theoretical and Practical Areas of Green Logistics Management in Transport Sector in European Union

Marta Kadlubek

Czestochowa University of Technology
Faculty of Management, Institute of Logistics and International Management
ul. Armii Krajowej 19 B
Częstochowa, Poland
e-mail: martakadlubek@wp.pl

Abstract

As environment matter has turn into significant concern, the idea of green logistics is escalating appreciably in reference to deliberation and lessening the negative environmental effects of logistics. Green logistics areas are anticipated to identify with the attempts to scrutinize appropriate ways concentrated on the balance between environmental protection and efficiency. The first chapter of the paper concerns recognition of the green logistics concept in theoretical aspects of its definition and function. Then chosen areas of green logistics in the view of European Union statistical data and obligations are presented. Specially transportation as the core source of environmental threats in the logistic system seems to be important and necessity of decarbonisation of the transport sector in reference to green logistics which may imply more public rail transportation solutions.

Keywords: *European Union, Green Logistics, Rail Transport, Road Transport*

JEL Classification: *F50, Q56, R40*

1. Introduction

The term logistics is currently comprehensively used to indicate the activities concerning the issues of transport, storage, material handling of products as goods moving from raw material resource, all through the production system to the sales point or consumption as the last destination of the finished products (Man & Nowicka-Skowron, 2010; McKinnon, Browne & Whiteing, 2012). The key purpose of logistics is planning, implementing and controlling of typical logistic activities such as e.g. transport, storage, inventory management, packaging, information flow, in the approach which is suitable to meet the customer requirements at minimum costs (Bowersox, Cross & Cooper, 2012; Christopher, 2011; Lambert, Stock & Elram, 2008; Myerson, 2015; Rushton, Croucher & Baker, 2014). Frequently logistic costs are inclined on the basement on merely monetary terms (Skowron-Grabowska, 2010). Nevertheless, involvements of increasing environment matters were observed, it is subsequently crucial to scrutinize the external costs of logistics related principally to e.g. air pollution. Afterward the term logistics was used in association with the “green” by creating green logistics.

While environmental matters have become critical apprehensions, the idea of green logistics is developing significantly due to understanding and minimizing the negative ecological impacts of logistics. The aim of the paper is recognition of the green logistics concept in theoretical aspects of definition and function, as well as recognition its chosen areas in European Union statistics and obligations.

2. Definition and Function of Green Logistics

M.S. Pishvae, S.A. Torabi and J. Razmi (2012) define green logistics as the integration of environmental features into logistics activities and management in the manner that regards the environment in every decision making procedure in the logistics supply chains. Due to the description of the term proposed by J. P. Rodrigue, B. Slack and C. Comtois (2015), green logistics includes supply chain management activities, practices and strategies which diminish the environmental and energy trail of freight distribution, which concentrates on material handling, waste management, packaging and specially transport. Large attention to green logistics concept was paid by E. Günter (2008), A. Sladkowski (2012), A. Angheluta and C. Costea (2011), I. Harris, C. Mumford, M. Naim (2014), who noted the strong association between logistics mainly in transportation area, environmental protection and natural resources. Green logistics activities include measuring the environmental impact of different distribution strategies (Romanowska, 2004), reducing the energy usage in logistics activities, reducing waste and managing its treatment (Sbihi & Eglese, 2009).

The function of green logistics is predominantly significant as in detail it is an art of inconsistency management and to accomplish the stability between the three principles: economy, environment and impact on society. To attain these objectives, it does not require e.g. the reduction in road transport, or enlarged environmental taxes, merely to discover the most favorable balance point. This involves, on the other hand, logistic activities parameterization based on general indicators of sustainable development (Nogalski & Szpitter, 2014). Nevertheless, green logistics indicators, particularly those which maintain the rationalization of activities, such as CO₂ reduction, point to the requirement to attain the essential stability between the level of emission reductions and cost savings. This correlation is presented in Figure 1.

Figure 1: Categorisation of Green Logistics Measures According to their Monetary and Ecological Impact

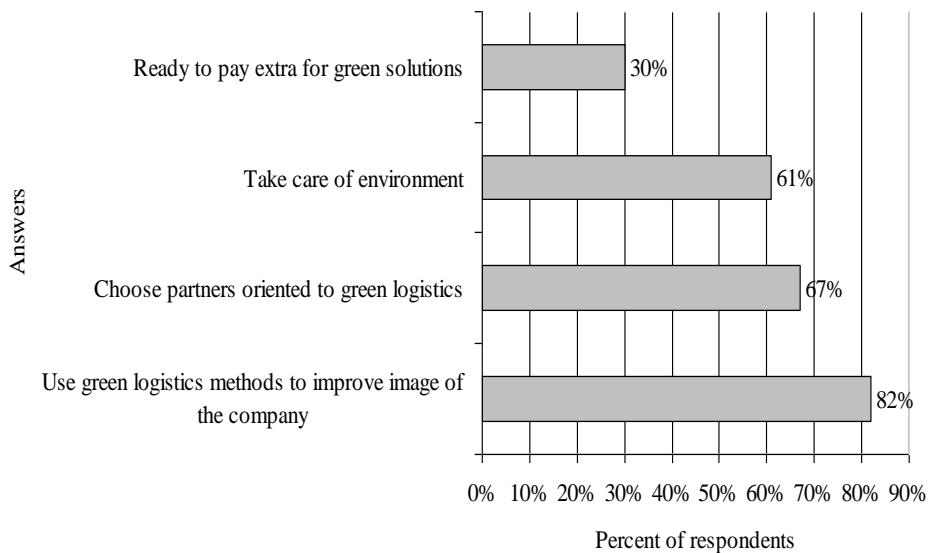
Emission reduction	Positive	Ecological	Ideal
	Negative	Ineffective	Economic
		Negative	Positive
		Costs savings	

Source: (4flow Supply Chain Management Study, 2013).

3. Selected Green Logistics Areas in European Union Statistics and Obligations

In reference to above theoretical aspects of the term green logistics, the analogy of understanding the concept in practice of the companies is presented in Figure 2. The results of the survey conducted by the QHSL Global Group (Alexandrova, 2014) among 5600 European Union respondent companies indicates four main directions in accordance to their green logistics activities realization. About 61% of surveyed companies identified their green logistics practice with care about the environment. Equally important seem to be for the companies' collaboration with the partners focused on green development likewise. On the other hand, for majority of respondents (82%) the activities in the sphere of green logistics are used primarily to improve their images. The most troublesome area are costs of the issue; only 30% of respondents are ready to pay extra price for eco-friendly technologies.

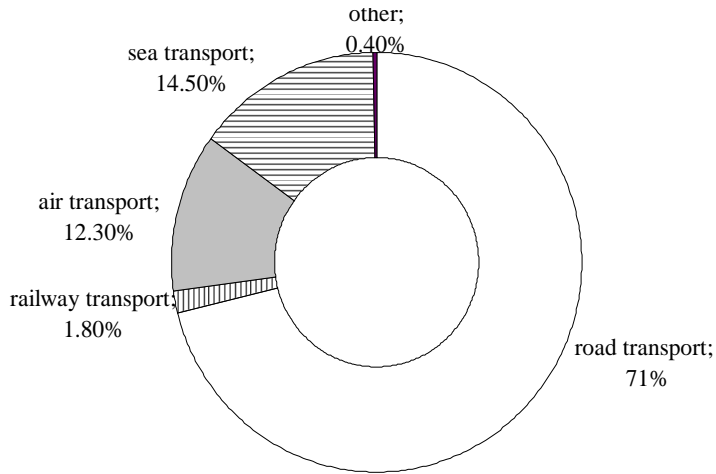
Figure 2: Green Logistics in Practice of the Companies – Results of the Survey



Source: (Alexandrova, 2014).

One of the most significant areas of green logistics is transportation related to environmental protection (Zhang et al., 2014). In European Union transport maintains to be the crucial sector where carbon dioxide emissions are escalating. The transport sector is still responsible for around a third of EU greenhouse gas emissions, which makes it the second major greenhouse gas emitting sector subsequent to energy sector (European Commission, 2015). The carbon dioxide emissions from different types of transport in European Union countries are shown in Figure 3.

Figure 3: CO₂ Emissions From Different Types of Transport in European Union Countries



Source: (European Commission, 2015).

The maximum negative impact of carbon dioxide emissions comes from the road transport, and the minimal adverse impact on the environment has rail transport. Carbon dioxide and other pollutant emissions, resulting from fuel combustion in the engines of motor vehicles, comprise one of the most imperative measure indicating the level of green logistics in the area of transport. Nevertheless, the measures of air pollution are easily available in databases on the national level. In these data it is feasible to locate information regarding the level of the pollution in individual agglomerations. Such data are as well provided by the cities which regularly scrutinize the condition of the air. However, it is actually difficult to denote what percentage of the pollution comes from the source which the transport is. The measures then are developed by assessment: it is estimated that the share of transport in the total emission will increase from the level of 13% in 2009 to 16% in 2020 (Brzeziński & Bukowski, 2011).

Considering the situation of the transport modes from the energy saving (Jain et al., 2013) point of view (Table 1), it furthermore reveals to the weak position of the road transport and strong position of rail transport.

Table 1: The Specific Energy Consumption of Various Modes of Transport

Mode of transport	Specific energy consumption (kcal / passenger – km)
Train	50
Bus	300
Plane	480
Inland water transport	550
Car	580

Source: (Bashmakov & Myshak, 2012).

According to above data, rail is the greenest mode of transport. Nevertheless, regardless of its apparent benefits, rail has rather small share of transport volumes. It still has a potential which desires to be considered in order to assemble the decisive decarbonisation target of European Commission of a 60 % reduction in carbon dioxide emissions in the transportation sector by 2050 and the two clue objectives from the Commission's Transport White Paper (European Commission, March 2011):

- 30 % of road freight over 300 km should be shifted to other modes such as rail or waterborne transport by 2030, and more than 50 % by 2050, with the aid of proficient and green freight corridors. To assemble this purpose, it is moreover necessitating proper infrastructure to be developed;
- by 2050 to complete a European Union high-speed rail network, to triple the length of the existing high-speed rail network by 2030 and sustain a solid railway network in all EU member states. By 2050 the greater part of medium-distance passengers should go by rail.

Above mentioned EU document, as well as among others Directive 2014/94/EU on the deployment of alternative fuels infrastructure, a Communication COM(2013)17 laying out a comprehensive European alternative fuels strategy, Directive 2009/33/EC of the European Parliament and of the Council on the promotion of clean and energy-efficient road transport vehicles, European Commission Green Paper on Urban Mobility, they are also the reasons why rail transport is of considerable significance as the most environmentally friendly form of transport in reference to green logistics. According to Eurostat (European Commission, 2015) data, the global need for a modal shift to rail seems to be clear as 80 % of passenger rail transport is electrified, thus less dependent on fossil fuels and capable to take advantage of green energy sources. Due to the 2014 World Rail Market Study (UNIFE, 2015), the prediction of the international demand for rail transportation is to grow at 2.7 % annually until 2019. This balanced intensification of demand in opposition to a global economic condition is a consequence of megatrends such as increase in urbanization or population growth, and particularly increasing apprehension interrelated to climate change and the environmental impact of transport in reference to green logistics.

4. Modernization Activities in Selected Green Logistics Management Areas in European Union

The growing reliance of the European Union on imports of fossil fuels and the commitment to assemble ambitious CO₂ emission decrease intentions means the necessity of looking for the problem solutions which will help the transport sector to be decarbonised. Above and beyond a little use of fossil fuels, rail's performance noticeably stands out in conditions of higher energy efficiency, lower exact emissions of carbon dioxide or increasing use of renewables. For that reasons, decarbonisation of the transport sector in reference to green logistics management may mean more rail-bound public transportation solutions, and further electrification of the sector. It means a modal shift from road and air to rail as more environmentally friendly type of transport. Moreover, modal shift would cause an amount of supplementary benefits in reference to green logistics, such as reduced congestion and pollution. Reasonable solution seems to be also intermodal transport, where the cargoes are carried by different means of transport belonging to different transport branches, may ensure the realization of the function of green logistics of different transport branches and optimize the balance between environment, costs of goods movement within the supply chain and adequate impact on society.

The adoption of the complex modernization activities, among others, also in the area of transport management, would allow for maintaining the pace of energy efficiency improvements. The main activities enabling the contribution to the achievement of this effect, among others, should be promoting collective transport or tightening standards in the field of fuel absorptivity of vehicles.

Apart from a significant increase in the respect for resources, a significant potential of the low-carbon modernization occurs in transport. It can be activated in two main fields (Bukowski, 2013):

- behavioral field; The essence is to plan and develop ecological forms of passenger transport - including particularly rail transport, creating a comfortable, green alternative for passenger cars and aircrafts. Behavioral changes are also the improvement in the efficiency of local transport, i.e. an increase in the share of public transport, walking and cycling in everyday move around the city, and also more effective use of cars for medium distances. This approach requires the support from land use planning as a result of strong support for creating transport-saving industrial structures;
- technological field; Apart from behavioral changes, an extremely great potential of the improvement in efficiency is in technological changes: designs of cars and their engines, reduction in weight of cars or the improvement in their aerodynamics. Electric cars are still at the early stage of development, however, hybrid diesel-electric vehicles are mass produced, gradually gaining in popularity. Simultaneously, manufacturers compete in offering more and more economical vehicles with traditional engines, which is the result of customers' requirements and changes in fuel prices but also increasingly demanding limits imposed by the EU countries at the level of emissions from petrol and diesel engines.

In the light of above considerations, the most significant modernization activities in the area of green logistics management in transport sector seem to be:

- the implementation of appropriate emission and noise standards for vehicles,
- promotion of public transport and low-emission solutions in mobility models,
- development of alternative drive technologies,
- emphasis on proper spatial planning in the context of public money spent on infrastructure.

5. Conclusion

Nowadays environmental apprehensions play a key role in transformation of logistics into green logistics. Whereas environmental subject has become decisive anxiety, the concept of green logistics is expanding much in reference to consideration and reduction the negative ecological effects of logistics. Green logistics areas are expected to identify with the efforts to examine proper ways focusing on the balance between environmental protection and effectiveness.

One of the most crucial areas of green logistics is transportation as the core source of environmental threats in the logistic system. In European Union transport continues to be the essential sector where carbon dioxide emissions are growing. For that grounds, decarbonisation of the transport sector in reference to green logistics management may imply more public rail transportation solutions. In the consequence a modal shift should be realized specially from road to rail as more environmentally friendly type of transport. In practical terms, nevertheless, its implementation is huge challenge likely to keep several professional

generations busy – from the smallest technical development up to live operation on the rail network.

Popular nowadays concept of co-modality by which various types of transport are capable to develop the strengths and cooperate, should not be the only direction for shaping and managing the transport area of green logistics. Increasing the transfer of freight to rail can much more significantly reduce carbon dioxide emissions in cargo and passenger transport. This can be done e.g. through the internalisation of external costs of transport and creating a transparent pricing mechanism. Besides strengthening and broader opening of the market in rail transport and the technical harmonization of European rail system seem to be indispensable. They would help to lay the foundation for moving freight to rail. This can be an important contribution to achieving the ambitious objectives of the European Union in the field of climate protection. At the same time the base should facilitate the realization of the purpose of green logistics management to optimize the stability involving the level of emission reductions and cost savings.

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Green Competitiveness of the EU Countries

Armand Kasztelan

University of Life Sciences
Department of Economics and Agribusiness
Akademicka 13, 20-950
Lublin, Poland
e-mail: armand.kasztelan@up.lublin.pl

Abstract

Nowadays, natural capital is seen as a key element of socio-economic development. Environmental resources and values are important factors in achieving competitive advantage at the micro, meso, and macro levels. The main goal of the paper is to evaluate the green competitiveness of the EU countries in terms of global trends of greening the economic processes. The article attempts to define the so-called green (environmental) competitiveness of countries. Moreover, the evaluation method of the competitiveness is also proposed. Research was carried out based on the so-called Hellwig's method, which enabled the construction of a synthetic measure of green competitiveness. It is based on indicators of state, pressure, and environmental protection, used by the Eurostat. This study evaluates the level of green competitiveness in selected European Union countries based on data collected from 2010 to 2014. 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, Green Growth, Green Economy, Natural Capital*

JEL Classification: *O44, O57, Q56*

1. Introduction

The term *competitiveness* has been evolving in economic terminology since the late 1970s, mainly through M.E. Porter's (1979, 1986, 1990, 1998, 2008) scientific work. According to Dosi, Pavitt, and Soete (1990), competitiveness is the capability of a subsidiary, of a firm, of a region, of an industry, of a sector, or of a nation to keep or increase its market share in those products or services whose importance (share) in national and international trade, consumption, and value added is growing and is expected to continue to grow in the foreseeable future. A similar approach presents the IMD World Competitiveness Center (2016) defining international competitiveness "...as a process in which higher levels of competitiveness are achieved at different levels, that is, at firm, regional and national levels. As such, competitiveness becomes international when it pertains to two or more countries." Thus, competitiveness is always a relational concept; the competitiveness of any one person, firm, region, or country is always relative to the achievements of others (Berumen, 2005).

The issue of spatial units' competitiveness gained importance in a moment of economic integration processes intensification. It turned out that disparities in this scope are a factor hindering particular entities' dynamic and harmonic development. In the market system, the increase in constant competitiveness in all fields and cross-sections, including spatial cross-section, is an absolute necessity (Wojarska, 2014). In this regard, the issue of country

competitiveness becomes particularly important because in the long term, it decides about the level of economic and social development and, in consequence, about a position on economic map of Europe and world.

According to the OECD (1992) definition, “competitiveness is the degree to which a nation can, under free trade and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real income of its people over the long-term.” M.E. Porter (1990) emphasizes that only productivity is the meaningful concept of competitiveness at the national level. Productivity is the key determinant of a nation’s long-run standard of living. This forces actions such as raising product quality, improving product technology, or boosting production efficiency.

The proper management of natural capital is the relevant element for improving productivity and therefore improving the competitiveness of national economy. Natural capital, considered here as a totality of resources and environmental values used in social-economic processes, is presented in numerous elaborations as one of rudimental factors for gaining competitiveness advantage in macro, meso, and microeconomic levels (Berumen, 2005; Delgado et. al., 2012; Esty and Porter, 1998; Kasztelan, 2010, 2015; Kijek, 2013a, 2013b; Malovics, 2003; Martin, 2003; Porter and Linde, 1995).

How to define green (environmental) competitiveness of a country then? Answer to such formulated question should include several aspects. On the one hand, environmental competitiveness may be evaluated through the level of disposability of a given country in natural resources and values, and on the other, through a scale of undertaken pro-environmental actions (so-called eco-behaviors), also through specifying negative influence level of a given country on the environment (level of anthropopressure). Certainly, these three areas should be evaluated jointly, using a comparative approach, hence relating the achieved results to the results for other countries.

Considering the above aspects, following definition for green competitiveness of a given country may be formulated. It is gaining advantage over other countries, based on the existing environmental potential, mainly: condition and quality of resources and environmental values, the ability to productively utilize it in social-economic processes with simultaneous endeavor to achieve relatively low level of anthropopressure.

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 in this area the “20/20/20” climate/energy targets based on a flagship initiative “Resource Efficient Europe.” It is a project “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 [online], 2010).

Note that the new strategy for Europe and the associated challenges have created a need for a new approach to the phenomenon of competitiveness. The authors who prepared the report for the European Commission redefine the term *competitiveness* for the purpose of monitoring the process of transition to a more dynamic, socially inclusive, and ecologically ambitious growth path. Given the evolution of the concept over time, they propose to define competitiveness “as the ability of a country (region, location) to deliver the beyond-GDP goals for its citizens today and tomorrow.” This definition emphasizes the equal importance of the three pillars. First, the income pillar that starts with GDP but moves beyond it toward disposable household income and consumption expenditure; second, the social pillar that reflects outcomes of a country’s

socio-economic system (poverty risk, inequality); third, the ecological pillar that evaluates environmental outcomes (Aiginger et al., 2013).

Based on both simple and more complex statistic methods, green competitiveness of selected countries can be assessed. It will allow in selecting those that are characterized by relatively high environmental potential and therefore orient developmental strategies on processes optimally utilizing environmental resource values. The analysis of this kind should also create the basis for specialization processes of countries with regard to the environmental factors.

Green competitiveness of a given country can be measured, but expressing it with one universal meter requires application of a proper method. This amounts to the formation of aggregate indicator, also called synthetic variable, which is the basis for structuring examined objects by the level of multi-feature phenomena. For the first time, this measurement was introduced by Z. Hellwig (1968), who constructed the so-called synthetic measure of development for the typological division of countries, according to the development level, resources, and structure of qualified staff.

The main goal of this paper is the evaluation of the green (environmental) competitiveness of the selected European Union countries, based on the indicators set by the author and the Hellwig's method. The article seeks to answer the following question: which of the EU countries are characterized by a relatively high and which by a relatively low level of environmental competitiveness?

2. Problem Formulation and Methodology

The level of green competitiveness of selected 23 European Union countries was determined by means of one of the most popular taxonomic methods – Hellwig's pattern model. At the first stage of the study procedure, the indicators were initially selected and also constructed based on Eurostat data. The reference years 2010-2014 were chosen due to data availability. Diagnostic variables defining the level of green competitiveness for particular countries were adjusted in attempt to meet three criteria: substantive, formal and statistical (Strahl, 2006).

Substantive indicators selection is based on literature studies (Borys, 2005; Kasztelan, 2010; 2013; 2015; Kijek and Kasztelan, 2013; Kruk, 2010), as well as on review of Eurostat databases. On this basis, 58 diagnostic variables were chosen. The next step was to check, if they meet formal criteria, i.e. whether they are measurable, complete and ensure comparability. It turned out, that only 34 variables met these requirements. At this stage, due to data incompleteness, five EU member states were excluded from the analysis, i.e.: Croatia, Greece, Ireland, Luxembourg and Malta. The last step was to check, whether acknowledged variables meet statistic criteria. Due to very low coefficient of variation ($V < 10\%$) two indicators were excluded from the taxonomic analysis: final energy consumption index ($V=7,1\%$) and greenhouse gas emissions intensity of energy consumption index ($V=8,1\%$). Afterwards, excessively correlated variables were eliminated from the set according to Pearson's correlation coefficients matrix. They were not included in further investigation since they carried identical informational value (Bujanowicz-Haraś et al., 2015).

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. Among the selected variables nine were considered to be

smaller-the-better (STB)²⁵ reducing the synthetic measure of green competitiveness, whereas the rest were regarded as larger-the-better (LTB)²⁶ characteristics having a positive influence on the measure.

Table 1: Indicators of Green Competitiveness

Indicators group	Indicator symbol	Indicator name
Natural resources	x ₁	Protected terrestrial area (% of mainland national territory)
	x ₂	Woodland (% of total land cover)
	x ₃	Forest area with a protective function (in % of total forest area)
	x ₄	Water areas (% of total country area)
	x ₅	Total fishery products (in tones live weight per capita)
	x ₆	Resource productivity (in euro/kg)
	x ₇	Soil erosion by water (in tones per hectare)
Anthropopressure	x ₈	Energy dependency (in %)
	x ₉	Greenhouse gas emissions (in tones/km ²)
	x ₁₀	Sulphur oxides emission (in tones/km ²)
	x ₁₁	Particulates (< 10µm) emission (in tones/km ²)
	x ₁₂	Noise from neighbors or from the street (% of total population)
	x ₁₃	Total domestic material consumption (in tones per capita)
	x ₁₄	Fertilizer consumption (kilograms per hectare of arable land)
	x ₁₅	Total amount of waste generated (kilograms per capita)
Eco-behaviors	x ₁₆	Electricity generated from renewable sources (in % of gross electricity consumption)
	x ₁₇	Share of renewable energy in fuel consumption of transport (in %)
	x ₁₈	Combined heat and power generation (in % of gross electricity generation)
	x ₁₉	Domestic biomass consumption (in tones per capita)
	x ₂₀	Organic crop area fully converted and under conversion (% of total utilized agricultural area)
	x ₂₁	Recovery wastes (kilograms per capita)
	x ₂₂	Environmental protection expenditure of general government (% of GDP)
	x ₂₃	Environmental taxes revenues (% of GDP)
	x ₂₄	Eco-innovation index (EU-28=100)
	x ₂₅	Organizations and sites with eco-management and audit scheme (EMAS) registration (number/1000km ²)
	x ₂₆	Ecolabel licenses (number/1 000 000 population)

Source: own elaboration.

²⁵ Smaller-the-better characteristic are variables for which low values are desirable from the point of view of a given phenomenon, whereas higher values are undesirable.

²⁶ Larger-the-better characteristics are variables for which low values are undesirable from the point of view of a given phenomenon, whereas higher values are desirable.

The chosen procedure for evaluating EU member states green competitiveness provided multidimensional comparative analysis, allowing the comparison of multi-featured objects. Taxonomic meters were applied, which replace research description using a set of diagnostic features with one aggregate volume, i.e. synthetic variable. In typological research Hellwig's pattern method was applied (Adamowicz, Janulewicz, 2012; Hellwig, 1968). It allowed a comparison between selected member states of the EU providing grounds for classifying them into uniform groups characterized by a similar level of green competitiveness.

Prior to constructing the synthetic variables, the smaller-the-better characteristics were transformed into larger-the-better characteristics according to the following formula:

$$x_{ij} = \frac{1}{x_{ij}} \quad (1)$$

Afterwards, the features were standardized according to the formula:

$$z_{ij} = \frac{x_{ij} - \bar{x}_{ij}}{s_j} \quad (2)$$

where: i – object number, j – feature number, s - standard deviation.

Such transformed features were subjected to the development model method which assumes the existence of a model (reference) object with reference to which the taxonomic distances between the investigated objects are determined. This study determines the distance of each object from the set model by means of the taxicab metric:

$$d_i = \sum_{j=1}^m |z_{ij} - z_{0j}| \quad (3)$$

The resulting d_i values were used for computing Hellwig's synthetic measure of development:

$$z_i = 1 - \frac{d_i}{d_0} \quad (4)$$

where:

$$d_0 = \bar{d} + 3s_d \quad (5)$$

$$\bar{d} = \frac{1}{n} \sum_{i=1}^n d_i \quad (6)$$

$$s_d = \sqrt{\frac{1}{n} \sum_{i=1}^n (d_i - \bar{d})^2} \quad (7)$$

The z_i indicator assumes values within the range $\langle 0;1 \rangle$, whereas values closer to one are closer to the model and so are associated with a high level of the investigated object. Next, z_i values were arranged in a linear manner in descending order and based on this arrangement typological unit classes were identified with four disjoint subsets of similar objects as follows:

$$\text{Group I: } z_i \geq \bar{z} + s_z \quad (8)$$

$$\text{Group II: } \bar{z} \leq z_i < \bar{z} + s_z \quad (9)$$

$$\text{Group III: } \bar{z} - s_z \leq z_i < \bar{z} \quad (10)$$

$$\text{Group IV: } z_i < \bar{z} - s_z \quad (11)$$

where: \bar{z} - arithmetic mean, s_z - standard deviation of the taxonomic measure of development (Bujanowicz-Haraś et al., 2015; Adamowicz, Janulewicz, 2012). According to the values of the z_i indicator the EU countries were assigned to one of the four groups with regard to their level of green competitiveness. Group I consisted of member states with the highest while group IV was with the lowest level of green competitiveness.

3. Problem Solution

The table 2 presents a disparity regarding respective variables between different countries of the European Union, expressed as the minimum values, mean value and coefficient of variation. The coefficient of variation for the indicators used in the analysis ranged from 23,4% to more than 201%. The highest variation was recorded for sulphur oxides emission factor and the lowest one for the variable describing environmental taxes revenues.

Table 2: Statistical Characteristics of Diagnostic Variables for EU Countries

Variable	Mean	Minimum	Maximum	Standard deviation	Coefficient of variation [%]
X1	18,7	8,0	38,0	8,0	42,7
X2	39,7	12,6	75,6	16,4	41,4
X3	17,8	0,0	87,4	20,0	112,1
X4	2,9	0,6	10,6	2,8	97,5
X5	16,9	0,0	119,3	27,4	162,2
X6	1,7	0,3	4,0	1,1	64,5
X7	1,8	0,1	15,6	3,3	183,1
X8	0,0287	0,0107	0,1124	0,0241	84,1
X9	0,0018	0,0002	0,0076	0,0019	106,3
X10	3,2377	0,1878	31,4623	6,5245	201,5
X11	5,3906	1,1875	15,9912	4,4336	82,2
X12	0,0637	0,0386	0,0952	0,0149	23,4
X13	0,0687	0,0294	0,1202	0,0255	37,1
X14	0,0078	0,0035	0,0178	0,0034	43,4
X15	0,0003	0,0000	0,0009	0,0002	71,3
X16	27,0	6,6	68,1	17,8	65,9
X17	5,1	0,2	16,7	3,4	67,1
X18	19,3	1,4	77,0	17,9	92,6
X19	4,2	1,7	10,9	2,1	49,8
X20	7,6	1,0	19,3	5,0	65,8
X21	2353,0	268,0	9410,0	2281,7	97,0
X22	0,6	0,2	1,5	0,3	52,0
X23	2,5	1,6	4,3	0,7	26,3
X24	86,0	38,0	138,0	32,6	37,9
X25	0,8	0,0	3,9	1,2	147,1
X26	2,1	0,0	10,1	2,4	116,5

Source: authors' calculations based on 2010-2014 data from Eurostat.

The level of green competitiveness in the selected 23 EU countries was evaluated based on 26 variables, and the outcomes of the analysis were presented in Table 3. The highest synthetic evaluation of the level of the competitiveness was awarded to 5 countries assigned to group I – Sweden, Finland, Latvia, Denmark and Italy. Group II consisted of 6 member states representing an outstanding level of green competitiveness, i.e. Estonia, Austria, Lithuania, the Netherlands, Slovenia and Spain. Group III, displaying an average level of green competitiveness, was at the same time the most numerous one as it consisted of 10 countries: Slovakia, Romania, Germany, France, Czech Republic, Portugal, Hungary, the United Kingdom, Poland, and Belgium. Group IV, characterized by the lowest level of green competitiveness among the countries, consisted of only 2 countries, i.e. Bulgaria and Cyprus.

Table 3: Classification of 23 EU Member States according to the Value of the Synthetic Measure Describing the Level of Green Competitiveness

Group number	The number of countries in the group	The level of measurement	The EU countries
I	5	above 0,33985	Sweden, Finland, Latvia, Denmark, Italy
II	6	from 0,25490 to 0,33985	Estonia, Austria, Lithuania, the Netherlands, Slovenia, Spain
III	10	from 0,16993 to 0,25489	Slovakia, Romania, Germany, France, Czech Republic, Portugal, Hungary, the United Kingdom, Poland, Belgium
IV	2	below 0,16993	Bulgaria, Cyprus

Source: authors' calculations based on 2010-2014 data from Eurostat.

The country characterized by the highest level of green competitiveness is Sweden ($z_i=0,4311$), whereas a country with the lowest evaluation of the studied phenomenon among all the 23 member states was Cyprus for which z_i indicator amounted to 0.1298 only. Particular countries differ as regards their possessed environmental potential. However, the fact that some countries are characterized by low levels of environmental competitiveness does not mean that they lack pro-environmental development factors. Telling the truth, Bulgaria and Cyprus are characterized by a relatively favorable landscape values, which predisposes these countries to promote touristic and recreational functions of the natural environment.

In the case of countries with a high level of green competitiveness a significant issue is the formation of an external perception of the countries as those that consider the realization of pro-ecological policy goals in their strategies, programs and practical activities. Authorities should promote the ecological image of the countries, and thus encourage investors to realize projects using the potential of the environment in a sustainable way (Kasztelan, 2013).

Individual elements of the natural capital (resources, climate, location etc.) determine the possibility of developing various types of economic activity. Moreover, proper use of environmental potential should allow the generation of additional economic effects. Secondly, it will contribute to further improvement of the state of the environment and thus produce synergistic effects, and thirdly, will favor realization of social goals by decreasing unemployment and a generally improving quality of life. Enacting pro-active measures to foster environment protection favors the development of the so-called 'green' specialization of the countries, and thus increases their competitiveness on the international level.

4. Conclusion

Facing the competition of open market is an extremely difficult task because this process in a relevant scope refer to the surrounding conditions, where given subjects function. The factor that increasingly shapes the market advantage is called green competitiveness. It might be considered on different levels of activities; however, due to the fact that environment is treated as a common good on a national level, subject spectrum for research in this paper covered green competitiveness of countries.

The use of the Hellwig method in the research, which belongs to the group of multidimensional taxonomic methods, allowed the classification of the selected EU countries into one of four groups identified based on their green competitiveness level. In group I, countries focusing on the highest level of green competitiveness are: Sweden, Finland, Latvia, Denmark, and Italy. In the opposite pole, there is a group of countries focusing on the lowest level of environmental competitiveness (group IV), comprising Bulgaria and Cyprus.

The results obtained support the usefulness of synthetic measures for evaluating the level of green competitiveness. Note that Hellwig's pattern method is one of many tools used to assess the level of territorial units' competitiveness and development. It appears advisable to continue research using other analytical methods, e.g., patternless method or Ward's clustering method, which would allow comparing results. Moreover, due to better data availability, it would also be possible to expand a set of indicators for the analysis, which in turn would lead to more comprehensive evaluation of countries' green competitiveness.

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Common Security and Defence Policy of European Union in Light of Contemporary Security Threats

Radomír Kaňa, Monika Mynarzová

VŠB - Technical University of Ostrava

Faculty of Economics, Department of European Integration

Sokolská třída 33

Ostrava, Czech Republic

e-mail: radomir.kana@vsb.cz, monika.mynarzova@vsb.cz

Abstract

European Union is surrounded by the security environment, which has changed since political events in the nineties of the twentieth century. This situation requires different methods and tactics to solve contemporary security problems in the European neighborhood or on global scale. It is necessary for European Union to play on the world security area more important role than in the past. Common Security and Defence Policy (CSDP) as integral instrument of the Common Foreign and Security Policy (CFSP) should be developed both on the formal level and in terms of the practical implementation too. This article focuses on the key aspects in development of CSDP and on EU relations with its main partner in security sphere, such as the North Atlantic Treaty Organization (NATO).

Keywords: *Common Security and Defence Policy, EU Missions and Operations, European Union, Frontex, Global Security, NATO*

JEL Classification: *F5, F15, F52*

1. Introduction

At the end of the Cold War and the disintegration of the Soviet Union in 1991, only the United States appeared to fulfill the criteria of being a world *superpower*²⁷. Relatively rapid collapse of the bipolar division has significantly reduced the probability of a global war, but no one can accept the fact that the current world situation is free of safety hazards. The recent multipolarity brings new threats such as the escalation of a series of regional conflicts, which by their nature are beyond standard military strategies and procedures (so-called *asymmetric warfare*, see Rand Corporation [online], 2016). Already in 2003²⁸ the European Council adopted the *European Security Strategy* (ESS) titled *A Secure Europe in a Better World*, comprehensive document which analyses and defines for the first time the European Union's security environment, identifying key security challenges and consequent political suggestions for the EU. The ESS has pointed five key threats: *terrorism, proliferation of weapons of mass*

²⁷ *Superpower* could be defined as a country that has the capacity to project its dominating power and influence wherever in the world, and sometimes, in more than one region of the globe at a time, and so may authentically attain the status of global hegemony (Miller, 2006).

²⁸ Approved by the European Council held in Brussels on December 2008, member states effectively confirmed the enduring validity of the 2003 ESS and the need to be "more capable, more coherent and more active" in order for the EU to reach its full potential – document has been called *Report of the Implementation of the European Security Strategy: Providing Security in a Changing World* (EEAS [online], 2016a).

destruction (WMD), regional conflicts, state failure and organized crime (European Council, 2003). On the basis of this document could be stated and highlighted the contemporary threats: *illegal immigration* (due to failure states because of armed conflicts, environmental or economic problems) and *international terrorism*. In the context of global security situation, as pointed out by Kaňa, Mynarzová (2012), the European Union together with other actors in global security, such as the United States (and NATO) have to assume its share of responsibility in this area. The position of the European Union in the economic, financial and business field is undisputable and it certainly lines it among the *great powers*²⁹. With respect to this position in the world economy it undoubtedly brings a necessary duty to take adequate role on the international political scene.

The current security situation in the world is different from the Cold War and, as such, requires different approaches to solve many problems of regional or global nature³⁰. If the European Union wants to play more important role on the world political and military scene, it will be forced to work intensively on the process of deepening effective and - in the future - maybe even a single security policy, accompanied by building appropriate military capabilities (Kaňa and Mynarzová, 2014b). This article mainly focuses on the role of the European Union's Common Security and Defence Policy, which through foreign operations and missions contributes to the stabilization and security not only in Europe but in its neighborhood and globally too. Attention is also paid to the analysis of issues in cooperation of the EU and NATO as an important factor of world security.

2. Common Security and Defence Policy as Key Instrument of EU in Security Area

The model of a *European Security and Defence Policy* was first officially used at an EU summit in Cologne (June 1999). Member states made an agreement on the mechanisms of coordination in crisis situations and a plan to create a European military capacity was started. The summit appointed the first High Representative for the CFSP with the newly formed committees, the *Political and Security Committee (PSC)* and the *EU Military Committee (EUMC)*. Another important summit for the development of ESDP was meeting in Helsinki in December 1999. Within the framework of the European Headline Goal - EHG requirements for military units were concretized³¹, that should be able to realize the types of missions (including in the establishment of peace), which were approved under the *Petersberg tasks*³².

²⁹ *Great powers* could be described as disproportionately involved in coalitions and wars, and their diplomatic weight is often concreted by their strong role in international institutions and forums. In today's international system, there are four great powers that fit this definition: the United States, Russia, China and the European Union (the EU is considered to be the sum of its parts). EU could compete to be the world's number two power, but this would require a more robust political union, with a common foreign policy and a shared defense capability (Brzezinski, 2012; HCSS 2014).

³⁰ Demographic factors were pointed as one of the key aspects of global security in the early 21st century (Čajka, Kazanský, 2014).

³¹ Member States had agreed that by 2003, would create a rapid reaction force of up to 60,000 soldiers, the so-called European Rapid Reaction Forces, but lacked in transport capacity for the transport of military forces over long distances, the necessary communication systems and some types of latest sophisticated equipment. Subsequently Battlegroups were formed (see below).

³² One of the most important steps, achieved in 1992, is the inclusion of the so-called Petersberg tasks in security policy, which today forms an important part of the common security and defence policy. Petersberg agreement allowed military forces of at that time still functional the Western European Union

The result of the Helsinki meeting was also the establishment of political-military EU institutions within EU structures that provide strategic leadership for EU-led operations (Kaňa, Mynarzová, 2015a).

At the Nice Summit (December 2000), the concept of the military structure of ESDP and CFSP was definitively established, the *PSC* and *Military Staff* have begun to operate since 2001. The Treaty of Nice (2003), incorporated the ESDP into primary law, confirmed finally the concept of political-military structures and defined the institution responsible for the functioning of the ESDP (Kaňa, Mynarzová, 2015b).

In May 2004, the Headline Goal 2010, has been approved which included the concept of EU Battlegroups (EU Battlegroup Concept). These comprehensive security military units of about 1,500 soldiers (in one or several EU member states) have to give the EU the ability to quickly intervene mainly in lower intensity conflicts (for example, in the context of evacuation and humanitarian missions or operations to prevent conflict). These groups are able to operate anywhere in the world within a radius of 6000 km from Brussels and must be able to deploy within 10 days of the decision of the EU Council. They must be able to stay in the place of conflict for 30 days, after the completion of units the period can be extended to up to 120 days or until the arrival of other units. The first units reached operational capability January 1, 2007, total 18 Battlegroups has been formed yet. There are always two Battlegroups on call alert and the ability to conduct two operations simultaneously is required. The Battlegroups rotate every 6 months (EEAS, 2013).

Treaty of Lisbon (2009) replaced the term European Security and Defense Policy by the new one *Common Security and Defense Policy*³³. 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 as part of the EU Directorate (Kaňa, Mynarzová 2014b). The permanent structured cooperation in defense, in which the participating states (the minimum number is not listed) undertake a more intensive development of its defense capabilities and provide its armed forces for the planned operation have become a new tool. Permanent structured cooperation shall be subject to approval by the EU Council, which decides by qualified majority at the request of the participating countries (Biscop, Coelmont, 2010).

Foreign operations and missions of the European Union carried out under the CSDP are considered the most important tool to ensure not only its own but also global security. This makes it the top of the existing efforts of the Union's CSDP. Not all Member States are involved equally in the foreign operations, but it always regards the participation of the countries under the supports of the Union. The European Union recognizes three types of these operations - *military, police and missions in support of the rule of law (civilian)*. These types

(WEU) member countries to participate in humanitarian and rescue missions, peacekeeping missions and combat forces in crisis management, including peacemaking.

³³ The CSDP is framed by the Treaty on European Union (TEU). Article 41 outlines the funding of the CFSP and CSDP, and the policy is next described in Articles 42-46, in Chapter 2, as well as in Protocols 1, 10 and 11 and Declarations 13 and 14. Decisions relating to the CSDP are taken by the European Council and the Council of the European Union (Article 42 TEU). They are taken by unanimity, with some notable exceptions relating to the European Defence Agency (EDA, Article 45 TEU) and permanent structured cooperation (Article 46 TEU), where majority voting applies. Proposals for decisions are made by the *High Representative of the Union for Foreign Affairs and Security Policy*, created by TEU, who also acts as Vice-President of the European Commission.

differ not only based on personnel involved (troops, police officers, civil servants), but in particular by its features (TEU, Article 43). Since 2003, when the first EU foreign mission (EUPM in Bosnia) was sent - by December 2015 a total of 35 missions were carried out, 17 of which have already been completed. Five of them were purely military, 11 were civilian/police and one operation (AMIS II) had a civilian-military character. As of January 2016, the Union conducted a total of 18 missions (see Table 1), 6 of which can be referred as military and 12 as civilian/police. The key military missions can include those naval in Somalia (Horn of Africa) and Mediterranean (EEAS [online] (2016b)).

Table 1: Ongoing EU Missions and Operations

Missions	Destination	Starting year	Estimated costs (mil. EUR)
ALTHEA/BiH	Bosnia and Herzegovina	2004	33,20 till 2015
EUBAM Rafah	Palestinian Territories	2005	26,67 till 2016
EUBAM Moldova and Ukraine	Moldova and Ukraine	2005	14,81 for 12/2015-11/2017
EUSEC RD Congo	DR Congo	2005	2,70 for 7/2015-6/2016
EUPOL COPPS/PT	Palestinian Territories	2006	9,17 for 7/2015-6/2016
EUPOL Afganistan	Afghanistan	2007	43,70 for 2016
EULEX Kosovo	Kosovo	2008	111 per year
EU NAVFOR Somalia	Somalia	2008	6,30 for 2016
EUMM Georgia	Georgia	2008	17,64 per year
EUTM Somalia	Somalia	2010	8,90 for 4/2015-12/2016
EUCAP NESTOR	Kenya, Djibouti, Somalia, Seychelles	2012	17,90 for 2014-2015
EUCAP SAHEL Niger	Niger	2012	9,16 for 2014-2015
EUBAM Libya	Libya	2013	26 per year
EUTM Mali	Mali	2013	27,70 per year
EUAM Ukraine	Ukraine	2014	2,68 for start up phase
EUCAP SAHEL Mali	Mali	2014	16,90 till 2016
EUMAM RCA	Central African Republic	2015	7,20 for 2015-2016
EU NAVFOR MED (Sophia)	Mediterranean	2015	11,82 per year

Source: EEAS [online] (2016b), own processing

The mission EU NAVFOR Somalia (Atalanta) is a major present military (Navy) EU operation running at the same time with two instructional (security) missions - Training/Security EUCAP Nestor mission (building maritime capacity) and the EU Training Mission Somalia (Somali security forces). On 2 June 2008 the UN Security Council adopted Resolution 1816, which called on states to combat piracy and armed robbery at sea. Council of the EU on 10 November 2008 decided to launch the operation EU NAVFOR ATALANTA. The operation was launched on 8 December 2008 and its mandate is focused on providing protection to vessels prior to pirate attacks, the prosecution of piracy and mugging ships along the Somali coast. Atalanta is just one part of a "Comprehensive Approach" (i.e. tackling both current symptoms

and root causes of the problem) to the issue of piracy and security in the Horn of Africa and includes the participation of non-EU countries (Montenegro, Serbia, Ukraine, New Zealand etc.) together with the 24 member countries. Military vessels are provided by Spain, Germany, the Netherlands and France. Common costs within the ATHENA mechanism are estimated at 39.65 million EUR. Operating and personnel costs are paid from the national budgets of the participating countries. Atalanta mission has contributed significantly to the reduction of pirate attacks in the region. At the height of Somali piracy in January 2011, 736 hostages and 32 ships were being held by pirates. By December 2015 that number has dropped to zero hostages and no ships being held. In addition to EU NAVFOR units, a considerable international military maritime presence is deployed in the area, comprising the Combined Maritime Forces (CMF), NATO (Operation Ocean Shield) and independent national units from further countries (China, India, Japan, Korea, Russia) and others (EU NAVFOR Somalia [online], 2016).

Europe is now experiencing one of the most significant inflows of migrants and refugees in its modern history. This migration crisis pushed by civil war and terror and pulled by better economic perspective, huge numbers of people have fled the Middle East and Africa. The conflict in Syria stays to be by far the biggest driver of migration, together with the ongoing violence in Afghanistan and Iraq, problems in Eritrea, as well as poverty in Kosovo. 2015 asylum claims in Europe reached 1 321 560 officially, in Germany with more than 476 000, but German officials said more than a million had been counted in Germany's "easy" system for counting and distributing people before they make asylum claims. The EU's external border force, Frontex³⁴, observes the different routes migrants use and set the figure crossing into Europe in 2015 at more than 1 800 000. Main migratory routes into the EU are Mediterranean (Western – to Spain, Central – to Italy, and especially Eastern – to Greece, with link to the Balkan land route), (BBC, 2016; Frontex [online], 2016). Due to the recent migration crisis (and need to protect external Schengen border) European Commission proposed in December 2015 a plan for *European Border and Coast Guard*, built from Frontex and national authorities responsible for border management, with the staff gradually increase from 402 members in 2016 to 1000 by 2020 (European Commission [online], 2015).

By Council Decision 2015/778 (18th May 2015) on 22 June 2015 the EU launched a European Union military operation in the Southern Central Mediterranean (EUNAVFOR MED – Sophia), with the aim to disrupt the business model of human smuggling and trafficking networks in the Mediterranean and contribute to reducing the further loss of lives at sea because of migratory routes to EU (mentioned above). The flagship is the Italian Light Aircraft Carrier *Garibaldi*, 24 Member States contribute the operation. At least five naval units in first three months 2016 rescued more than 1 800 migrants. Sophia is a complementary operation to present smaller scale naval operations held by Frontex (Triton, Poseidon), (EUNAVFOR MED [online], 2016).

³⁴ The European Agency for the Management of Operational Cooperation at the External Borders of the Member States of the European Union (Frontex) was established by Council Regulation (EC) 2007/2004 in October 2004. Frontex coordinates operational cooperation between Member States in the field of management of external borders; assists Member States in the training of national border guards, carries out risk analyses; follows up the development of research relevant for the control and surveillance of external borders; assists Member States in circumstances requiring increased technical and operational assistance at external borders; and provides Member States with the necessary support in organizing joint return operations (Frontex [online], 2016).

3. EU and NATO as Partners in Security Area

A major player in the global security arena and the guarantor of European security is the North Atlantic Alliance. Sphere of interest of the European Union and NATO as well as most of their members overlapped. It is therefore understandable that their relationship and cooperation were key elements of a Common Security and Defense Policy. 22 countries are part of both organizations and therefore the question of mutual cooperation is fundamental and still relevant. A set of agreements between NATO and the EU itself was called Berlin Plus (see below). Planning EU military operations can use either the structure of NATO in the framework of the Berlin Plus agreements or national planning center authorized by Member States. EU used the first option for example when planning Operation Concordia in Macedonia (2003), or Althea in Bosnia and Herzegovina (2004), the French infrastructure (France as the framework nation) was used in the planning of the operation Artemis in Congo (2003). Essentially, the present mutual relations are governed by *EU-NATO Declaration on European Security and Defence Policy*, approved December 16, 2002, which at that time meant the recognition and support of the European Security and Defence Policy of the Alliance. On March 17, 2003 the above *Berlin Plus agreements* were signed to ensure cooperation between the two organizations. It has formed the basis of the present strategic partnership and cooperation between the two organizations. The very precise and comprehensive texts of Berlin Plus agreements, how this key set of agreements is commonly referred to, is not publicly known, due to the confidential nature of certain documents. Communiqué of the Washington Summit (1999), where this document was created, provides most information on the four points of the contract (directly related to the possibilities of the EU). Use of the *Berlin Plus mechanism* is possible within “the NATO first refusal” meaning the right of NATO to be the first to refuse the realization of the mission. Only then the EU decides for or against the mission using the offered capacity. If the Council decides to launch an operation within the Berlin Plus, it is granted access to the operational capacities of the Alliance (Kaňa, Mynarzová, 2014a). Table 2 refers to EU missions and operations with NATO cooperation.

Table 2: EU Missions with NATO Cooperation

Missions	Destination	Operation years
EUFOR CONCORDIA	FYROM	March - December 2003
ALTHEA/BiH	Bosnia and Herzegovina	December 2004 - to date
AMIS II	Sudan	July 2005 - December 2007
EUPOL Afghanistan	Afghanistan	June 2007 - to date
EU NAVFOR Somalia	Somalia	December 2008 - to date
EULEX Kosovo	Kosovo	December 2008 - to date

Source: EEAS [online] (2016b), own processing

At the Lisbon Summit (November 2010), the Allies underlined their determination to improve the NATO-EU strategic partnership. This was strengthened by NATO’s 2010 Strategic Concept which commits the Alliance to prevent crises, manage conflicts and stabilize post-conflict situations, including by working more closely with NATO’s international partners, especially the EU. Close cooperation between NATO and the EU is an important element in the development of an international “Comprehensive Approach“ to crisis management and operations, which requires the effective application of both military and civilian means. The Chicago Summit in May 2012 confirmed cooperation by underlining that NATO and the EU share common values and strategic interests (NATO Multimedia Library [online], 2016).

Mutual cooperation and coordination between NATO and the EU (under the Common Security and Defence Policy) is currently based on a number of formal and informal mechanisms. Based on the Berlin Plus agreement *NATO-EU Capability Group* was created, which should ensure the coherence of NATO and the EU with regard to the development of interaction skills. Representatives of both organizations will have to meet several times a year. Contact is also provided by the staffs of both organizations - *NATO International Military Staff* and the *EU Military Staff*. Within the EU Military Staff a NATO liaison team is permanently present (since November 2005) and a representative of the EU (EU Cell) operates at the *Supreme Headquarters Allied Powers in Europe – SHAPE*, since March 2006. There are also regular meetings of EU High Representative for Foreign Affairs and Security Policy and Secretary General of NATO, while individual Foreign Affairs ministers meet during informal meetings (Kaňa, Mynarzová, 2015b).

EU High Representative (Federica Mogherini) and Secretary General of NATO (Jens Stoltenberg) during last joint meeting (December 2015) approved as top priority to develop and strengthen the cooperation between the EU and NATO in three particular areas. The first area has been addressed to hybrid threats³⁵. NATO's Foreign Ministerial meeting (December 2015), approved NATO's strategy on how to fight hybrid threats, now it is up to EU. The second area is helping partners to become more capable of securing themselves in Europe and in the Middle East and North Africa. Syrian conflict (and situation in Iraq and Afghanistan) that led to migration crisis requires NATO and the EU operate side by side already, for better coordination in their efforts. And the third area with potential for doing more is to further boost the capabilities of European allies. NATO took a landmark, a decision at Summit in Wales (2014) to increase defence spending to two percent of GDP. European states are making progress they have started to at least stop the cuts and to invest more in their security (NATO Multimedia Library [online], 2016).

4. Conclusion

Over the last few years the security situation in global and especially in regional scale has changed significantly. Syrian Civil War and deterioration of the situation in the Middle East due to existence of “Islamic State” led to biggest migration crisis the EU has not faced yet. We have to add to this the real danger of terrorist attacks (as in Paris, 2015) and, finally, increasing ambitions of Russian Federation. These security threats represent a great security challenge for European Union and its member states to strengthen Union's position in the field of foreign and security policy and to build the necessary military/police/civilian capabilities that will ensure the required status. In addition to mentioned CSDP missions and operations we can assume that to ensure regional and global security, a functional cooperation between the EU and NATO is necessary. To fight all mentioned threats, is a complex challenge and therefore we need a “Comprehensive Approach” - we need military means, political means, together with diplomatic efforts.

According to Secretary General of NATO, 2016 will be “a big year” for the NATO-EU relationship. June's European Council and the NATO Warsaw Summit in July would be key opportunities to strengthen unity and practical cooperation of both organizations even further.

³⁵ Typical example of hybrid warfare (threat) was the annexation of Crimea by Russian Federation in March 2014.

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Development of Rural Social Infrastructure Services Promoting Elderly Integration to Society

Ilona Kiaušienė, Gintarė Vazonienė

Aleksandras Stulginskis University,
Business and Rural Development Management Institute,
Faculty of Economics and Management
Universitetas street 10 – 408, Akademija
Kaunas, Lithuania
e-mail: ilona.kiausiene@asu.lt, gintarej@gmail.com

Abstract

Integration of the elderly to society and encouragement of their participation are important steps towards better inclusion and activity of the elderly, assurance of human rights, choices and alternatives as well as their versatile role in society. One of the directions to be taken for achievement of these objectives would be development of social infrastructure services in rural areas, improvement of targeted institutional activity and provision of high-quality services according to the needs and priorities of the elderly. 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. It has been determined that science has been playing insufficient role in social infrastructure research, which, besides other impact, restricts the possibility for developing practical insights on how development of social infrastructure could strengthen ability of the elderly to feel and be normal citizens of society. According to the analysed problem, changes and challenges of the rural elderly in Lithuania's society are presented first. Second, the results of research on social infrastructure situation and need for development need are presented in view of how they relate to integration of the elderly into society.

Keywords: *Elderly, Integration, Rural Areas, Social Infrastructure*

JEL Classification: *J14, R11, R53, O18*

1. Introduction

To reflect the current socio-economic and socio-political changes in Europe increasing attention is addressed to the topics of wellbeing, solidarity, civic integration and social cohesion at different territorial levels and among various social groups. Following social policy, scientific studies (Gopalakrishna, Leelavathi, 2011; Stula, 2012; Report..., 2012; Population..., 2014) dealing with societal problems at the European level, one important direction has been acknowledged – improvement of wellbeing and overall human rights and choices for elderly people in light of obvious increase in the number of elderly population in different countries. Lithuania is not an exception too because the number of the elderly is growing consistently. The novelty of this study is based on analysis of integration into society of the elderly in the context of development of social infrastructure (further SI) services. Moreover, in EU level we can mostly find studies, reports etc. based on separate SI sectors, institutions evaluations, though there is a lack of systematic approach on this issue. The article

uses the findings of previous study 'Improvement of rural social infrastructure for the territorial and social cohesion'.

The importance of SI in a society is undisputed, as SI is the rural social and economic system and important part of daily life. SI development level predetermines satisfaction of rural elderly needs, fulfilment of their choices and alternatives. It is also a crucial component of the evaluation of economic and social progress. Rural SI comprises various, mostly public services, provided by different SI objects (institutions): e.g., education institutions, medical authorities, police forces, domestic service providers, post offices, suppliers of transportation services etc. (Atkočiūnienė et al., 2014; Vazonienė, 2015). It is widely discussed at the European Union level (Stula, 2012; Population..., 2014; Niedzwiedz, 2014; Policy..., 2015) that integration of the elderly into society and better wellbeing depend largely on housing and family relations, health care, transport system and cultural life services – all being parts of SI sectors. As a result, inconsistency between the demand for and supply of SI services becomes more evident. Studies on the SI development could be claimed to gain importance, where they apply to solution of issues related to certain social group (Gopalakrishna, Leelavathi, 2011; Niedzwiedz et al., 2014; Vazonienė, 2015) or to identification of attractiveness, viability of a territory (Ahgren et al., 2009; Suharto, Tan, 2011; Atkočiūnienė et al., 2014). Achieving consistency between the supply of and demand for the IS services related to the needs draws more light on the characteristics of social and economic differentiation of the rural elderly. In presentation of results of this study it has therefore been attempted to analyse the importance of SI for the present situation and development of SI for social functioning and integration of the elderly into society and its barriers.

In view of the above, the following research question has been formulated: how social infrastructure service development can contribute/support promotion of integration of the elderly into society? *The research object:* social infrastructure services as an integrating element promoting integration of the elderly into society. *The aim of the research:* to analyse the opportunities offered by development of rural social infrastructure in terms of promotion of integration of the elderly into society. *The research objectives:* 1) to disclose the problem of population ageing; 2) to analyse features of social infrastructure as of the integrating element promoting integration of the elderly into society; 3) to assess the level of development of rural social infrastructure (RSI) and the needs of the rural elderly. The article has been structured according to the research objectives presented above.

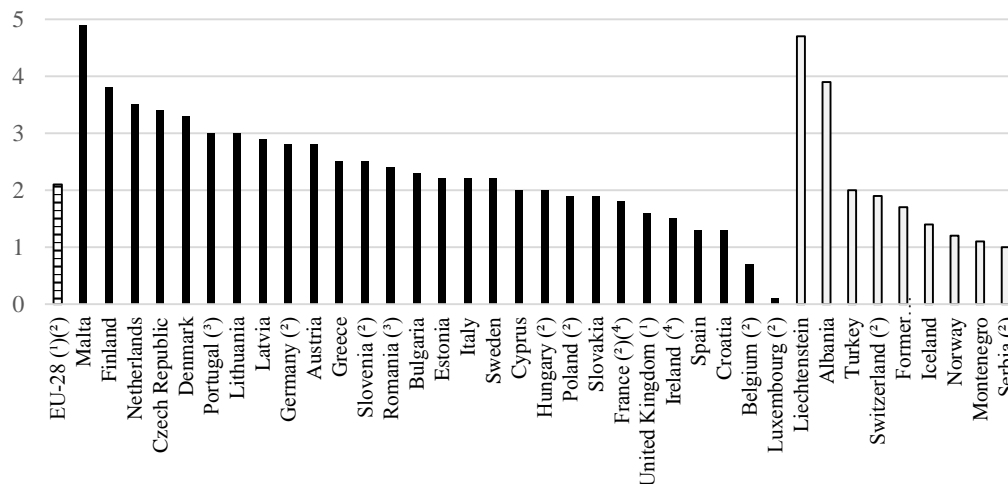
2. Population Ageing Problem in Europe and Lithuania

Population ageing is monitored and evaluated at the European and national levels. In scientific discourse (Policy..., 2012; Stula, 2012; United Nations, 2013), it has been acknowledged that the increase in life expectancy should be deemed a positive change in health care, social and economic domain and an achievement for the modern society. Nevertheless, the scientific literature (The Challenge...[online], 2012; Population..., 2014; Niedzwiedz et al., 2014) has also been pointing out various age-related risks of physical and social functioning associated with transition from labour market to retirement age, which influences health and social economic status, general attitudes towards ageing, life style and living conditions, restrictions from SI. As a result, the elderly face challenges related to lower evaluation of their overall wellbeing.

It is acknowledged that the threshold of population senility (attribution of people to the category of elderly) is a matter of agreement. The threshold of senility according to senility criteria approved by the United Nations is 60 years (United..., 2013). With the retirement age

being 65 in most European countries, Lithuania has been gradually increasing this age from 60 to 65 in view of the European Union regulations and social economic circumstances of the country. According to the Lithuanian statistics of 2014 (Demographic, 2015), the retirement age of women has reached 60 years 8 months and that of men 62 years 10 months. As a result, the results of ageing problem monitoring in comparison to other European countries do not allow for developing an accurate profile of demographic situation. According to the Eurostat statistics, several indicators disclosing the ageing situation in all Europe Union member states are observed. One of important indicators is the share of the population aged 65 years (Figure 1).

Figure 1: Increase in the Share of the Population Aged 65 Years or over Between 2004 and 2014 (Percent Points)



(1) Provisional; estimate.

(2) Break in time series in various years between 2004 and 2014.

(3) Estimate.

(4) Provisional.

Source: Eurostat (online data code: demo_pjanind)

Source: Eurostat [online], 2015

As may be noticed, Lithuania stands in the 7th place, and this indicator increased by 3 % age points and was above the European Union average. Ageing is increasing, also taking into account smaller births rates registered in the recent years. It is also to be noted that the ratio of young to elderly population causes imbalance in the structure of society. Total age dependency ratio in 2014 in EU-28 was 2.2 p. p. bigger (51.6 %) than in Lithuania (49.4 %). According to the old-age dependency ratio, this indicator in Lithuania (27.5 %) was smaller just by 0,6 p. p. comparing with EU-28 (28.1 %). Elderly population average of European Union (Demographic..., 2015) indicates that in 2014, 65+ population made 18.5 % of all population, meanwhile in Lithuania it was 18.4 % (18.7 % in 2015) – very close to the EU average. In terms of the ageing situation in Lithuania, elderly people (60+) could be claimed to have made 25 % of all Lithuanian society, with same share in rural areas in 2015 (Table 1). Compared to 2011, the total rural population comprising 60+ elderly group, both men and women, decreased in 2015. Nonetheless, situation with 80+ group has shown growth in population of this age group. 80+ group of rural population made as many as 22 % of all Lithuanian elderly people in 2015, or 2 % points higher as compared to 2011. Compared to 2011, 80+ population in rural

areas increased by 8 % in 2015. In 2014, this indicator was 5.1 % for the EU-28 and 5 % for Lithuania as the share in total population.

Table 1: Changes of Elderly in Rural Areas of Lithuania (Thousands)

Indicators	2011			2015			Comparing 2015 with 2011, %		
	In whole	Men	Women	In whole	Men	Women	In whole	Men	Women
Population	1015,5	491,2	524,2	958,6	467,3	491,4	-6	-5	-6
60 +	247,5	91,4	156,1	241,4	91,7	149,7	-2	0	-4
80 +	49,4	12,6	36,7	53,1	13,9	39,3	8	10	7

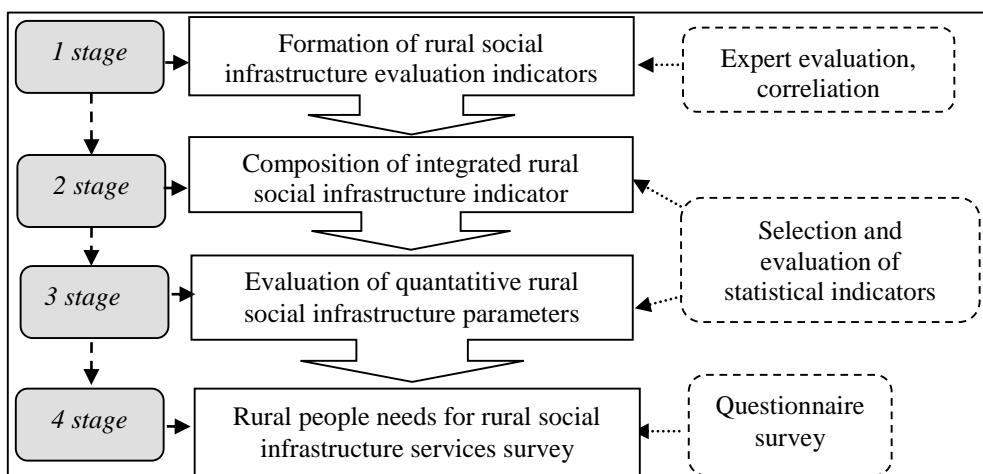
Source: authors 'calculations

Comparison of Lithuania with the EU makes it clear that growth in the numbers of the elderly in society requires adapting the existing resources to the new needs of the in the systems of distribution, consumption. Health care system raises challenges of ensuring financing, balanced development of high quality services and their accessibility for everyone. Therefore, 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.

3. Research Methodology

The methodological background of this research is based on analysis and synthesis of scientific literature and European and national documents, statistical calculations, graphic modelling. In order to obtain comprehensive information on condition of the RSI, weaknesses of service provision, and identify the needs of residents, both statistical data (quantitative evaluation) and subjective (qualitative) evaluation are needed. Evaluation of RSI condition covers several stages (Fig. 2).

Figure 2: Evaluation Stages of Rural Social Infrastructure



Source: authors 'elabotation

First, preliminary list of indicators characterising the RSI condition has been developed. 8 sectors have been identified during evaluation of quantitative differences of RSI conditions: education, training, consultancy (S_1); communications and telecommunications (S_2); utilities and municipal services (S_3); transportation (S_4); culture, sports, recreation (S_5); trade and public catering services (S_6); health and social security (S_7), personal and property protection (S_8) (Atkočiūnienė et al., 2014). Respective indicators have been allocated to each sector. Following development of the preliminary list of indicators characterising the RSI condition, expert interviews were held to provide rationale behind importance of the sectors and indicators for evaluation of the RSI condition. 30 indicators were included into the final set of RSI condition indicators. Hence, the integrated indicator comprises 8 sectors characterised by 30 indicators. The overall evaluation of RSI sectors of the region (I_{KSI_j}) has been obtained as the arithmetic sum of points obtained during evaluation of a separate RSI sector (Atkočiūnienė et al., 2014).

This research was performed applying random selection, to be more exact – applied cluster analysis. Selected five pilot areas complied with specified criteria: particular differences in rural residents, they are in different regions and districts consist of townships, some of them of small towns and villages. The study of the needs of rural residents was implemented using questionnaire survey which aimed at identifying the respondents' opinion on the current RSI condition and existing weaknesses of the RSI objects, emphasizing the attractive aspects of the area of residence in terms of living, employment, investment, and issues characteristic of various types of areas that are relevant to the locals. The sample was N-1023 respondents (though there had to be only 400) from which 110 were rural elderly. The SI condition has been evaluated by converting the responses into a 5 point scale. The data obtained have been processed by applications IBM SPSS Statistics Version 20 and Ms Excel.

It is worth noting that this research has scientific, practical and strongly proved methodological background. As well it was the field of interest from scientists from Poland looking for opportunities to test it in their rural areas. Moreover, we make presumption that in EU level especially emphasizing European integration processes this research can be a good practice example while seeking to create systematic (integrated) view to SI evaluation.

4. Social Infrastructure as an Integrating Element of the Elderly into the Society

Theoretical reasoning and limited empirical findings suggest that integration of the elderly into society and overall wellbeing are influenced by SI services in local context as well as by personal characteristics. The common interest of all rural residents in improvement of the rural SI services should comply with the needs of both individual residents and various social groups. Furthermore, considerable size and specific nature, institutions, living environments created for elderly people assure their human dignity (2010: a Europe..., 2003; Suharto, Tan, 2011; The Challenge...[online], 2012; Vaznonienė, 2015). Although few studies on SI development aimed at integration of the elderly into society have been conducted both in Lithuania and abroad, this research and practical field obviously is significant in a number of different aspects (Atkočiūnienė et al., 2014). Difficulties in ensuring adequate and affordable SI, conflicts in social infrastructure provision services are relevant to more vulnerable, risk groups, and the rural elderly are susceptible to social exclusion (Suharto, Tan, 2011; Eurostat..., 2014; Policy..., 2015). Nonetheless, SI services could be considered relatively as

a social investment in satisfying the needs and ensuring better wellbeing. Following different scientific literature, political and practical insights (2010: a Europe..., 2003; Suharto, Tan, 2011; United..., 2013; Policy..., 2015) the need to promote a more favourable attitude towards the SI for integration of the elderly into society could be supported by several statements: a) SI serves as the key factor enhancing quality of life and creating strong, active communities in rural areas; b) elderly rural residents as the consumers indicates the demand for specific SI services; c) integration of the elderly into society through SI relatively reflect their personal intentions or willingness for action; d) innovations of the SI services can enable the elderly to find information about accessibility of various services, in particular, in place-based context; e) SI acts as a strong factor of external investment and induces rural area growth; f) SI development research supplement the data of previous studies; g) provision of SI services promotes social cohesion and concentrates efforts of various rural development actors. With the rural areas recognised as a living place for all age groups, the SI services could be claimed to be a social bridge integrating the rural elderly into various activities, promoting their participation and collaboration. Moreover, active role of the rural elderly could strengthen both the process of building rural human capacity and initiating better living conditions through SI improvement.

5. Development of RSI in Lithuania and Needs of the Rural Elderly

Integrated evaluation of the RSI condition has shown that there is no rural area in a district or municipality of the country that could be named as having a very well developed RSI. Comparison of RSI evaluation indicators between individual regions has suggested that differences exist in the condition throughout the infrastructure system. RSI of the majority of districts and municipalities (56.86 %) has been evaluated at 2.5–3.0 points. Poor condition of the RSI has been identified in 18, or 35.29 %, of all the country's districts and municipalities. In more than half (i.e. 29) of the Lithuania's districts and municipalities, the RSI condition was recognised as satisfactory, with the evaluation scores ranging between 2.93 and 2.51. Analysis of the SI condition in Lithuania's districts and municipalities has shown that the RSI is the weakest in the sectors of personal and property protection, trade and public catering services, health and social security, transportation (Table 2).

Table 2: Subjective and Objective Evaluation of Rural Social Infrastructure Sectors in Lithuania, 2014, in Ccore*

Evaluation method	Social infrastructure sectors							
	Education, training, consultancy	Communications and telecommunications	Utilities and municipal services	Transportation	Culture, sports, recreation	Trade and public catering services	Health and social security	Personal and property protection
Elderly people subjective evaluation	3.26	3.81	3.32	2.76	3.24	3.05	3.19	2.79
All respondents subjective evaluation	3.39	3.82	3.38	3.05	3.09	3.07	3.14	2.95
Average of objective evaluation	2.56	3.36	2.57	2.44	2.68	2.33	2.39	2.28

Remark: meanings of scores are 1-very bad, 2-bad, 3-satisfactory, 4-good, 5-very good. Source: author's calculations.

The sector of personal and property protection has received the lowest evaluation score (2.28 point). According to the objective evaluation, RSI is strong in the sectors of communications and telecommunications, culture, sports, recreation. The sector of communications and telecommunications has received the highest evaluation score (3.36 point). The average evaluation score for this sector is 30.23 % higher than the aggregate RSI score (2.58 point). Meanwhile, the condition of personal and property protection sector has been evaluated as bad with the average evaluation score for this sector being 11.63 % lower than the aggregate RSI score. Hence, development of the RSI is inconsistent across Lithuania's districts and municipalities, creating prerequisites for emergence of economic social problems. According to the subjective evaluation, the elderly have evaluated the transportation sector the lowest (2.76 point). More than third (35 %) of the elderly living in the pilot areas have rated the transportation sector as very bad/bad, meanwhile rural residents have indicated that personal and property protection sector is the worst functioning sector. The quality of services and functioning of this sector have been found to have certain weaknesses. The elderly have rated the communications and telecommunications sector the highest with their opinion being close to all respondents' opinion. This indicates that in the pilot areas this sector has been developed the best compared to other sectors. Elderly respondents' opinion was lower in as many as 6 sectors compared to all respondents.

6. Conclusion

The analysis of demographic indicators has shown that the issue of population ageing is relevant for Lithuania, with the group 80+ growing the fastest. Rural population ageing causes adverse social economic consequences such as social and physical functioning, integration of

the elderly into society restrictions and satisfaction of their needs, accessibility of public services etc. To achieve higher quality of life for the rural elderly, willingness and efforts of the locals must be supported by external assistance related to SI service development.

Objective and subjective evaluation of SI have shown that SI services are evaluated fairly differently. Integrated statistical analysis of SI indicators has revealed lower evaluation of SI services than in the subjective perspective. This finding can be supported by methodological SI evaluation features. The biggest problems in opinion of the rural elderly is bad functioning of transport and personal and property protection sectors, meanwhile the highest scores were given to communications and telecommunications.

Difficulties in ensuring adequate and affordable SI services challenge conflicts between the elderly needs and rural development actors who should assume responsibility in developing SI. 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.

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Shopping Typology of Generation Y in selected European Union Countries

Petra Klapilová Krbová, Šárka Velčovská

VSB - Technical University of Ostrava

Faculty of Economics, Department of Marketing and Business

Sokolská třída 33

Ostrava, Czech Republic

e-mail: petra.klapilova@vsb.cz, sarka.velcovska@vsb.cz

Abstract

The main aim of this paper was to create a shopping typology of Generation Y in two European Union countries, the Czech Republic and Slovakia. Data were collected by questioning. Generation Y individuals of both countries served as a population for the survey. The sample consisted of 218 Generation Y individuals from the Czech Republic and 162 from Slovakia. The sample was chosen with the judgemental sampling. Several statistical methods were used to get the proper results, namely basic descriptive statistics, Pearson's χ^2 and factor and cluster analyses as the main methods. As the result of the study several segments were determined separately in both countries. Although both countries are the members of the European Union and have long common history, some differences in typologies were found. Also various common characteristics were observed, e.g. the prevailing preference of online sources of information, tendency to shop online and reliance on own judgement before the choice of the product.

Keywords: Czech Republic, Decision Making Process, Generation Y, Slovakia, Typology

JEL Classification: C38, M31, M39

1. Introduction

Shopping typologies are a common instrument used in business to get to know target groups. Marketers still try to seek markets that are internally consistent on some common ground and differ from other markets. Segmentation has become the key of marketing effectiveness and efficiency (Parment, 2013). Segmentation seems to be necessary also for the enterprises operating in the European Union due to the diversity of particular Member States markets. On the other hand, basic principles of operating in these markets are almost the same due to the existence of the European Single Market. So the enterprises operating in the European Union can use the advantages of it. However, even the principles are almost the same, the customers can differ significantly. Therefore, it seems to be useful to examine the customers in particular Member States in order to create typologies of them which can be later used for better targeting in the marketing campaigns.

1.1 European Single Market

Retailers and manufacturers operating in the European Single Market can use the benefits that this territory without any internal borders or other obstacles can offer in terms of free movement of goods and services (European Commission [online], 2016b). In this area, goods can move as freely as on particular national markets. The free movement of goods is the first

out of four basic freedoms of the European Single Market. The complete framework is based on the elimination of quantitative restrictions, custom duties or any other similar obstacles on trade. Physical and technical barriers were eliminated as well. On the other hand, standardisation was added. Initially, free movement of goods was planned as part of a custom union between the Member States. Later other issues were discussed and implemented (European Parliament [online], 2016). The positives of Single Market are obvious, e.g. rise of quality, stimulation of competition and trade or improvement of efficiency. It also makes lives of European enterprises and consumers easier (European Commission [online], 2016b). Single Market is supposed to be a 'home market' to 500 million consumers in the European Union because of providing an easier access to a wider range of shopping opportunities for lower prices. It also forces subjects operating in the EU to adjust technologies and to implement innovations and higher standards of safety and environment protection faster (European Commission [online], 2016a).

In this paper, especially shopping process of the final consumers has been examined. It aimed to create shopping typologies of customers in order to have better knowledge about their specifics and shopping habits. Customers operate very frequently in the sector of retail trade where they spend very high amount of their expenditures. The retail trade sector (according to NACE classification) was in 2010 the second largest within EU 27' non-financial business economy in terms of turnover and value added. Turnover was valued at 2592 billion EUR in this year (Eurostat, [online], 2016). For retail companies and also manufacturers, detailed knowledge about their target groups can be inevitable for the future success in the market. The potential problem lies in the diversity of customers across particular European Union countries. Therefore, many research agencies offer shopping typologies of customers across the EU. One of the approaches to creating typologies lies in the generational cohort theory.

1.2 Generational Cohort Theory

Generational cohort theory is widely used in the field of marketing. Finding the homogenous segments of consumers that can be offered by very similar products or services can bring savings and better targeting to companies. Marketing based on differences among generational cohorts goes deeper than common segmentation according to the basic demographic indicators like age (Parment, 2013). Generational cohort is a group of people born during a specific period of time (usually 20-25 years) who experience the same events in the history during their formative years. This can form individuals sharing similar values, attitudes and beliefs (Brosdahl and Carpenter, 2011). The Silent generation is followed by Baby boomers, and then Generations X, Y and Z exist.

1.2.1 Generation Y Specifics

Generation Y, so called Millennials or Net Generation, is a specific cohort of people born approximately between 1980 and 2000. Some authors refer to different boundaries, e.g. 1982-2000 (Brosdahl and Carpenter, 2011) or 1980-1994 (Bednall, Valos, Adam, McLeod, 2012) or 1977-2000 (Noble, Haytko, Phillips, 2009). This generation possess an extensive and significant purchasing power and becomes very attractive for companies (Brosdahl and Carpenter, 2011). Generation Y has lifestyle completely different from previous generations (Mandhlazi et al., 2013). This can be caused by a permanent presence of new technologies in their lives. They have grown up together with opportunities that World Wide Web can bring, i.e. social networks and immediate availability of information. The influence of popular culture is also very strong (Parment, 2013). They very often belong among innovators or early adopters according to the Innovation Adoption Lifecycle Theory (Mangold and Smith, 2012).

Family background comprises in approx. 75 % of families, where Generation Y lives, the working mothers. That can lead to more liberal spending patterns (Dunne and Lusch, 2008).

1.2.2 Generation Y in the European Union

According to Eurostat's most recent demographic data from 2015, European Generation Y account for 24 % of the adult population in the 28 EU Member States (Stokes [online], 2015). Unlike in the United States, European Generation Y do not comprise the largest segment of the labour force (Laudicina and Peterson [online], 2016). More than 90 % of Generation Y considers family to be a fundamental element of their growth. They use modern and new technologies to arrange appointments, make travel plans with friends and view technologies as the core of their social acceptance (Corvi, Bonera and Bigi, 2010). A small majority of European consumers have made a purchase online in the last twelve months (54%). 25-39 year-olds are the most likely to have purchased online (76%), followed by 18-24 year-olds (68%) (European Commission [online], 2015a). The first of mentioned group comprises a part of Generation Y and the whole second one belongs to Generation Y. Men are more confident than women to buy online from domestic retailers or providers (66% vs. 57%) (European Commission [online], 2015a). The prevalence of online shopping is strongly linked with frequency of internet use (European Commission [online], 2013). Consumers in the Czech Republic are in general (regardless of generation) the most likely to be aware that they can return an electronic product bought online, by phone or by post four days after delivery, and receive their money back (72%), followed by those in Germany (69%), Slovakia (66%) and the Netherlands (65%) (European Commission [online], 2015a). Generation Y individuals have been affected by Europe's debt crisis; they have to deal with rising of youth unemployment. Among those who are still studying, the most common concern in getting a job is not finding a long-term contract or a stable job (31%) (European Commission [online], 2015b). They are increasingly pessimistic about their ability to control own success through hard work and good education (Laudicina and Peterson [online], 2016). On the other hand, Stokes [online] (2015) claims that most of European Generation Y individuals are satisfied with their own lives (with Germans the most satisfied). According to Pawlasová, Valečková and Spáčil (2014) Czech Generation Y individuals trust in the European Union more than older generations, specifically Generation X.

2. Research Methodology

Generation Y, as a huge generational cohort with an extensive shopping power, has become a very attractive segment for companies nowadays. Comprising diverse people born from 1980 to 2000, it is necessary to describe the main characteristics regarding to the decision making process. With the usage of market data, it is possible to create a typology of Generation Y that can serve as a basis for adjusting assortment and services offer in the stores, both online and offline. Among different countries also some differences could be found. Generation Y has been widely examined in USA (e.g. Brosdahl and Carpenter, 2011), but less often in the European Union countries (e.g. Parment, 2013). Presented research was focused on two countries in the Central Europe, namely the Czech Republic and Slovakia, as very close countries (connected not only historically) and also members of the European Union since 2004.

2.1 Research Objective

The main objective of the research was to create shopping typologies of Czech and Slovak Generation Y individuals in terms of their attitudes to shopping, brands, retailers and discounts.

In this article, only final findings are presented due to limited extent of the paper. Partial analyses can be found in Klapilová Krbová (2016a) and Klapilová Krbová (2016b). The reason why to examine the potential differences among European Union countries is the need to identify the specifics of the Generation Y that seems to become very important regarding to revenues of manufacturers and retailers. Description of specifics can help subjects operating in the Single Market to break down barriers among individual EU Member States especially in the category of free movement of goods.

2.2 Population and Sample

Generation Y individuals living in the Czech Republic and Slovakia born between 1980 and 2000 served as a population for the survey. The sample of 380 respondents was conducted by judgemental sampling, i.e. non-probability sampling technique was used. See Table 1 for detailed structure of the sample.

Table 1: Detailed Structure of the Sample

		Czech Republic		Slovak Republic	
		Count	%	Count	%
Gender	man	82	38%	77	48%
	woman	136	62%	85	52%
Education	primary or apprentice school	67	31%	64	40%
	secondary school	85	39%	49	30%
	university	66	30%	49	30%

Source: authors' calculations

2.3 Data Collection Method and Questionnaire

Data were collected separately in two European Union countries, the Czech Republic and Slovakia, with the usage of the same questionnaire as part of diploma thesis of Slížová (2015) and Turoňová (2015) as the members of the research team. Online questioning was supplemented by written questioning due to problems with collecting enough answers from respondents. The research was conducted during autumn and winter 2014/15. Online questionnaire was spread with the usage of contacts on social networks as well as the link was sent to the list of email addresses provided by research team members. As mentioned above, written questioning was necessary to get a suitable size of the sample, so particular secondary schools in Moravian Silesian Region and Region of Zilina were asked to participate in the survey. The questions included in the questionnaire touched several phases of the decision making process, e.g. general attitudes of Generation Y, information sources they use before purchase, main reference groups, attitudes to shopping, brands and retailers, perception of discounts and sales, visits of shopping centres (length, activities) as well as the preference of online purchase. Such a wide palette cannot be presented in one paper. Therefore, only (1) factor analysis that served as the base for the cluster analysis and (2) final typologies of Generation Y in the Czech Republic and Slovakia are presented in this paper.

2.4 Methods of Data Analysis

Data were analysed with the usage of SPSS 21.0 and Microsoft Excel software. Several methods of analysis were used to find eventual dependencies between variables, e.g. analysis of variance (ANOVA) and Pearson's χ^2 were applied. To set the optimal starting point for creating typology of Generation Y, factor analysis was used to diminish the number of

variables used later in cluster analysis. Principal component analysis with Varimax procedure and hierarchical clustering with Euclidean distance measure and Ward's method served as the methods of factor and cluster analysis.

3. Shopping Typologies of Generation Y individuals

Because of a great extent of various issues as parts of the questioning, factor analysis was essential in order to reduce the number of variables. The new factors were then used as the basis for clustering respondents into groups, i.e. segments. These results have already been published in Klapilová Krbová (2014a), but for the purposes of further cluster analysis presented later in the paper, it is certainly necessary to mention them.

3.1 Factor Analysis of Attitudes to Shopping, Retailers, Brands and Discounts

Originally in the questionnaire, total number of 33 statements was evaluated on 7-point Likert type scale, where 1 meant total agreement and 7 meant total disagreement. Attitudes to shopping, retailers, brands, discounts and sales offers served as the base for factor analysis. Attitudes of all respondents from both countries were included to the factor analysis. Factor analysis of these statements was valid because of the results of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO measure=0.662) and significance of Bartlett's test of sphericity (sig.=0.000). The results of factor analysis suggest that statements can be divided into 4 main groups evaluated by the respondents similarly (see Appendix 1). These new factors were further used in cluster analysis in order to create the clusters of Generation Y individuals. The first factor named as 'Brand and tradition loving' is associated with the tendency to prefer branded products, admiration of well-situated people owning expensive property, preference of well-known retailers and negative attitude to sales support activities as coupons. The second factor 'Shopping is easy if you verify information' refers to the sympathy with online shopping, need to verify information before purchase and the feeling of being the excellent shopper. Also the preference of well-known shopping place and brands (in case of online purchase) was examined here. Statements connected to the sympathy with discounts are parts of the third factor ('Discount and sales loving'). These sales support activities can enhance the feeling of happiness as well as the tendency to read leaflets on a regular basis and to use the loyalty programmes as often as possible. The fourth factor mirrors negative issues that decision making can bring like the overwhelming by the amount of information as well as the width of merchandise offered in the market. It refers also to the confusion by not optimal quality of information provided by the retailers and also the problems connected with the searching of the best alternative of the shopping place. Therefore, it was named as 'Overwhelming by supply and information'.

3.2 Shopping Typology of Generation Y

Despite of clustering according to the same factors, the results of segmentation process of Generation Y in the Czech Republic and Slovakia differ, i.e. the clusters have different characteristics.

Table 2: Factor Scores in Particular Clusters for Both Countries

Country	Czech Republic				Slovak Republic			
	A	B	C	D	A	B	C	D
REGR factor score 1	.0262	-.5237	-.1613	.0909	.3278	1.2178	1.2965	-.8785
REGR factor score 2	.1031	.0481	-.7582	.8579	.2780	-1.1951	.1268	.1087
REGR factor score 3	1.0328	-.4565	-.4643	-.5905	-.5721	.9158	.3090	.5036
REGR factor score 4	.0919	-1.3220	.4525	.3478	-.3943	-.5660	1.5417	.2370
Share of people	32%	16%	32%	20%	49%	12%	8%	31%

Source: authors' calculations

In Table 2 factor score matrix for both countries can be seen. In all 4 factors in both countries statistically significant differences (according to ANOVA) were found regarding to the clusters (all sig.=0.000, only sig. in the first factor in the Czech Republic=0.26).

3.2.1 Shopping Typology of Generation Y in the Czech Republic

In the Czech Republic, the structure by gender (Pearson's $\chi^2=7.908$, sig.=0.048) as well as by educational level (Pearson's $\chi^2=16.546$, sig.=0.011) depends on the cluster. A typical shopping scenario comprises a product choice and after it a shopping place search. All the clusters prefer this scenario, but the share of it is different, with the highest level in the cluster C (Pearson's $\chi^2=9.813$, sig.=0.020). Various combinations of online/offline seeking of information with follow-up online/offline purchase has appeared in the clusters (Pearson's $\chi^2=36.653$, sig.=0.000). According to the results of ANOVA, the clusters answered significantly different in parameters as follows (1) price level (sig.0.006), (2) quality of products (sig.=0.000), (3) width of assortment (sig.=0.008), (4) easy exchanges and returns (sig.=0.000) and (5) store atmosphere (sig.=0.001). Own experience is the most important when selecting what to purchase for all Czech clusters (sig.=0.468). The importance of friends (sig.=0.011), family members (sig.=0.025) and online references (sig.=0.012) differs significantly.

The cluster A has a strongly positive attitude to all the new factors. Its members feel overwhelmed by the amount of information and the width of supply, but also think that if they verify information, the shopping process can be simple. Above average they love brands and keep tradition in shopping. On the other hand, discounts and sales offers are welcomed. This last factor was preferred much more than the average of the sample was. So we can name this group as 'Discount lovers'. Demographic profile fits these characteristics – more women (57%) with primary education (40%) and secondary education (33%). These people want to be sure, so after choosing a particular product they start searching a proper shopping place (75%). Online sources are usually the basis for seeking information about products, but on the other hand shopping place is usually offline (41%). A particular store is chosen according to the price level that should be lower than competitors', overall quality of products and the width of assortment. Own experience is the most important when selecting what to purchase (77%). Also friends (63%) and online references (57%) are the useful sources of information and recommendation. In these two parameters the opinions of clusters differ.

The cluster B ('I want more of all') has a very negative attitude to the fourth factor which means its members do not feel overwhelmed by the amount information or wide supply available in the market. They are not sales hunters a lot as well as they do not perceive brands or tradition as very important. On the other hand shopping is considered to be easy if a shopper

verifies information in the market. Nearly 71% of women and mostly people with primary education belong here. A product is chosen as the first even then shopping place is found (74%). Searching of information as well as the choice of a store is most often offline, i.e. brick-and-mortar stores are the most popular (47%). Three factors are the most important regarding to the choice of the shopping place, lower price, quality of assortment and additional services offered by the store as easy exchanges and returns. This segment is the only one where its members rely on advice of friends the most (88%). Own experience with a product (77%) and family members (56%) serve as the additional channels of recommendations.

The cluster C ('Shopping is a misery') comprises people who feel overwhelmed by information and assortment offer in the shops. Nearly equal share by gender with the lowest share of primary school educational level (secondary school and university=87%) – these are the main demographic characteristics. They do not accentuate a dedication to traditional products, brands or the importance of sales. The shopping process is complicated even if the shopper tries to verify information before purchase. Almost 93% of them chooses a product at first and only then starts to search a best suitable shopping place. In this process the overall quality of assortment is considered to be the most important criterion followed by the price level. This is the only group where price was not accentuated as the most important. It is curious because on the other hand this group has higher than average feelings of overwhelming by the width of supply in the market. This can be probably a problem when they start their decision making, but after finding a right object of purchase, this threat is no longer present. This group indicates the highest share of completely online shopping process, i.e. online search of information followed by online purchase (46%). Together with this fact also own experience is the basic lead when they decide about a purchase of particular product (90% of respondents). Friends (75%) and online references (65%) are other important sources of information.

The last cluster D ('Shopping is a pleasure') consists of Generation Y individuals who like brands and keep traditions. They do not like discounts and sales offers and sometimes feel slightly overwhelmed by the amount of information and merchandise in the market. The highest positive value above the average of the sample was in the second factor. These people think shopping is easy and verifying information before purchase can help them to make the right decision. As in other clusters also here a product is chosen at first (75%). Seeking information is made directly in the store followed by a purchase there too (41%). One third combines online seeking of information with following purchase offline (34%). Family members and own experience have the same (high) importance followed by friends' advice. Except of overall quality level of products offered, the price level has the same importance. Store atmosphere was accentuated as more important than in other clusters. (sig.=0.001).

3.2.2 Shopping Typology of Generation Y in Slovakia

In Slovakia, the structure by gender depends on the cluster (Pearson's $\chi^2=22.640$, sig.=0.000). On the other hand, the structure by educational level is not affected by it (sig.=0.243). The preference of online/offline searching of information with follow-up online/offline seeking of a particular shopping place differs significantly among clusters (Pearson's $\chi^2=18.755$, sig.=0.027), so all the combinations appeared in the clusters with prevailing share of one or two of them. Analysis of variance showed no statistical differences among clusters in regard to the main reference groups. Slovak Generation Y decides mainly according to the own experience, advice of friends and family members. According to the ANOVA results, the clusters differ significantly in parameters as follows (1) price level (sig.=0.029) and store atmosphere (sig.=0.011). Other variables in this question were evaluated the same by clusters, e.g. quality of products (sig.=0.398), the width of assortment (sig.=0.159) and easy exchanges

and returns (sig.=0.492). All the clusters stated that the choice of a particular product is the first step in the decision making process, shopping place is chosen afterwards (sig.=0.860). The share varies from 76 to 84%.

Mostly women (70%) with primary or university education belong to the cluster A named as 'I want more, but not discounts'. They prefer shopping in the brick-and-mortar stores while searching information is more online (41%). Quite a big share of those has appeared in this cluster, whose decision making process remains offline at all (35%). Own experience is crucially important followed by the advice of friends and family members when deciding about a particular product. Except of quality of products being the most important factor of choosing a suitable shopping place, also price level and wide assortment play an important role. The choice of a particular product is the first step in the decision making process, shopping place is chosen afterwards (81%).

The analysis of factors in the cluster B has indicated high tendency to brands and tradition preserving ('Onliners seeking brands, tradition and information'). Higher than average also the preference of discounts and sales was found. Shopping is not supposed to be easy even if a shopper has enough verified information. They do not feel overwhelmed by the amount of information available and used during decision making process. The width of assortment is no problem for this segment of Generation Y. So it can be assumed that the wider choice possibility, the better. Share of men and women is almost equal with the prevailing ratio of university and secondary education. Decision making process is made mostly online, including seeking of information (53%). Own experience and friends' advice, as the source of recommendation, are followed by the usage of online references like blogs, reviews and discussions (63%). Family follows afterwards. Store atmosphere was accentuated as the reason of visiting a particular shopping place more than in other clusters. A quality of products offered has the same importance. Price level is the third most important criterion.

The cluster C members prefer brands and tradition as well as they are not lost in a decision making process if they find enough verified information. They do not like discounts and sales offers, but on the other hand they feel overwhelmed by the width of merchandise. Information can be considered to be useful and frequently used, but the feeling of overwhelming by information sources in the market was also examined. Secondary level of education (43%) and higher share of men (64%) are the basic demographics of the cluster. Major part consists of those whose decision making process is completely online (43%), but there exists also big group of mostly offline customers (36%). Sources of recommendation are the same as in cluster B. The most important features of selecting a shopping place differ; price level was not mentioned on the first three positions (1. quality of products offered, 2. easy exchanges and returns and 3. product selection). This group can be named as 'Brands and tradition lovers who feel overwhelmed'.

The last cluster D has more negative attitude to brands and tradition. Its members feel shopping as an easy process if accompanied with enough information. On the other hand they can perceive an overwhelming by the information smog that exist in the market as well as very wide assortment possibilities. They love discounts and sales. Prevailing share of men (70%) with basic education (50%) are the basic characteristics for this cluster. Except of the combination of offline searching of information with further online purchase, all remaining combinations had similar shares of answers (online searching and online purchase=24%, online searching and offline purchase=32% and both offline activities=30%). Own experience, friends, family and online references are the most used sources of recommendation. Quality of assortment offered in the store determines the willingness to choose this store for purchase.

Price level follows as the second one. The name of this cluster is 'I want to shop as easy as possible'.

4. Conclusion

Clusters, identified with the usage of cluster analysis, differ in both, among themselves in a particular country as well as between countries where the research was conducted. In the Czech Republic, segments have different demographic characteristics in gender, educational level and also age. In Slovakia, they differ only in gender structure. All of the segments in the Czech Republic choose a product at first, after that the shopping place is found with significantly different shares among segments. In Slovakia, answers of all segments were not significantly different. All the combinations of online/offline searching of information and online/offline purchase appeared in all 8 segments with prevailing trends in particular clusters. Quality is considered to have the same position in Slovak clusters, but Czech clusters evaluated it differently. Also some common tendency emerged, e.g. store selection is influenced in particular segments most frequently by overall quality of products and the width of assortment. Generation Y individuals accentuated own experience as crucially important regardless of country or the membership in a particular cluster. In Slovakia, friends and family members have the same importance across segments. In the Czech Republic, some segments prefer advice of friends and family significantly more than others. Sources of information also differ significantly, especially due to the ranking of the options and significant differences among clusters. Online sources as retailers' websites and price comparison websites seem to be the most often used for two clusters in the Czech Republic and the frequency of usage significantly varies among segments. In Slovakia, retailers' websites also became the most often source of information for several segments with the statistically significant differences among segments too. Surprisingly, one segment of Generation Y in Slovakia use written catalogues, leaflets and newsletters the most often.

The limited length of the paper does not allow presenting all particular and specific research results that served as the basis for findings presented in this paper. Almost each study has its limitations. The extent and structure of the samples are the main limits of this research. Other limits can be identified in a fact that data were collected in two European Union countries only. In the future it would be beneficial to conduct similar research in other European Union countries in order to make a comparison with the findings presented in this paper. In this time, data are being collected among Generation Y individuals in Spain and there exists the intention to focus also on Poland in the future. Such a comparison of several typologies could be considered as useful for manufacturers and mainly retailers in the European Union who operate in the Internal Market. It can bring new insights into the Generation Y and help to create 'personalised' strategies to get a higher attention of this target group.

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Appendix 1

Table 1: Factor Analysis of Statements to Shopping, Retailers, Brands and Discounts

Rotated Component Matrix	1*	2*	3*	4*
Branded product = symbol of success and prestige.	0.687			
I admire people that own expensive house, car or jewellery.	0.585			
Well-known retailer is an equivalent to a good quality.	0.562	0.351		
I have only several favourite brands that I buy.	0.560			
People judge me according to products I usually buy.	0.551			
I like to own things that impress others.	0.549			
The name of the retailer is important for me.	0.524			
Brand is a guarantee of quality.	0.495			
Coupons are inferior.	0.435		- 0.352	
I would never buy anything with a coupon.	0.402	- 0.334	- 0.363	
Brands are uselessly expensive.	- 0.382			
I am not an innovator.	0.334			
I prefer stores with a personalized approach to customer.				
I have no problem with shopping online.		0.678		
I can always choose suitable shopping place.		0.626		
I am afraid to shop online.		- 0.565		
I like to shop in well-known shops.		0.513		0.34 0
I think I am an excellent shopper.		0.472		

When I shop online, I prefer well-known brands.	0.377	0.450		
If my friends see with coupons, my reputation falls.	0.443	-	-	
Online shopping is faster than offline.		0.439		
I have several favourite stores where I always shop.		0.420		
When I shop online, I prefer well-known shops.		0.416		
I prefer verified shops.		0.314		
When I buy in sales, I am happy to save some money.			0.774	
I use coupons to save money.			0.762	
Sales inspire me to shop.			0.656	
I regularly browse leaflets with sales offers.			0.568	
I always use my loyalty card, if it is possible.			0.357	
The more I look for shopping place, the more I am confused.				0.70 4
Information about retailer does not help me to make choice.				0.63 1
It is a problem to choose where I make my purchase.				0.60 4
I sometimes feel overloaded by the width of supply.				0.56 6

*Legend: 1=Brand and tradition loving, 2=Shopping is easy if you verify information, 3=Discount and sales loving, 4= Overwhelming by supply and information.

Source: authors' calculations

Development of Innovation Cooperation via Competence Centres

Viktorie Klímová, Vladimír Žitek

Masaryk University, Faculty of Economics and Administration

Department of Regional Economics and Development

Lipová 41a

Brno, Czech Republic

e-mail: klimova@econ.muni.cz, zitek@econ.muni.cz

Abstract

Cooperation and interactive learning have a significant influence on the development of innovations. Regions with well-developed cooperation between innovation players have better prerequisites for development and competitiveness. Due to cooperation the companies can develop innovations and reach targets that would not be reached without others. The aim of this article is to analyse innovation cooperation between different actors through the evaluation of their engagement in the competence centres that have been supported by the Czech Technology Agency. The analysis is conducted at the level of NUTS3 regions and the regions are compared with respect to participation of regional players in the competence centres and to financial indicators. For validation of a relation between eligible costs or amount of grant and regions' economic level the Pearson correlation coefficient is used. Our analyses confirmed that the innovation cooperation is well-developed in Prague and the South Moravian, Central Bohemian, Pilsen and Moravian-Silesian Regions.

Keywords: *Competence Centres, Cooperation, Innovation, Region*

JEL Classification: *R12, O31, O38*

1. Introduction

It is broadly accepted that innovation is an important source of competitiveness in developed regions and countries. It is an essential prerequisite for economic prosperity and wealth creation, because it has a significant influence on socio-economic development and its long-term sustainability (Adámek et al., 2015; Víturka, 2014). The European Commission put innovation as its key priority through the Lisbon strategy and especially the Europe 2020 strategy. The objectives of the Europe 2020 are based on three priorities – smart growth, sustainable growth, and inclusive growth (European Commission, 2010). The importance of innovation is also reflected in the implementation of Cohesion policy (Poledníková, 2014).

The importance of innovation and the possible ways of its support are discussed by the concept of national and regional innovation systems, in particular. The innovation systems concept stresses the innovation network as a key factor influencing innovation performance. (Doloreux, 2002; Lundvall, 2007; Kološta and Flaška, 2015) The innovation network represents a network of relations among various actors and it enhances introduction and diffusion of innovations. The innovation network is a way for various organizations to gather, exchange resources with each other, and develop new ideas and skills together (Powell and Grodal, 2005). The importance of innovation cooperation is also reflected in the European legislation dealing with public aid. If an innovation project is carried out in cooperation with other partners (particularly, the cooperation between enterprises and research organizations is

meant), it is possible to grant a higher intensity of public aid (Commission Regulation No 651/2014).

R&D are important sources of introduction of new and especially radical innovations. Therefore, we can say that research collaboration is a key precondition for innovation development. Innovation policy supports innovation and research cooperation through a wide range of policy tools. We can name tools such as clusters (Skokan and Zotyková, 2014; Kožiak and Suchý, 2014), innovation vouchers (Fránková, 2014) or science parks (Vásquez-Urriago, Barge-Gil and Rico, 2016; Hansson, 2007; Fránková, 2015). In this article we assess the innovation and research cooperation through an analysis of competence centres.

Competence centres represent special networks (collaborative entities) that connect academic and industrial partners at a territory and aim for global excellence in specific specialisation niches (Streitenberger, 2013; Korber and Paier, 2014). With the requirement for long-term and geographically concentrated R&D, the competence centres provide an environment for collective learning and transfer of “sticky” knowledge. Competence centres support innovation by enabling access to tacit knowledge both geographically localized, but also to distant knowledge via internationally networked partners. (Korber and Paier, 2014) Summing up the above mentioned, competence centres focus on long-term cooperation in research and development, especially applied R&D, whose purpose is to develop new innovations which can be put on market soon. Regional actors that can communicate face-to-face with each other and that share tacit knowledge are the inseparable part of them. The network is also formed by national and international actors that bring knowledge (especially the codified knowledge) absent from the region. Competence centres serve for new knowledge creation and knowledge exchange, combination and diffusion. The public-financed competence centres can have their own legal subjectivity (e.g. in Estonia, Latvia and Austria) or they can operate as a collaborative project (Czech Republic).

2. Data and Methodology

In our article we analyse the competence centres in the Czech Republic that are supported through the Competence Centres Programme implemented by the Czech Technology Agency (TACR, 2014). The programme was launched in 2012 and financing of projects should finish in 2019. Each competence centre has to consist of at least two independent enterprises and one research organization (in the sense of the Commission Regulation No 651/2014). The research organizations are mainly represented by research institutes (in the case of the Czech Republic, especially the Public Research Institutes) and universities.

The aim of this article is to analyse the innovation cooperation between different actors through the evaluation of their engagement in the competence centres that have been supported by the Technology Agency of the Czech Republic. The analysis is conducted at the level of NUTS3 regions. We assess how active the actors from various regions are in participating in competence centres. If actors in a certain region are active, it is possible to suppose that the innovation cooperation is well developed in this region and that the region has better prerequisites for innovation development. We focus on investigating in which regions the leading and the other recipients are resided. We distinguish three types of participants – businesses, research institutes, and universities. The calculation of the average amount of grant corresponds with the structure of participants. In accordance with the European legislation (Commission Regulation No 651/2014), aid intensity depends on the type and size of organization (small, medium and large-sized enterprises, research organizations) and the character of research conducted (basic research, applied research, experimental development).

In the case of enterprises cooperating enterprises with research organizations, the aid intensity can be increased. Research organizations can obtain higher aid intensity than companies (up to 100% of eligible costs).

The Competence Centres Programme is aimed at fields with a high application and innovative potential (TAČR, 2014). Therefore, we can expect a close relation between eligible costs or amount of grant and regions' economic level. For its validation the Pearson correlation coefficient is used:

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}} \quad (1)$$

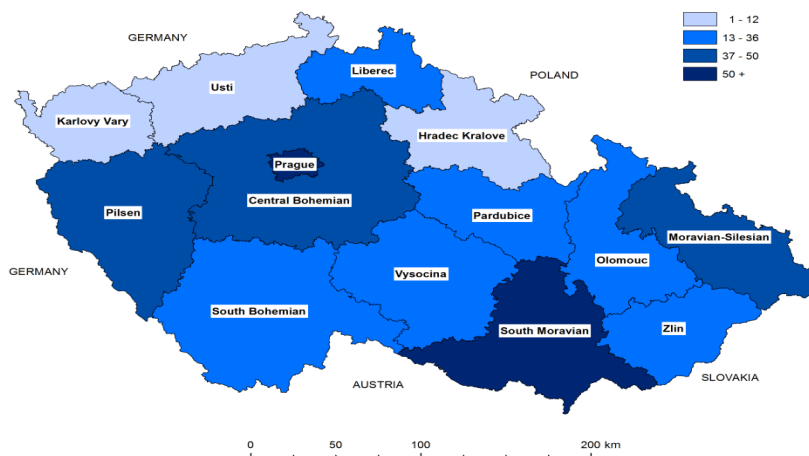
The coefficient can take a range of values from +1 to -1, positive correlation being anticipated. The values of the correlation coefficient can be interpreted as follows: 0.10-0.39 weak correlation; 0.40-0.69 medium correlation; 0.70-0.89 strong correlation; 0.90-1.00 very strong correlation (Bajgar et al., 2012).

We analyse the granted projects with respect to cooperation of actors participating in their implementation. On the one hand, it is possible to evaluate the degree of participation of actors in individual regions. On the other hand, we can also assess the structure of recipients in individual projects with respect to the number of participating regions.

3. Competence Centres in the Czech Regions

The establishment of 34 centres has been granted through two public tenders. 341 recipients participate in the supported projects. These recipients are mainly located in the regions where the leading recipients are based (value of the correlation coefficient between number of all participants and number of leading participants is 0.96). The most of them are based in Prague, the South Moravian and Pilsen Regions. Fewer than 10 participants have been observed in the Hradec Králové, Ústí and Karlovy Vary Regions (see Figure 1).

Figure 1: Number of Participants in Competence Centres Projects based on the Region of Residence



Source: authors' processing and calculations based on RVVI (2016)

Participation of regional actors in the competence centres is perceived as a willingness to cooperate with other subjects. They pursue an obvious aim, which is achieving better results. The collaboration of actors across regional borders seems to be very important. It is clear that the situation in individual regions is different. It can be supposed that particularly participants in “active” regions cooperate more often with participants from other regions. Table 1 shows that recipients from Prague participate in the highest number of projects (32 projects, i.e. 94.12% of all projects). Recipients from the South Moravian Region participate in 23 projects and participants from the Central Bohemian Region participate in 17 projects.

Table 1: Participation of Regional Actors in Competence Centres Projects

Region	Number of projects	Share (%)	Region	Number of projects	Share (%)
Prague	32	94.12	Hradec Králové	6	17.65
Central Bohemian	17	50.00	Pardubice	8	23.53
South Bohemian	10	29.41	Vysočina	8	23.53
Pilsen	12	35.29	South Moravian	23	67.65
Karlovy Vary	1	2.94	Olomouc	10	29.41
Ústí	4	11.76	Zlin	8	23.53
Liberec	9	26.47	Moravian-Silesian	12	35.29

Source: authors' calculations based on RVVI (2016)

Besides the general participation in projects, we can evaluate what role is played by the entities from individual regions. Two types of roles can be observed at Competence Centres projects: the leading participant (recipient) and other participants (recipients). The highest number of leading recipients are settled in Prague (11) and the South Moravian Region (8). No leading participant can be found in four regions (Karlovy Vary, Ústí, Liberec and Hradec Králové). The role of other participants is played mainly by actors from Prague, the South Moravian and Central Bohemian Regions (see table 2).

Table 2: Role of Regional Actors in Competence Centres Projects (Number of Projects)

Region	Leading participant	Other participant	Region	Leading participant	Other participant
Prague	11	31	Hradec Králové	0	6
Central Bohemian	1	16	Pardubice	2	9
South Bohemian	1	10	Vysočina	1	7
Pilsen	4	12	South Moravian	8	21
Karlovy Vary	0	1	Olomouc	3	9
Ústí	0	4	Zlin	1	8
Liberec	0	9	Moravian-Silesian	2	12

Source: authors' calculations based on RVVI (2016)

The individual projects offer another point of view on the cooperation. Three projects are solved by participants from only two regions. All other projects are solved by participants from at least three regions. The highest number of projects (9) consist of participants from six different regions. An atypical project is “Centre for Innovative Use and Strengthening of Competitiveness of Czech Brewery Raw Materials and Products” in which 17 recipients from 10 different regions participate (table 3).

Table 3: Number of Projects with Aarticipants from Several Regions

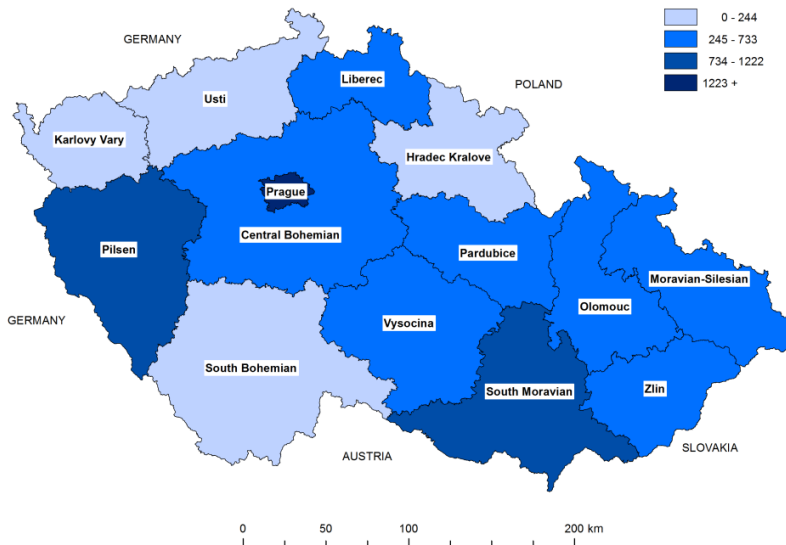
Number of regions	2	3	4	5	6	7	8	9	10
Number of projects	3	7	5	7	9	2	0	0	1

Source: authors’ calculations based on RVVI (2016)

The supported players want to spend 9,031 mil. CZK on eligible costs. The highest total costs should be spent by the actors from Prague. Their costs reach 3,137 mil. CZK, which represents 34.74% of total costs within all granted projects. The expected eligible costs of participants from the South Moravian Region are 1,707 mil. CZK, the costs of participants from the Central Bohemian Region are 724 mil. CZK and the costs of participants from the Pilsen Region are 708 mil. CZK. In order to be compare the obtained results, it is necessary to express the values per inhabitant. The recalculated results differ from the absolute values only slightly. The highest costs have been observed in Prague (2,492 CZK per inhabitant), the South Moravian Region (1,453 CZK) and the Pilsen Region (1,231 CZK).

The Technology Agency of the Czech Republic will grant 6.149 mil. CZK to recipients during the implementation of their projects. The highest amount of public aid will be granted to entities from Prague. They will get 2,262 mil. CZK, which represents 36.79% of the entire allocation for the Competence Centres Programme. Participants in the South Moravian Region will get 1,208 mil. CZK, in the Pilsen Region 534 mil. CZK and in the Central Bohemian Region 419 mil. CZK. Recalculating the figures per inhabitant, the public aid in individual regions is as follow: 1,797 CZK in Prague, 1,030 CZK in the South Moravian Region, 929 CZK in the Pilsen Region, and 532 CZK in the Olomouc Region. Figure 2 illustrates the spatial differences in the amounts of grant.

Figure 2: Amounts of Grant per Participants’ Regions (in CZK per Inhabitant)

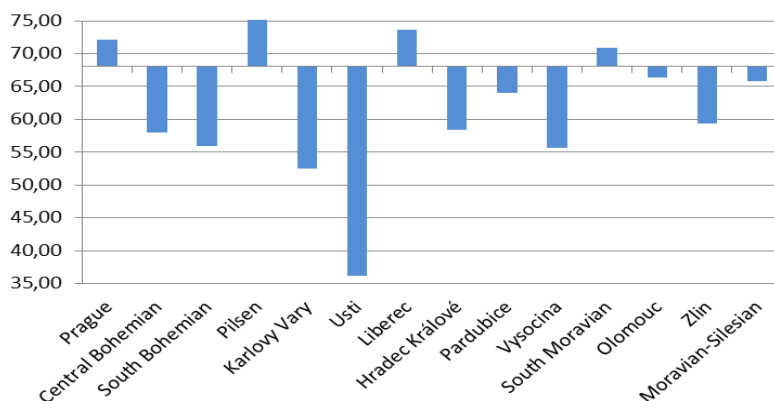


Source: authors’ processing and calculations based on RVVI (2016)

Figure 3 shows what aid intensity has been granted to actors in individual regions. Respecting the public aid guidelines, these results have some limitations. Although the differences in the aid intensity among regions are significant, they indicate the structure of recipients rather than

ability to achieve a high level of support. In other words, if the aid intensity in the region is high, it means that the region is mainly represented by research institutes and universities. If the intensity is low, especially enterprises participate in the competence centres. The average aid intensity is 68%, which corresponds to the programme rules that determine the maximum aid intensity at 70%.

Figure 3: Average Aid Intensity (in % of Total Eligible Costs)



Source: authors' calculations based on RVVI (2016)

The aim of the Competence Centres Programme is to increase the competitiveness of the Czech Republic in advanced fields with a high potential for the application of R&D results in innovation. We can expect that the recipients are particularly located in more developed regions. The values of the correlation coefficient stated in table 4 express the relationship between regional gross domestic product and eligible costs or amount of grant. The high values of correlation coefficient (very strong correlation in the case of absolute values and strong correlation in the case of relative values) confirm that the more developed region, the more concentrated are the participants in its territory.

Table 4: Relation between Economic Level of the Region and Amount of Costs or Grant (Values of Correlation Coefficient)

	Total costs	Total amount of grant	Costs per inhabitant	Amount of grant per inhabitant
GDP in total	0.93	0.92	-	-
GDP per inhabitant	-	-	0.88	0.87

Source: CZSO (2015, 2016), RVVI (2016), authors' calculations

4. Conclusion

The innovation policy around the world has used the competence centres as a tool to support innovation cooperation in the last three decades. In the Czech Republic this instrument has a significantly shorter history and the first competences centres were supported in 2012 by the Czech Technology Agency. The competence centres serve for long-term research cooperation among industry, research institutes and universities. They are focused on applied research and therefore, they are expected to bring results that can be put on market in the form of innovation soon.

In the Czech Republic, 34 competence centres have been granted up to now. The highest number of participants are located in Prague and the South Moravian Region. The participants from the Moravian-Silesian, Central Bohemian, and Pilsen Regions are active as well. The lower number of participants have been observed in the Karlovy Vary, the Ústí, and Hradec Králové Regions. The participants from Prague and the South Moravian Region play the role of leading participants in the highest number of projects. The competence centres usually consist of participants from 4–6 regions. The highest amount of grant is allocated to Prague, the South Moravian, and Pilsen Regions. The levels of total eligible costs and public aid correspond to regional gross domestic product. This result could be predicted, but on the other hand, it demonstrates certain limitation of public financing. The reason is that the position of the most developed regions is still enhanced and disparities between more and less developed regions are deepened. Finally, we can pronounce that the best conditions for cooperation have been observed in Prague, the South Moravian, Central Bohemian, Pilsen, and Moravian-Silesian Regions. In other words, these regions have the best prerequisites for introducing new and radical innovations.

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Positives and Negatives of the European Digital Single Market

David Kollár, Michaela Melková

Matej Bel University
Department of Security Studies
Kuzmányho 1, 974 01
Banská Bystrica, Slovakia
e-mail : david.kollar@umb.sk, michaela.melkova@umb.sk

Abstract

Provision of digital services to their customers was possible only within territory of each EU Member State. The Digital Single Market will remove such barriers and it will contribute to the expansion of the digital world and employment growth. Part of the Digital Single Market is to ensure a free movement of persons, services and capital. Individuals as well as companies can easily exercise online activities under conditions of fair competition and a high level of data protection, irrespective of their location. On one hand, Digital Single Market brings a lot of benefits, such as easier access to online services across Europe and support of the European digital economy growth. On the other hand, it represents a new form of cyber vulnerabilities that can negatively affect the whole European Community. The main aim of the article is to define the positives and negatives associated with the creation of the Digital Single Market of the European Union. This objective will be achieved by analysing of available sources of information, primarily the reports and documents of the European Commission and also by comparison of current cyber threats and threats that could emerge as a result of integrating the digital markets of EU Member States.

Keywords: Cybersecurity, Digital Single Market, European Union, Information Security

JEL Classification: G1, L86, N4

1. Introduction

The contemporary world is increasingly influenced by digital technologies and the Member States of European Union are no exception. Although European citizens take advantages of current development, it is possible only within the territory of their own country. Creation of the Digital Single Market (DSM) should eliminate digital barriers present in the EU and thus contribute 415 billion euro per year to the EU economy and also create many new job opportunities. The present time is characterized by the fact that technological progress is ahead of the creation of laws and standards and therefore Europe needs to reflect the current situation and adapt to it. Creation of DSM will ensure the same digital conditions in all EU Member States, it will enable the development of innovation, encourage European companies and thereby contribute to the growth potential of the digital economy. The State Secretary at the Ministry of Foreign and European Affairs of the Slovak Republic Peter Javorčík said that “it is important to catch this wave of digitization. At present time there are powerful interests of member countries and business companies”, while adding that “strategy to build a Digital Single Market is a strong candidate for the priority of the Slovakia’s Presidency of the Council of the EU” (Dátová ekonomika: príležitosť., [online], 2015).

2. Main Definition of the Digital Single Market of the EU

Creation of the Digital Single Market of the European Union is one of the objectives of the Europe 2020 strategy, which was proposed by the European Commission in March 2010 and adopted at the summit in June 2010. (Čajka, Terem, Rýsová, 2015) The strategy also defines the current position of the EU and discusses issues related to the global economic crisis in order to create procedures that might avoid similar situation in the future (Úrad vlády SR [online], 2011). The strategy is built on the three essential and mutually reinforcing priorities, which the subtitle of the document stands for ("A European Strategy for smart, sustainable and inclusive growth") and tries to achieve the following objectives (Europe 2020 [online], 2010):

- Smart growth: economy based on knowledge and innovation;
- Sustainable growth: promotion of a more competitive, greener and low-carbon economy;
- Inclusive growth: strong emphasis on the promotion of the economy with high employment, which will lead to social and territorial cohesion.

Besides the three above mentioned priorities, the strategy is also built on five targets (employment - increasing the employment rate of the population aged 20-64 years to 75%; research and development - increasing the level of investment in research and development to 3% of GDP; climate change and energy sustainability - according to the model "20/20/20" which embodies the efforts to reduce greenhouse gas emissions by 20%, to acquire 20% of energy from renewable sources, to achieve a 20-percent increase in energy use efficiency; education - to reduce early school leaving; the fight against poverty and social exclusion - to reduce the number of people at risk of poverty by at least 20 million) (Európska komisia [online], 2015a) and the following seven initiatives (Europe 2020 [online], 2010):

1. *"Innovation Union"* to improve conditions and access to finance for research and innovation to ensure that innovative ideas can be turned into products and services that create growth and jobs;
2. *"Youth on the move"* to enhance the performance of education systems and to facilitate the entry of young people to the labour market;
3. *"A digital agenda for Europe"* to speed up the roll-out of high-speed internet and reap the benefits of a digital single market for households and firms;
4. *"Resource efficient Europe"* 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, modernise our transport sector and promote energy efficiency;
5. *"An industrial policy for the globalisation era"* to improve the business environment, notably for SMEs, and to support the development of a strong and sustainable industrial base able to compete globally;
6. *"An agenda for new skills and jobs"* to modernise labour markets and empower people by developing their skills with a view to increase labour participation and better match labour supply and demand, including through labour mobility;
7. *"European platform against poverty"* to ensure social and territorial cohesion such that the benefits of growth and jobs are widely shared and people experiencing poverty and social exclusion are enabled to live in dignity and take an active part in society.

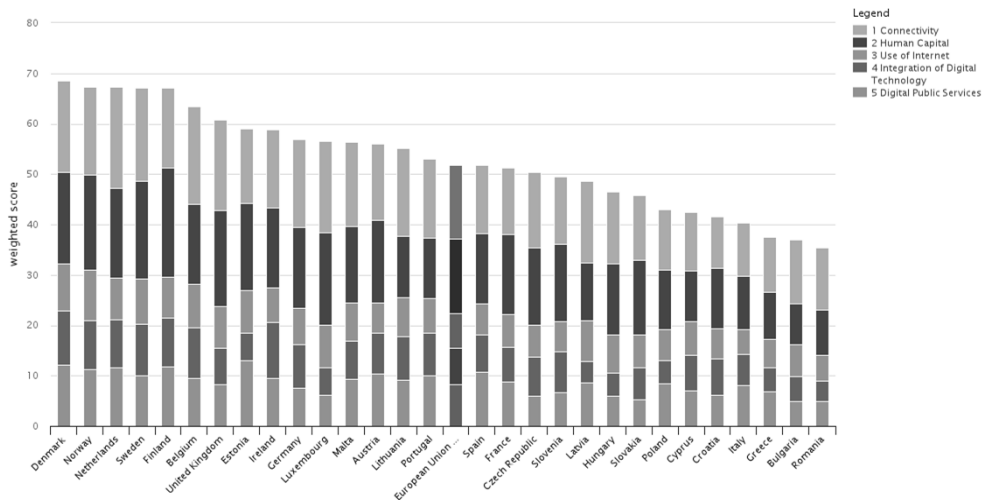
As we can see from the definition of the various strategy initiatives, the creation of the DSM is part of the third pillar - the Digital Agenda for Europe, which aims to use the potential of information and communication technologies more effectively in order to promote the

development of innovation, economic growth and development (Čajka, Abrhám, 2012). Main objective of the DSM is “*elimination of national barriers to transactions taking place online. Based on the concept of the common market, designed to remove trade barriers between Member States in order to increase economic prosperity and contribute to a closer union among the peoples of Europe and further to developed in the principles of the internal market, which is defined as an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured*” (Maciejewski, Dimova [online], 2016). Achieving of the goals will be accomplished at European Union level and at national level. Their activities are defined as follows (Europe 2020 [online], 2010):

- At EU level, the European Commission will provide a stable legal framework to facilitate investments in an open and competitive high speed internet infrastructure, promote effective policies to facilitate the use of EU structural funds in order to achieve the set objectives, create a true single market for online services, reform the research and innovation funding and increase support for information and communication technologies, promote internet access and develop a computer literacy;
- At national level, Member States will develop strategies for the introduction of high-speed internet, create a legal framework for the coordination of public works, thereby reducing the cost of network construction and support the introduction and usage of modern online services.

The vision of creating DSM will be built on the implementation and usage of information and communication technology as well as innovation, which is possible due to the dynamically evolving technological environment. However this development on the other hand implies the need for introduction of a new regulations of an online sphere. It is important to emphasize that the EU Member States apply in this area different national legal regimes and DSM will therefore seek to unite national regulations and create one legal framework valid in entire EU territory. As an example of these differences we can mention blocking of online content for users accessing it from certain geographical regions (Balejová [online], 2015).

Figure 1: Chart of EU Member States Created on the Basis of Digital Economy and Society Index



Source: European Commission [online], 2016a.

In connection with efforts to digitize and unify the online environment of the EU, the European Commission created a study entitled “*How digital is your country?*”, which takes into account factors such as connectivity, human capital, use of the Internet, the integration of digital technology and digital public services. It ranked EU Member States on the basis of Digital Economy and Society Index - DESI³⁶ (Figure 1). In the first place is Denmark, second place is occupied by Norway and the Netherlands is in third place. By comparison, the Czech Republic ranked eighteenth place, the Slovak Republic the twenty-second place and in last place is Romania (Kováčik, Ondria, 2011).

3. Positives of European Digital Single Market

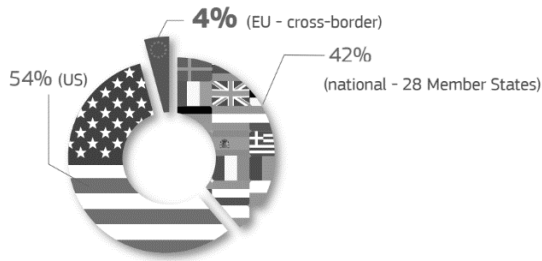
As we have already mentioned, building of the DSM as one of the objectives of Europe 2020 strategy is scheduled for the next decade. During this period, national control regulations of online sphere will be removed, thereby a more efficient and competitive business environment will be created. The above-mentioned facts will lead to the development of a number of positives that we will analyze in the following section of the article.

At present, online services are mainly administered by the nation states. Only 4% of small and medium enterprises in the EU territory conduct cross-border trade (for better representation of the current state of the digital environment, see Figure 2). One of the positives of the DSM is creation of an environment that allows free movement of people, goods, services, capital and online content in the form of digital goods or services which are available to consumers and businesses, regardless of their nationality or place of residence. The DSM can thus contribute to the European economy 415 billion euro per a year, strengthen job creation, growth, competitiveness, innovation and investment, expand markets and promote the provision of better services at better prices. It may also create new opportunities for the creation of startup companies³⁷ and allow the growth of existing businesses that will benefit from the market consisting of nearly 500 million people (European Commission [online], 2016b).

According to the report of the European Commission “*Why do we need a digital single market?*” EU consumers could save € 11.7 billion a year if they had a choice of a range of services and products within the online purchase. Although, small businesses can offer their goods in other EU countries, they are forced to pay approximately 9,000 euros for fees associated with adaptation to the national laws. If the same conditions for online shopping that wants to introduce the DSM were applied, 57% of companies would extend their products or services into other EU Member States (*Why We Need Digital Single Market* [online], 2016).

³⁶ Index that reviews the relevant indicators of the digital performance of European countries and allows to compare the development of EU Member States in context of digital competitiveness.

³⁷ Eric Ries defines startup as human institution created in conditions of extreme uncertainty, to bring a new product or service. Key aspects of startups are product innovation and uncertainty that must startup face. The novelty of the product or service differs from the classic companies. Classical companies try to maintain and protect ourselves rather than uncovering new sources of customer’s values and investigate what impact it has on their business (Slovak Business Agency [online], 2015).

Figure 2: The Contemporary Digital Market

Note: The Digital Market today is made up by 42% of national online services, 54% of US-based online services and only 4% EU cross-border online services.

Source: Why we need Digital Single Market [online], 2016.

In addition to removing legal barriers, the EU will also focus on improvement of the technological base, which is necessary for the provision of online services. Specifically, the development of 5th generation mobile networks (5G). An action plan concerning their creation will be unveiled by the end of the year 2016. In the words of European Commissioner Oettinger, “5G is a fantastic opportunity for creating an entirely new breed of digital ecosystems where networks can be used as platforms to provide new specialised services. Automotive, health, smart factories, smart cities, energy, media. In all these sectors, we have world class players on this continent. Giving these sectors (and others as well) the benefits of a 5G network is a huge opportunity for reinforcing the competitiveness of industrial sectors” (Šimkovič, 2016). 5G technology doesn’t concern only Europe and therefore in order to create a global 5G network EU signed in February an agreement on the development of next-generation communications networks with Brazil³⁸, an important and close business partner in the field of information and communication technologies since 2008 (European Commission [online], 2016c).

As final positive emerging from the DSM, we consider to be a creation of an environment which supports above mentioned startup companies that currently represent one of the sources of innovative ideas. In this context, we can mention statement of Alvin and Heidi Toffler that “if the economy is driven by something, it is knowledge. Economy does not drive knowledge” (Toffler - Tofflerová, 2001, p. 68). 60% of economic growth between years 1995 and 2007 was driven by young and technologically advanced companies. Also technologically-oriented startups compared with small and medium businesses create more jobs and thus intensively drive the economy (Wauters [online], 2015). Unification of previously separated 28 national markets with different regulations and creation of a digital single market consisting of 500 million consumers, will ensure development of new and existing startups, creation of new jobs and promotion of an economic development across the EU. Some experts say that startup companies are part of the so-called “disruptive innovation” - innovation and technologies that create a whole new market, apply new values, which ultimately results in the development and transformation of existing market values (as disruptive innovation of postal letters can be considered the establishment of e-mails).

³⁸ Similar agreements signed the EU in 2014 with South Korea and in 2015 with China and Japan.

4. Negatives of European Digital Single Market

There is no doubt that the creation of DSM brings many positives. However, every subject can be viewed from two angles and even DSM is no exception. We can argue that the interdependence of the 28 EU Member States markets will certainly boost dynamic development of the economy, but on the other hand it will open an interconnected complex to increased risks and threats arising from the existence of cyberspace. The basic threats associated with the formation of DSM, which can cause economic losses include, for example (Európska komisia [online], 2015b):

- Data interception
- Online payment fraud
- Identity theft
- Theft of business secrets.

We can observe a rising trend of cyber-attacks aimed at different targets from government institutions, industrial enterprises to individuals. Privacy and data protection is one of the key tasks of DSM and the European Commission wants to implement the reform of EU rules on the protection of personal data. But we must take into account one important fact. The human factor is one of the most critical components of protection of internet networks (Masár, 2013). Not all people are fully aware of the security rules of behaviour on the Internet and therefore they can by negligent actions provide hackers access to their sensitive data (Juhászová, Kováčik, 2014). If some hacker or group of hackers could penetrate the protection of networks in one state, it could make the whole interconnected complex of DSM more vulnerable. Unless the EU will not be able to cope with various cyber threats, it can cause (Alston & Bird LLP [online], 2015):

- Disruption of public online services, which will become ineffective
- Violation of fundamental rights
- Loss of finances
- Undermining citizens' confidence in online activities and the digital world.
- A threat to national security.

Finally, we must note that the cyber sphere is different from the other dimensions of state security and in the context of the DSM and security of cyberspace there are present several factors:

- Cooperation. It is unthinkable that a State can ensure security of cyberspace on its own - therefore here is present an important factor, namely cooperation. One important aspect that can make cyber defence more effective is the team work among several actors of the international system and the cooperation is necessary also for the creation of the DSM;
- Information sharing and joint assistance in the prevention, mitigation and recovery from cyber-attacks in the EU;
- Fragmentation of Member States' policies, because not all states put enough emphasis on cyber security, and their concepts are relatively fragmented or they have not yet developed national cyber policy;
- Private sector owns a significant part of cyber space and do not always share the same views and objectives as state sector. Collaboration of different kinds of actors (states, individuals, businesses, international organizations, but mainly private sector actors) could increase the potential security of cyber sphere.

5. Conclusion

Creation of the Digital Single Market means removing and unifying of regulatory measures on the markets of the Member States of the EU and its achievement is only possible by their joint cooperation. The functioning DSM can contribute 415 billion euro per year to the European economy, strengthen job creation, growth, competitiveness, innovation, investment, expand markets, promote the provision of better services and better prices and also create environment for the functioning of startup companies that are considered part of the so-called disruptive innovation. Some experts advocate the idea of creating a common digital market first by States, which have necessary tools (e.g. The Scandinavian countries) and then will be existing model later joined by other EU Member States. It is also necessary to ensure the free flow of data and do not enclose the DSM only in the European region, but open it for trade with other actors such as USA.

We must note that although the creation of an interconnected DSM on the one hand opens the way for the rise of new threats emerging from cyberspace, for example data interception, identity theft and online payment fraud, on the other hand, the common European security and protection of critical information and sensitive data is more important and also more effective than security precautions followed only by one country.

Finally, we come to the question whether is the creation of this market not only a utopian vision? Member States have so far failed to abolish roaming charges within the EU, then how we can assume unification and the removal of digital control measures of all markets of the EU countries? Europe 2020 strategy wants to fulfil its goals until 2020, and therefore we will be closely watching how EU member states will try to achieve economic growth and their goals. If the EU Member States could achieve their goals through joint efforts and comprehensive cooperation, EU will strengthen its international-political status and also position in digital economy. Right now coordination, coherence and cooperation is one of the most important factors influencing the future of the whole European Union.

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Effects of the EU Competition Policy and Strategy Europe 2020 Symbiosis

Marcel Kordoš

Alexander Dubcek University in Trencin

Faculty of Social and Economic Relations, Dept. of Public Administration and

Regional Economics

Studentska 2

Trencin, Slovakia

e-mail: marcel.kordos@tnuni.sk

Abstract

The Strategy 2020 appears to be one of the most important current programs and activities at EU level which supports job creation, competitiveness, economic growth, quality of life and sustainable development. Competitiveness contributes significantly to dynamic development of European prosperity. Thus the competition policy is the area of economy which determines the development of European Union Member States. New approach of the EU competition policy focuses mainly on its standards such as antitrust, merger control and state aid control measures. Based on the comparative analysis of European competition policy and Strategy 2020 mutual interaction the object of the paper is to assess the impact of the EU competition policy effects on the Strategy 2020 regarding the EU competitiveness enhancement in international economics system. Those effects are supposed to lead to increasing economic growth, sustainable social and economic development and higher quality of life for European Union inhabitants.

Keywords: *EU Competitiveness Enhancement, International Economics, Social and Economic Development, Sustainable Development*

JEL Classification: *F63, L51, O25*

1. Introduction

European Union consists of 28 member states. Of course, cooperation, economic growth and creating a Single Market represent the main topics of political agenda of the Union. Competition policy is closely linked to the EU goal of creating a Single Market for goods, services, capital and labor. Competition policy can contribute to economic growth by stimulating productivity and investment. In our work, we dedicate to theoretic determination of basic terms referring to competition, e.g. competition policy, as well as to development of European competition policy and setting up the basic competition rules and laws, emphasizing and focusing especially to EU Competition Law.

Europe, by 2010, wanted to become the most competitive and dynamic knowledge-based economy, which should be capable of sustainable growth. After the expiry of the Lisbon Strategy, the objectives of which failed to materialize, was made a new document called the Europe 2020 strategy one has to determine the direction of the European Union in the next decade. The Strategy 2020 is based on three main priority areas, namely smart growth, economic development, which is based on innovation and the knowledge economy,

sustainable growth, supported by low competitive economy. It is also based on inclusive growth, which supports high employment, social and territorial cohesion.

2. Problem Formulation and Methodology

This paper surveys the status and workings of EU Competition policy along with the Strategy 2020 and explores the implications arising from the creation of the Single Market. Initially, an economic rationale is presented for intervention in private industry, whether this is seen primarily as a policy to promote competition or as a corrective action for monopoly abuse. This is followed by a section outlining and analysing the current EU Competition policy tools and strands policy. When it comes to the Strategy 2020 its characteristics as an EU competitiveness enhancement tool will be assessed. The next section provides a brief discussion of the EU Competition policy and Strategy 2020 mutual interactions, parallels and symbiosis to figure out the synergy of sustainable economic growth in terms of the social and economic development promotion measurements.

Within the hypothesis we suppose that the EU Competition policy and Strategy 2020 create a proper environment and conditions to enhance the EU competitiveness in international economics. The goal of this paper based on the EU Competition policy and Strategy 2020 comparison analysis is to figure out their positive impact on the EU economic environment as the way how to achieve higher social and economic development and living standard of EU inhabitants. The issue is to point out the extent to which the EU Competition policy tools and strands implemented in the Strategy 2020 can mitigate fluctuations in competitiveness of the EU economy, whose sluggish economic performance evokes a negative impact on the socio-economic development of the countries of European Union. From this impact rate it will depend whether the EU economy is able to cope with competitive pressure within the world economy triad, or if there is rather a weakening trend on account of other centres in the world economy. To accomplish this goal, methods such as analysis, comparison, synthesis and logical deduction are to be used. Subsequently the analysis will lead to synthesis and prognosis by means of abstraction method eliminating the less important factors in order to set general statements and opinions.

3. The EU Competition Policy Tools and Strands

Competition policy is one of the oldest policy areas and has developed considerably over the years. It is also one of the policies with the most concrete, visual results. The core of the internal market is the maintenance of a level playing field throughout the EU for businesses to compete. Effective competition policy encourages economic efficiency and creates a favourable climate for growth, innovation and technological progress while pushing down prices (Baldwin, Wyplosz 2009). Thus competition policy is the cornerstone of the internal European market. The European Commission has wide powers to make sure businesses and governments stick to European Union rules on fair play in trade in goods and services, while allowing governments to step in if markets are failing consumers or business, or to promote innovation, unified standards, or small business development.

a) Antitrust and cartels

Antitrust is an important tool to protect European firms from practices that adversely affect competition such as price fixing, patent abuses, capacity hoarding, or the prevention of cross-border activities (Ivanová, 2011). European Commission (2016) argues that antitrust covers two prohibition rules set out in the EC Treaty: agreements which restrict competition are prohibited; and firms in a dominant position may not abuse their position.

Agreements between undertakings - examples include price fixing; limiting or controlling production, markets, technical development or investment; sharing markets or sources of supply; applying dissimilar conditions to equivalent transactions. The Commission is responsible for ensuring the application of these rules. A member state can apply for an investigation or the Commission can launch one by its own volition. If it finds antitrust infringements, it proposes measures to bring them to an end (Jovanović, 2014). Other types of agreement are considered by the Commission as harmful to competition and thus prohibited without exception. They are usually presented in public black lists, and include: Among the horizontal agreements Price fixing, Joint sales offices, Production or delivery quotas, Sharing of markets or supply sources. Among the vertical agreements: fixing the resale price, and absolute territorial protection clause (Mitchel, Muysken, Van Veen, 2006).

Abuse of dominant position - the aim here is to prevent companies from abusing a position of dominance and thus distorting competition in intra-Community trade. Dominant positions, as such, are not prohibited, but rather the abuse of dominance when it is likely to affect trade between member states. Behaviour which only affects a national market cannot be considered by the European authorities. This objective requires preventive Community intervention to investigate company mergers, since they may create illegal position of dominance. According to Larry (2007) a "Cartel" is created by an illegal, secret agreement between competitors who fix or increase their prices, restrict supply by limiting their sales and/or their production capacities, and/or divide up their markets or consumers. Fines of up to 10% of their worldwide turnover may be imposed on the guilty parties (McDonald, Dearden, 2005). The amount of these fines is paid into the EU budget.

b) Merger Control

Merger control ensures European consumers and businesses are protected against price increases and other anti-competitive effects resulting from mergers, whilst simultaneously helping firms in restructuring and enhancing their global reach through mergers. The legislation states that a concentration - an operation to integrate previously separate companies - which would significantly impede effective competition in the common market, in particular by the creation of or strengthening of a dominant position, is incompatible with the common market (Balaz, 2014). When companies in any economic sector propose a concentration that is likely to affect the Single market, the Commission can undertake an investigation. This Community dimension is determined on the basis of the companies' aggregate, worldwide turnover and the absence of national character. Companies that have no Community dimension are under the purview of national authorities (Mura, Buleca, 2012). It does not matter where the companies are based, or if national authorities have no objection to concentration. If the companies' sales figures in EU markets are large enough, the Commission has jurisdiction, and can prevent potential mergers. Companies proposing mergers must notify the Commission, which will consider -within strict delays- whether the proposed merger creates or strengthens an illegal, dominant position in the relevant market (Fojtikova, 2014). If yes, the merger is prohibited. If not, the Commission confirms that it is compatible with the common market and authorises the merger with or without certain conditions (Havierníková, 2014a).

c) State Aid Control

State aid control is essential to avoid distortions in the Single Market, whilst also ensuring that subsidies that promote the competitiveness of sectors and companies are allowed. The EU's State aid regime - a system that is unique in the world - provides a framework that focuses aid

on addressing market failures. Competition can be restricted by governments if they grant public subsidies to certain businesses. For this reason, the Treaty prohibits, in principle, any form of State aid that is likely to distort competition. As with mergers, the aid in question must be such that it affects trade between member states; aid with only domestic consequences is not under the purview of the Commission. An absolute ban on state aid, however, would be unthinkable: in certain cases, governments must be able to intervene or provide funding for select economic activities (Lipkova, 2012). For this reason, the Treaty provides for a number of exceptions to the principle of State aid prohibition. Member states must notify the Commission in advance of any plans to grant or alter aid. Aid granted through plans without authorisation is illegal and must be repaid. If the Commission considers that an aid plan is incompatible with the common market, it initiates infringement proceedings. This suspends application of proposed aid, pending a final decision. In practice, no aid is granted without the Commission's agreement (Neumann, 2013).

4. The Strategy Europe 2020 as an EU Competitiveness Enhancement Tool

To put it in a nutshell, Europe 2020 is the European Union's ten-year jobs and growth strategy. It was launched in 2010 to create the conditions for smart, sustainable and inclusive growth. Five headline targets have been agreed for the EU to achieve by the end of 2020. These cover employments; research and development; climate/energy; education; social inclusion and poverty reduction (Harakalova, 2014b). Progress towards the Europe 2020 targets is encouraged and monitored throughout the European Semester, the EU's yearly cycle of economic and budgetary coordination.

Within the ongoing management and monitoring framework in March 2014, the Commission published a Communication taking stock of the Europe 2020 strategy, including an overview of progress on the 2020 targets. The Commission held a public consultation on the strategy between May and October 2014, and published the results in a communication. This consultation results will be taken into account when reflecting on how the Europe 2020 strategy should be taken forward. Proposals to review the strategy will be presented before the end of 2015. Also in March 2015, Commission proposed a new set for the Integrated guidelines – broad guidelines for the economic policies of the Member States and of the Union and guidelines for the employment policies of the Member States – that once adopted would replace the 2010 Integrated Guidelines.

The European Union has been working hard to move decisively beyond the crisis and create the conditions for a more competitive economy with higher employment. In terms of priorities the Europe 2020 strategy is about delivering growth that is: smart, through more effective investments in education, research and innovation; sustainable, thanks to a decisive move towards a low-carbon economy; and inclusive, with a strong emphasis on job creation and poverty reduction (Haviernikova, Strunz, 2014). The strategy is focused on five ambitious goals in the areas of employment, innovation, education, poverty reduction and climate/energy. To ensure that the Europe 2020 strategy delivers, a strong and effective system of economic governance has been set up to coordinate policy actions between the EU and national levels.

European Commission (2016) has identified new engines to boost growth and jobs. These areas are addressed by 7 flagship initiatives providing a framework through which the EU and national authorities mutually reinforce their efforts in areas supporting the Europe 2020 priorities such as (1) innovation, (2) the digital economy, (3) employment, (4) youth, (5)

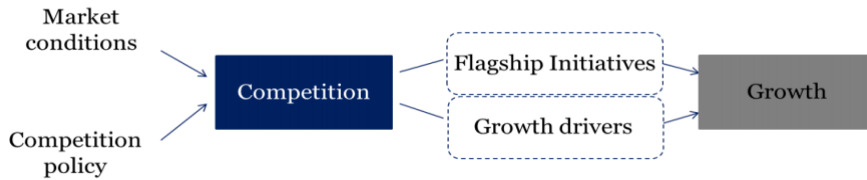
industrial policy, (6) poverty, and (7) resource efficiency. Within each initiative, both the EU and national authorities have to coordinate their efforts so they are mutually reinforcing (Cihelkova Hnat, 2008).

As a crucial issue we need to underline the EU Innovation policy, which is about helping companies to perform better and contributing to wider social objectives such as growth, jobs and sustainability. The main current European Union's innovation policy is the Innovation Union, as one of the seven flagship initiatives of the Europe 2020 strategy for a smart, sustainable and inclusive economy (Harakalova, 2014a). Its aim is to boost Europe's research and innovation performance by speeding up the process from ideas to markets. According to European Commission the Innovation Union plan will aim to do three things. Firstly, to make Europe into a world-class science performer; secondly 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 public and private sectors work together, notably through Innovation Partnerships between the European institutions, national and regional authorities and business (Haviernikova, 2014b).

5. Problem Solution and Discussion

There are some important strategic collaborative linkages between the EU Competition policy and Strategy 2020 necessary to be met. The definition of activities with high added value, which offer the best chance of strengthening the competitiveness of the state, needs strategic information. To resources for research and development and innovation have the greatest impact, must reach its critical value. They must be accompanied by measures to improve skills, increase education levels and knowledge infrastructure (Fojtikova, Kovarova, 2014). The National and the regional governments should develop smart specialization strategies to increase the impact of Strategy 2020 in combination with other the Union policies to the maximum. The Smart specialization strategies can ensure the efficient use of public resources and stimulate private investment. They can help regions that concentrated resources on a few key priorities. They can also be the key element in the creation of multi-level governance for integrated innovation policies (Balaz, 2013). The strategy of smart specialization involves businesses, research centres and universities that cooperate to define the most promising areas of specialization of the region, but also the weaknesses that hamper innovation. It takes into account the different capacities of national economies, in terms of innovation (Vojtovic, Krajnakova, 2014).

As Hitiris (2003) argues, the effect of competition policy on growth can be described in different ways. One way is to describe the link between competition policy and the Flagship Initiatives. This is a policy oriented description. Another way is to describe the link between competition policy and drivers of economic growth. This description is in line with economic theory. However, the fundamental growth drivers are the same in both cases, so it is merely a matter of two different ways to describe the same relationships. Moreover, the first step in both descriptions is to describe how competition policy affects and strengthens competition. Relationship between competition policy and growth is shown in Figure 1.

Figure 1: Effects of Competition Policy to Growth

Source: Hitiris, 2003

The synergy of Strategy 2020 and EU Competition policy must show how technology refers to ideas and knowledge that business can exploit commercially and assure the world economy sustainable development. The sources of new ideas on which companies can call are many and varied, ranging from universities and research institutes to competitors, customers and suppliers, and to employees. The EU economies are following a long-established trend of restructuring away from the primary and secondary sectors and towards services and high value-added products. But manufacturing is still an important economic sector of the Community for production, trade and employment (Spankova, Grecikova, 2014). By discussing the issue, we can say that the EU Competition policy implemented into Strategy 2020 plays very important role within the current financial framework 2014 -2020 and Europe 2020 Strategy to assure sustainable economic growth in the EU and enhance its competitiveness within the environment of the world economy triad. Innovations and innovation policies and strategies implementations are one of the most important aspects of current international economics and business development issues. It is the key not only to creating more jobs and improving quality of life, but also to maintaining companies' competitiveness on the global market and states'/economies' competitiveness enhancement within the international economics system.

6. Conclusion

As conclusion we can say that technological advance, knowledge based production, innovation implemented into new technologies are the outputs of effective synergy how the Strategy 2020 can act as symbiotic parallel along with the EU Competition policy. Those are the tools leading to increasing economic growth, sustainable social and economic development and higher quality of life of European Communities inhabitants. Finally, the paper provides a comprehensive, coherent and systematic overview of the basic principles and objectives forming the backbone of the EU Strategy 2020 and the nature of its operation mechanism along with the Competition policy. A proper competition environment plays an important role when it comes to the access of SMEs to innovation and research, or the joint development of international markets. We have proved that following the goals of Strategy 2020 is the unique and sophisticated way how to improve and enhance competitiveness of European business companies within the international environment. We have figured out that the EU Competition policy by creating the proper environment enables to launch effective business projects and in our opinion that's the way how the crucial issue of EU Competition policy and Strategy 2020 synergy is to be met and implemented.

Finally, we can summarize that EU Competition policy, in conjunction with Strategy 2020, is at the core of the new competitiveness policy framework. The European Commission works to reduce distortions to competition within the internal market through merger control, antitrust enforcement, and state aid control. Why is it important? Strategy 2020 and EU Competition

policy are at the core of the new competitiveness policy framework; competition creates incentives for companies to innovate and increase productivity; and finally through state aid, antitrust, and merger control, the European Commission ensures undistorted competition in the Internal Market. Adapting the competition policy to the current economic environment is a challenge for the European Union's authorities and also for those acting at national level. In order to make it more efficient they are trying to find the most appropriate means of ensuring the competitiveness growth of the European enterprises worldwide.

In this paper we have shown how Europe can succeed if it acts collectively as a Union. EU needs a strategy that will help to make sure the Union comes out stronger from any crisis - a strategy that will help make the EU a smart, sustainable and inclusive economy delivering high levels of employment, productivity and social cohesion. The smart symbiosis of the 2020 Strategy and EU Competition policy is a vision of Europe's social market economy for the 21st century. As paper is supported by Slovak Ministry of Education scientific grants research outputs are to be widely used in Slovak scientific and industry environment particularly the Slovak chamber of industry and trade is very interested in the final research findings.

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Value and Commodity Structure of the West Africa's Exports to the European Union

Eva Kovářová

VŠB - Technical University of Ostrava
Faculty of Economics, Department of European Integration
Sokolská třída 33
Ostrava, Czech Republic
e-mail: eva.kovarova@vsb.cz

Abstract

The European Union is one of the largest trading blocks of the current world economy. It adopted various trading agreements with various countries from the whole world. The EU pays special attention to developing countries, especially to so-called ACP countries. Since 2002 the EU has negotiated seven regional Economic Partnership Agreements with them. West Africa is the most important EU trade partner of all ACP regions. Therefore, paper is focused on this region and examines the West Africa's exports of goods to the European Union. It deals with the value and commodity structure of these exports and shows weaknesses of them, especially in the sense of their low commodity diversification.

Keywords: *Economic Partnership Agreement, European Union, Trade, West Africa*

JEL Classification: *F13, F14, O24*

1. Introduction

Trade liberalization is a process very closely connected with globalization. Foreign trade is the integral part of each successful economy because trade improves efficiency in resource allocation; allows use of comparative advantages; allows benefits from more efficient methods of production. A lot of studies confirm that based on specified assumptions³⁹, trade is positively associated with economic growth, measured by the growth of gross domestic product. Trade also enhances specialization and productivity growth. Moreover, openness to trade stimulates inflow of foreign investment that again stimulates economic growth, creates new job opportunities, promotes social development etc. And these challenges are urgent especially in developing countries.

Foreign trade is important not only for contracting countries but also for the whole world economy. The European Union endeavours long-term to strengthen the involvement of developing countries into the world economy, therefore it has launched specific trade measures and incentives focused on them. Current trade relations between the European Union and developing countries have historical roots due to dominant role of European countries in the world during the period of colonialism.

³⁹ One necessary precondition has to be met for the positive impact of trade on national economy – the institutional quality. Low institutional quality, e.g. in the form of excessive regulations, reverses it. Bormann and Busse (2007) consider market entry regulations, efficiency of tax system and labour market regulations as the most relevant to explain positive or negative effects of trade on growth.

When the Treaty of Roma was signed in 1957, founding members of the European Economic Community formalized their relations to 18 former European colonies. Part IV of this Treaty opened the avenue for cooperation with the Overseas Countries and Territories – essentially West and Central African countries. Since then, various Conventions have framed trade relations between European Communities (EC), later the European Union (EU), and specified developing countries. Within period 1975-1999, trade relations were based on so-called Lomé conventions and were principally built as non-reciprocal, i.e. members of the ACP Group of States (ACP)⁴⁰ were under no obligation to provide same trade preferences for the imports from EC (EU) countries as EC (EU) countries provided for imports from the ACP.

Nowadays, relations between the EU and ACP Group of States are formalized by the Cotonou Agreement (known also as the ACP-EU Partnership Agreement) that was signed on 23 June 2000. Under the Cotonou Agreement, so-called Economic Partnership Agreements (EPAs) had to be established between the EU and the ACP countries. Negotiations started in September 2002 and were scheduled to be concluded by 31 December 2007. Economic Partnership Agreements would lead to the foundation of a free trade area between the EU and the ACP. Negotiations are organized on sub-regional level, ACP countries are divided into seven ACP regions, five in sub-Saharan Africa (SSA)⁴¹, one in Caribbean and one in Pacific region.

Trade relations between the ACP Group and the EU are also influenced by the international system of preferences granting easier entrance of developing countries to the markets of the developed ones. Generalized System of Preferences (GSP) is the most important system that was adopted at the Conference of United Nations Conference on Trade and Development (UNCTAD) in 1968. Nowadays, 13 national GSP schemes are notified by the UNCTAD, one of them is granted by the European Union. The EU allows under its Generalized Scheme of Preferences to pay less or no duties on exports to the EU, special attention is focused on so-called Least Developed Countries (LDCs) that have had full duty-free and quota-free access (with some exceptions – arms and ammunition) to the EU through initiative Everything-but-Arms since 2001.

2. Literature Review

Numerous papers and publications focused on West Africa-EU Economic Partnership Agreement are found if we look at foreign publication sources. They deal with this issue in various circumstances. Dirk Kohnert, former deputy director of the Institute of African Affairs, focused on this topic in various papers published in e. g. *Africa Spectrum* (2014) and *Review of African Political Economy* (2015). A complex study was presented by Fontagné, Laborde and Mitaritonna (2011). Other scholars, Borrmann and Busse (2007), introduced not only theoretical framework of EPAs, but also evaluated the link between trade, growth and institutional quality in ACP countries. In another study, Borrmann, Busse and De La Rocha (2007) tried to evaluate influence of EPAs on inter- and intra-regional integration.

⁴⁰ The ACP Group was created by the Georgetown Agreement in 1975. This agreement was opened for the signatories of the Lomé Convention I. The original objective of the Group was the cooperation between its members and the European Communities. Nowadays, it consists of 79 countries, 48 from sub-Saharan Africa, 16 from Caribbean and 15 from the Pacific region of the world economy.

⁴¹ These are: West Africa, Central Africa, Eastern and Southern Africa, Eastern African Community and Southern African Development Community.

Hardly any serious publications devoted to Africa-EU trade relations can be found in the Czech research space. Formal framework of the EU-Africa trade relations is described in publication of Cihelková (2003) or in recent work of Fojtíková (2014), but no analytical study has been published yet.

3. Methodology and Objectives of the Paper

Lomé Conventions, formalizing the ACP-EU trade relations within period 1975-1999, did not fulfil declared objectives. Economic situation of the majority of ACP countries, especially African ones, was very serious in the second half of the 20th century. Relative weight of the ACP-European Communities trade declined. Level of ACP exports' diversification was very low, which led to higher economic vulnerability of these countries. Bormann and Busse (2007) say that ACP countries' share on the EU market declined from 6.7 % in 1976 to 3.0 % in 2005; about 68 % of total ACP exports to the EU consisted of agricultural goods and materials, and 74 % was concentrated in only ten products.

We try to evaluate selected aspects of ACP exports to the EU in this paper. One ACP region was chosen for this analysis. Nowadays, West Africa is the most important EU trade partner from all ACP regions. In 2014, value of the EU total trade (export + import) with West Africa was € 68 billion and accounts for more than 38 % of total trade between the EU and all ACP regions.

Our research is based on literature review, on analysis of relevant documents of the European Commission as well as on own data processing. Data used in our analysis were taken from the European Commission Statistics on Trade, from the African Statistical Yearbooks, and from the statistical databases of the World Bank and the World Trade Organization. We applied several indicators (see Table 1) to meet research objectives of our paper. However, in some cases our statistical analysis gave us limited results because of non-availability of longer data series.

Table 1: Methodology of Indicators Used in Data Processing

Indicator	Mathematical definition	Variables	Range of Values
Openness to Trade	$\frac{X_{it} + M_{it}}{Y_{it}} \quad (1)$	X – total value of exports M – total value of imports Y – the GDP of country i at time t	A trade value above 100 indicates that combined exports and imports exceed GDP.
Trade Intensity Index (TI index)	$100 \times \left(\frac{\frac{x_{ij}}{X_i}}{\frac{x_{wj}}{X_w}} \right) \quad (2)$	x – value of exports from origin country i to destination j X – total exports from i w indicates the world as origin	0 to $+\infty$ A value greater than 100 indicates a relationship more intense than the world average for the partner.

Herfindahl-Hirschman Product Concentration Index (HH index)	$\frac{\sum_{k=1}^{n_i} \left(\frac{x_{ik}}{X_i} \right)^2 - \frac{1}{n_i}}{1 - \frac{1}{n_i}} \quad (3)$	X – total exports from exporter i , x – value of exports of product k from country i n – number of products exported by country i	0 to 1 A higher index indicates that exports are concentrated in fewer sectors.
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Source: Cadot, Carrère and Strauss-Kahn (2013), own completion and adjustment

When patterns of external trade of some country or of a group of countries are analysing, then scholars and scientists pay highest attention especially to assessment of the export diversification. They apply various approaches and indices for such analyses; Theil, Gini or Herfindahl-Hirschman are the most widely used ones. But also extensive and intensive margins are applied, especially if it is worked with longer data series. Due to the non-availability of data, we decided to use Herfindahl-Hirschman indicator (see Table 1) in this paper and we will analyse diversification of West Africa's exports to the European Union only in the year 2014.

Our main research objective – evaluation of the value and commodity structure of the West Africa's exports of goods to the European Union – can be divided into three partial objectives and with them connected three stages of our research. First, we will present and interpret trade profiles of all West Africa's countries. Then we will examine the value of West Africa's exports of goods to the EU. And finally, we will evaluate commodity structure of these exports.

4. Own analysis of West Africa's Exports to the European Union

West Africa is traditionally the most important SSA's trade partner of the EU. In 2014, value of the EU total trade (export + import) with West Africa was € 68 billion. In February 2014, after ten years of negotiations, West Africa and the EU signed their EPA. It brings together the EU, 16 countries from West Africa, and two regional organizations – the Economic Community of West African States (ECOWAS) and the West African Economic and Monetary Union (WAEMU).

EPA negotiated by West Africa and the EU contains seven parts, focused on various aspects of mutual trade relations. The deal takes account on the current differences in the level of development between West Africa and the EU. The EU opens its market completely from day one, while West Africa, as a partner with lower level of economic and social development, was given the obligation to remove import tariffs only partially over a 20-year transition period. West Africa's market access offer liberalises 75 % of tariff lines only at the end of the transition period, i.e. 25 % of tariff lines will remain the same as for all third countries. West Africa has also excluded all the products that are considered to be the most sensitive from negotiations. On the other hand, tariffs will be progressively eliminated on goods such as equipment or other inputs for local business. Concluded EPA also includes various safeguards that can be deployed if the imports of liberalized goods are increasing too quickly, special protection is foreseen for infant industries and West Africa can also use special measures in case of threats for food security (European Commission [online], 2016).

4.1 Trade profile of West Africa

West Africa, under the EPA's framework, counts 16 countries (see Table 2). There are significant differences in trade profiles amongst them. Also if we analyse trade profile of each country, important progress in trade matters can be identified. The highest level of trade per capita is achieved in Cabo Verde (within period 2011-2013 it was around US\$ 4,000), while the lowest level was reached in Niger - only US\$ 253 in the same period (WTO, 2016).

Openness to trade (1) is one of the basic indicators that are used if trade performance of each country and its integration into the world economy are evaluated. Rate of this openness is influenced by various factors - adopted trade policy, bilateral and multilateral trade negotiations led by national government, wider macroeconomic context of national economy as well as of the whole world economy. Comparison of the openness to trade of West Africa's countries is contained in Table 2.

Table 2: Openness to Trade of West Africa's countries

Country	Period 2011-2013				Period 2001-2003				Increase (in pp)
	Trade to GDP ratio				Trade to GDP ratio				
	2011	2012	2013	Average	2001	2002	2003	Average	
Benin	56	60	69	61,67	57	51	49	52,3	9,3
Burkina Faso	58	63	63	61,33	32	31	31	31,3	30,0
Cabo Verde	92	n/a	n/a	110,6 ^{p)}	92	101	99	97,3	13,3
Côte d'Ivoire	91	93	85	89,67	74	80	75	76,3	13,3
Gambia	67	75	70	70,67	47	60	69	58,7	12,0
Ghana	86	93	82	87,00	110	97	97	101,3	-14,3
Guinea	141	145	131	139,00	29	55	51	45,0	94,0
Guinea-Bissau	58	40	42	46,67	48	41	43	44,0	2,7
Liberia	193	156	149	166,00	65	73	72	70,0	96,0
Mali	52	55	59	55,33	60	60	62	60,7	-5,3
Mauritania	122	144	135	133,67	73	71	68	70,7	63,0
Niger	69	61	62	64,00	42	42	40	41,3	22,7
Nigeria	53	44	31	42,67	82	63	75	73,3	-30,7
Senegal	67	67	76	70,00	66	68	65	66,3	3,7
Sierra Leone	n/a	n/a	n/a	98,4 ^{p)}	36	39	46	40,3	58,1
Togo	93	107	109	103,00	82	86	102	90,0	13,0

Note: Data on trade-to-GDP ratio were not available in some countries for certain years. Then, the average level of this indicator calculated by the World Trade Organization is used.

Source: World Bank (2016), author's own calculation and data processing

Larger countries tend to be less open to trade because they may undertake a greater share of trade within their borders. It means the same for more populous countries or countries with unfavourable geographical location. The highest increase in openness to trade between two specified periods is identified in Liberia, Guinea and Mauritania (all countries have access to the Atlantic Ocean). Nigeria's declining rate of indicator is caused by several reasons, e.g. Nigeria's exports dropped by 11.6 percent in 2013 due to difficulties with petroleum exports - the United States stopped importing crude petroleum from Nigeria and fuels create nearly 80 percent of its export revenues.

Diversification of exports is insufficient in West Africa. Most countries are focused significantly on exports of one product group (according to SITC). Moreover, primary products are the most important resource of export revenues for them (see details in Table 3).

Table 3: Most Important Export Product Group (Percentage Share in Total Exports of Goods) of West Africa's Countries

Agricultural product	Fuels and mining products	Manufactures
Benin (22 %)	Gambia (68,4 %)	Togo (45,7 %)
Burkina Faso (32,6 %)	Ghana (36,9 %)	
Cabo Verde (86,1 %)	Guinea (52,6 %)	
Guinea-Bissau (25,7 %)	Mauritania (58,6 %)	
Côte d'Ivoire (58,4 %)	Niger (51 %)	
Mali (20,8 %)	Nigeria (79,9 %)	
Senegal (36,3 %)		

Note: Data for Liberia and Sierra Leone are non-available.

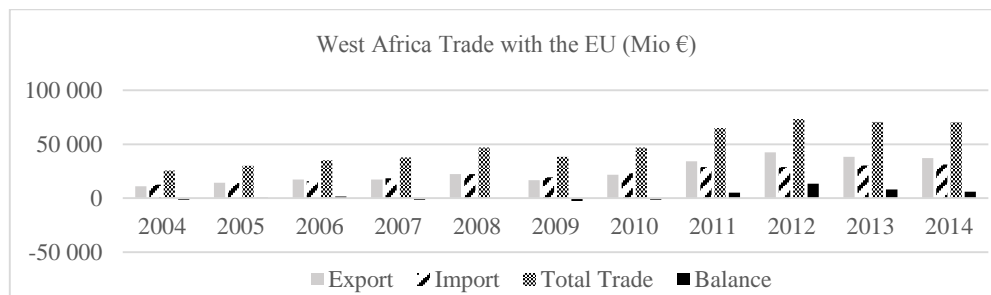
Source: World Trade Organization (2016)

Togo is the only one West Africa's country with the manufactures as the most important export product group. Within period 2011-2013, the most important items of Togo were machinery and transport equipment, crude materials, animals and vegetable oil.

4.2 Value of West-Africa's Export (of Goods) to the EU

The European Union is long-term the most important export as well import partner for West Africa. EU imports to West Africa creates 23 percent of all West Africa's imports and West Africa's exports to the EU creates 37 percent of all West Africa's exports. Figure 1 shows value of exports, imports and trade balance of West Africa with the EU over the period 2004-2014. Since 2011, West Africa has had active balance of trade with the EU, with the highest surplus in 2012 (13,566 Mio €).

Figure 1: West Africa's Trade with the EU



Source: European Commission (2016), author's own data processing

However, on country level, the EU is the most important trade partner for only six countries (Cabo Verde, Ghana, Guinea, Côte d'Ivoire, Niger and Nigeria). Cabo Verde realizes more than 90 percent of its exports on EU market. It is the highest percentage amongst all West Africa's countries.

Intensity of trade relations between West Africa and the EU can be measured with the use of trade intensity index (2). This index indicates whether a country/region exports more, as a

percentage, to a partner than the world does on average. In our analysis it means whether West Africa exports more to the EU than the world does. For the year 2014, the value of TI index was 254,4. A value of the index greater than 100 indicates a relation more intense than the world average.

Table 4: Trade Intensity Index (Exports of Goods)

West Africa's TI index with	TI index
EU 28	254,40
India	468,87
Brazil	524,69
China	48,58
South Africa	619,97
USA	27,60
Japan	68,14
South Korea	91,19
Indonesia	248,28
Australia	90,26

Source: European Commission (2016), author's own calculation and data processing

We also calculated TI index for all top 10 export partners of West Africa. As it can be seen in Table 4, West Africa has more intensive relations than has the world on average with the EU, India, Brazil, South Africa and Indonesia. Except the EU, all of them belong to Global South. Intensification of South-South trade relations is one of the forms of so-called new geography of world trade.

4.3 Commodity Structure of West-Africa's Exports to the EU

Commodity structure is another important aspect in analysis of external trade. Commodity and market concentration are considered as significant variables if it is discussed about stability (instability) of export revenues. It is usually argued that wider export base is necessary for the stability of these revenues. Contrary to it, low diversification is considered as the cause of export earnings' fluctuations.

Low commodity diversification of West Africa's exports to the EU is significant weakness of these countries. Primary products quote more than 90 percent of West Africa's exports to the EU with mineral fuels, lubricants and related materials as the most important product group. This product group creates 77 percent of all West Africa's exports to the EU and 92 percent of these exports are realized in only one item – petroleum (for the year 2014). Dependence on exports of primary products is clearly visible in Figure 2.

Figure 2: Commodity Structure of West Africa's Exports to the EU



Source: European Commission (2016), author's own calculation and data processing

Commodity structure of exports can be also evaluated more sophisticatedly with the use of various indicators. We use Herfindahl-Hirschman product concentration index (3). For the year 2014, value of the HH index is 0,64, which means relative low commodity diversification of West Africa's exports to the EU (exporter with a preponderance of trade concentrated in a very few products has the value close to 1).

Low diversification of exports can be caused by various circumstances in exporting country, such as lack of finances, existing barriers for market entrance, insufficient infrastructure, lack of skilled labour force, weak public institutions, corruption etc. The World Bank evaluates business environment in 189 economies in its regularly printed Doing Business Reports. Countries are ranked on the ease of doing business. West Africa's countries belong to countries with the worst performance. The regional average rank of West Africa is 152. Ghana is the best performing country in this region but its rank is 114⁴².

5. Conclusion

Long-term, we pay our research attention to involvement of the Sub-Saharan Africa's countries to the world economy, especially in terms of their external trade and foreign investment relations with developed countries – see our papers Kovářová (2014), Kovářová (2015a) or Kovářová (2015b). In this paper, we analysed value and commodity structure of the West Africa's exports to the EU. This analysis brought us initial view on fundamental patterns of these trade relations. It is more general than detailed. However, results of our analysis open us space for further research of these trade relations as well as for inter-regional comparison with other EPA regions.

The European Union has launched specific measures and incentives focused on developing countries as a part of its common trade policy. Special attention is paid to ACP Group of States. Trade relations with ACP countries has to be framed by the Economic Partnership Agreements that are negotiated on regional level. Negotiations of the EPA with West Africa was concluded in 2014 and in the same year, West Africa was the most important trade partner for the EU from all ACP regions.

We found out that since 2011, West Africa had had active balance of trade with the EU. EU imports to West Africa creates 23 percent of all West Africa's imports and West Africa's exports to the EU creates 37 percent of all West Africa exports. According to the trade intensity index, trade relations between West Africa and the EU are more intense than the world average level. However, patterns of the West Africa's exports to the EU show weaknesses typical for exports of all developing countries – low commodity diversification and signification of primary products in these exports. These patterns are dependent not only on previous trade negotiations, but also (and more significantly) on traditional weaknesses of West Africa's countries. Adopted EPA had no impact on the part of West Africa-EU trade that was analysed in this paper because of the date of its entry into force. Only future development will show if this Agreement has the ability to improve patterns of West Africa-EU trade.

⁴² Cabo Verde (rank 126), Côte d'Ivoire (142), Burkina Faso (143), Mali (143), Sierra Leone (147), Togo (150), Gambia (151), Senegal (153), Benin (158), Niger (169), Guinea Bissau (178), Liberia (179).

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Breach of Budgetary Discipline as a Direct Consequence of the Breach of Conditions in the Management of the EU Funds

Michal Koziel

VŠB - Technical University of Ostrava
Faculty of Economics, Department of Law
Sokolská třída 33
Ostrava, Czech Republic
michal.koziel@vsb.cz

Abstract

This paper deals with one of the major threats in the use of resources from European funds - breach of budgetary discipline. This is a situation where beneficiary usually uses funds provided to him from public sources against the law. In the case of resources provided by the EU funds, the issue is very actual, since currently are taking place in the Czech Republic ex post controls of the management of individual projects and financed from EU funds. The author will mainly focus on definitions of the terms, as well as on control and method for determining whether a violation has occurred budgetary discipline, and also the consequences associated with this violation. The main aim of this article is to determine what sanction are facing up the beneficiary for breach of budgetary discipline in relation to the management of EU funds.

Keywords: *EU Funds, Breach of Budgetary Discipline, Beneficiary, Sanction*

JEL Classification: *K420, K34, K30*

1. Introduction

Social relations, whose subject are public funds, have special position in the legal order of the Czech Republic. Of course, the state has an interest in ensuring that those relationships are respected, because through these relations public funds are handled. Therefore, these relations are subject to special protection of the law and violation of the rules handling with public funds may have negative consequences for the lawbreaker. The legislator thus makes it very clear that anyone who handles with these funds must be aware of the fact, that in case of violation of set rules, associated sanctions threaten with for breach of budgetary discipline. Restriction does not apply only to public bodies, but also to private law entities - natural and legal persons who are under the law, decision or agreement recipients of public funds, and handle with them.

Breach of budgetary discipline is at the same time a direct result in case that subjects - the recipients of subsidies from the European funds, act contrary to the set conditions. Breach of budgetary discipline occurs not only if the parties act contrary to the laws, but also if they violate the directly applicable legislation of the European Union, decisions of the authorities or an agreement between the provider and the recipient. In addition, resources from the EU funds are secured by funds from the state budget, and therefore the same rules apply to manage them as is the case with national resources and also for their beneficiaries in regions in Czech Republic, because as Beck (2012, p. 16) said there is *“a specific connection or relation between the public funds expended from the European Union into their regions in the form of subsidies and the real economic advancement of those regions”*. The fundamental sources

within the study area are Act No. 218/2000 Coll., on Budgetary Rules, and Act No. 250/2000 Coll., on Budgetary Rules of Territorial Budgets, together with other laws, which are for example Act No. 320/2001 Coll., on Financial Control or Act No. 280/2009 Coll., the Tax Code.

The main aim of this article is to determine what sanction are facing up the beneficiary for breach of budgetary discipline in relation to the management of EU funds.

2. Public Funds

The concept of breach of budgetary discipline occurs primarily in connection with the management of public funds. These funds are clearly defined in the law⁴³, but also their character should be taken into account. Of particular importance is their public character, as defines for example Banaszak (2012), which determines whether in this case a violation of budgetary discipline may occur or not. It is therefore the determining factor. For the definition of a public nature of these funds can be used for example a definition of public funds in the Act on Financial Control. It defines public funds as public revenues and public expenditures, things, property rights and other assets belonging to the state, state contributory organizations, state fund, a the local government unit, district of city Prague, contributory organization of the territorial government and contributory organizations of city Prague district. It may also be the means that are used by legal entity established to carry out the tasks of public administration by a special regulation, for example: public college or General Health Insurance Company or other legal entities, which manage public funds (Act on Financial Control).

For purposes of breach of budgetary discipline laws define the following categories of funds:

- finances of state budget and funding out of state budget;
- finances of state fund;
- finances of National fund;
- state financial assets;
- finances of local government unit;
- finances of the district of the Capital city of Prague;
- finance of the Regional Cohesion Council;
- finances of associations of municipalities.

Part of the punishment for violation of budgetary discipline is also punishment for unauthorized use or retention of funds from the state budget secured by funds from the European Union budget and state budget funds backed by the National Fund. The question remains whether the range of funds determined for breach of budgetary discipline should not be much wider.

3. Definition of Breach of Budgetary Discipline

The law quite unambiguously defines what a violation of budgetary discipline is. Because of decentralization in public funds management, which may have influence on many different factors (Golem, Malešević Perovič, 2014), there are two Act in the Czech Republic in this area. The definition of breach of budgetary discipline can be found both in the budget law, which lays down basic rules for management of resources at the state level, as well as the Act on Budgetary Rules of Territorial Budgets as a crucial piece of legislation for the financial

⁴³Act on Budgetary Rules and Act on Budgetary Rules of Territorial Budgets contain definition of subsidy, refundable financial assistance and other funds.

management of municipalities, counties, regional cohesion councils and voluntary associations of municipalities, including legal persons of local government. As the fundamental statutory definition of breach of budgetary discipline is quite precise and clear, leading experts in the field of finance, respectively, budgetary law transpose it into their definitions. Main Czech authors in field of financial law, such as Bakeš (2012), Janošíková (2009), Marková, Boháč (2007) and Mrkývka (2004). The definition according to both above mentioned acts are also very similar, but with regard to their focus we should obviously distinguish them.

Crucial practical implications have the legal definition of the date of the breach of budgetary discipline. This is the day when granted funds were unlawfully used or the day they are put down to the beneficiary's account with the subsidies provided retroactively. This has implications in particular for determining the amount of penalty for breach of budgetary discipline. In case of unauthorized retention of funds, the date of violation of budgetary discipline is the day following the day on which a deadline for returning the funds provided had passed in vain (Act on Budgetary Rules, Act on Budgetary Rules of Territorial Budgets).

3.1 Breach of Budgetary Discipline in Accordance with the Act on Budgetary Rules

Bakeš (2012) mentioned, that the Act on Budgetary Rules defines a breach of budgetary discipline, especially as the unauthorized use of funds of the state budget and other state funds and unauthorized use or retention of funds from the state budget, state fund, the National Fund or state financial assets by the recipient. The fundamental here is the explanation of terms the unauthorized use of funds and cash retention. Unauthorized use is understood by the law as *“their issue, whose implementation has meant that obligations under the law, decision or agreement to provide such funds have been breached, , or breach of the conditions under which the relevant funds provided, violations on purpose or the conditions under which the funds were included in the state budget or moved by the budget measure and contrary to the stated purpose or conditions issued; Furthermore, it also means that it was not possible to prove how these funds are used.”* (Act on Budgetary Rules, art. 3 letter e)) The law thus equates violations of legal provisions as a legislative act with the decision as an individual legal act. It is necessary even to count on the fact that the unauthorized use of funds provided from the state budget is also a breach of the conditions which the applicant promised in their project applications (project).⁴⁴ Process of project selection is connected to other important element, which are very ambiguous criteria for project selection (Brzáková, Šimánová, 2014). The issue of unauthorized use is also related to public procurement and violation of procedures for the submission of public procurement (failure to comply with established procedures, deadlines etc.) (Daňari online, 2008)

The decision is somehow crucial especially in the area of providing subsidies, the subsidy provider first establishes the general conditions for obtaining grants, subsequently to applicants who meet those conditions, provides specific conditions and the purpose for which the means are about to be used, and it is through the decision. In case, that does not happen and the applicant will act contrary to the decision and his project application, based on which this decision was issued, he commits unauthorized use of entrusted funds and breach of budgetary discipline.

Another "type" of infringement to the law, which leads to a breach of budgetary discipline, is a seizure of cash. Seizure of funds means a breach of the obligation to repay funds provided from the state budget, state fund, state financial assets or the National Fund within the set

⁴⁴ See decision of the Czech Supreme Administrative Court No 5 Afs 70/2008.

deadline (Marková, Boháč, 2007). The legislator therefore combines the consequence of breach of budgetary discipline not only to the conducting of the entity where he used funds illegally as mentioned above, but also the situation where the entity is acting in accordance with the law, but certain conditions have changed so much that as a result of these changes funds should have been returned to providers, but he will not do so.

3.2 Breach of Budgetary Discipline in Accordance with the Act on Budgetary Rules of Territorial Budgets

In case of violation of budgetary discipline under the law on budgetary rules for regional budgets the definition of breach is in principle identical to the definition under the law on budgetary rules, however, the public funds, from which the financial services come, are changing. The law on budget rules for local budgets thus defines the breach of budgetary discipline as any unauthorized use or retention of funds provided as a subsidy or a refundable financial assistance from the budget of the regional district of the capital city Prague, the Regional Cohesion Council, or the municipalities (Mrkývka, 2004).

The breach of budgetary discipline is defined differently in the case of a contributory organization established by the local authority. This type of organization commits a breach of budgetary discipline, especially when it uses the funds it has received from the budget of its founder, and funds from its cash fund, contrary to the specified purpose, in a different amount or for other purposes, or does not pay levy imposed by founder (Act on Budgetary Rules of Territorial Budgets).

3.3 Lawbreakers of Budgetary Discipline

Among the potential infringers of budgetary discipline under the Act on Budgetary Rules and the Act on Budgetary Rules of Territorial Budgets is (Act on Budgetary Rules, Act on Budgetary Rules of Territorial Budgets):

- a state organizational unit;
- contributory organization;
- regional government unit;
- natural or legal person other than the state.

An important element in the definition of lawbreakers who are able to violate budgetary discipline itself is not a list of them, but the fact that they manage the public funds, and that they used them improperly or they seized them in accordance with law. To breach budgetary discipline so can any natural or legal person, and in the case of funds at the state level, it can be also state organizational unit.

4. Procedure for Breach of Budgetary Discipline and Amount of the Sanction Imposed

To check the budgetary discipline legislator does not constitute a separate system of bodies, but uses the already existing institutions. In the case of funds at the state level, the body that decides whether it breach of budgetary discipline occurs and imposes levy and penalty for this violation, is a tax office. The competence of financial authority results from, first of art. 44a par. 11 of the Act on Budgetary Rules, as well as of art. 10 par. 1 of the Act No. 456/2011 Coll., on Financial Administration of the Czech Republic. For unauthorized use or retention of funds provided as a subsidy or a refundable financial assistance from local budgets it is municipal office which decides to impose a levy and penalties for breach of budgetary discipline in the independent competence for funds from the municipal budget, regional office

with funds from the regional budget and for budget of district of City of Prague it is office of the district and for budget of the capital city of Prague it is Prague city Hall. Budgets of association of municipalities and the Regional Cohesion Council are calculated among regional budgets. In case of violation of budgetary discipline, it is a body appointed to the statutes to impose levy penalties and decided in case of the association of municipalities and with the Regional Cohesion Council it is the Office of the Regional Council (Act on Budgetary Rules of Territorial Budgets).

4.1 Management of Charges

Management of these charges is carried out by said authorities according to the Tax Code. It generally defines that for the purposes of the Tax Code, the tax means also cash transactions, if a special law sets that management is conducted according to the Tax Code. This particular law is in this case the Act on Budgetary Rules (art. 44a par. 11) and Act on Budgetary Rules of Territorial Budgets (art. 22 par. 15). Baxa (2011) and other commentators of the Tax Code stand similar for this issue, and this issue can therefore be regarded as indisputable.

These offices can use all procedures offered by the tax system, particularly tax audits, local inquiry or demand explanations etc. to decide whether there has been a breach of budgetary discipline, and consequently to determine charges and penalties for this violation to. The infringer of budgetary discipline has in this case the status of the tax entity, and it grants him all the rights conferred on him by the Tax Code, but he also complies with the obligations laid (Act on Budgetary Rules, Act on Budgetary Rules of Territorial Budgets). In terms of assessing compliance with the budgetary discipline an issue in fact is decisive at the time of deciding territorial financial authorities.⁴⁵

4.2 Suggestions of Errors

The mentioned authorities can obtain suggestions of errors from different sources. In the case of funds at the state level that can be individual providers of grants who carry out public administration control⁴⁶ within their own supervisory bodies. Likewise, municipal, county and other authorities implement their own control procedures in accordance with that legislation. Equally important institution in this area is the Supreme Audit Office, which is inherently a body independent of the legislative, executive and judicial power. His task is to exercise control of the state property management and exercise control over the implementation of the state budget (Constitution of the Czech Republic, art. 97). If the Supreme Audit Office discovers any errors, it may pass on a suggestion to the responsible authorities. The wide range of privileges under the Act on the Supreme Audit Office belongs to inspectors of the Supreme Audit Office or but they are not entitled to impose sanctions if they find that the budgetary discipline had been violated.

In the event that breach of budgetary discipline is found and it is a violation under less serious conditions, a provider prompts first a grant recipient to carry out remedial measures.⁴⁷ If the grant recipient fails to take remedial or violation involves other than less serious conditions than, provides financial or other competent authority levy or penalty to infringer for breach of

⁴⁵ See decision of the Czech Supreme Administrative Court No 1 Afs 100/2009.

⁴⁶ According to the Act No. 255/2012 Coll., on Control; and Act No. 320/2001 Coll., on Financial Control.

⁴⁷ See especially art 18 Act No. 320/2001 Coll., on Financial Control, art. 14f par. 1 Act No. 218/2000 Coll., on Budgetary Rules and art. 22 par. 6 Act No. 250/2000 Coll., on Budgetary Rules of Territorial Budgets.

budgetary discipline through a decision which is called as a demand for payment. Levy or penalty shall amount according to the rules set out in the relevant laws. This decision must be justified (see Tax Code). Levy and penalties may be assessed within 10 years from January 1st of the year following the year in which there has been a breach of budgetary discipline. According to the jurisprudence of the Supreme Administrative Court, the limitation period for determining the levy or penalty for breach of budgetary discipline special notice to the limitation periods for tax specified in art. 148 of the Tax Code.

By this of course this entire process in violation of budgetary discipline can be terminated (if subsequently assess levy and penalties are paid by infringer), but it may not. The law allows that if the infringer does not agree with the decision, he can actively resist or use other means to mitigate the consequences of that decision. Since it is an obligation imposed by decision, it is possible against this decision to appeal to reconsider that decision by governing body. Another way is to apply for remission or partial remission of duty to pay levy or penalty. The General Directorate of Finance decides on this request for resources on the state level (Act on Budgetary Rules), regarding the resources at the local level, and then on this application may decide authority which has provided funding decision (Act on Budgetary Rules of Territorial Budgets). Since the management of these charges is implemented on the basis of the Tax Code, the infringer may also request a postponement of payment of the levy and penalties or on the distribution of a payment in instalments (Tax Code). If the request of the infringer is accepted, then he is not obliged to pay punitive interests during permitted postponement.

4.3 Amount of the Sanction Imposed

The basic rule is that the sanction for breaching of budgetary discipline corresponds to the amount of unauthorized use or withhold funds. Clarification of this rule provides the Supreme Administrative Court in its decision. Another important limitation is the possibility of imposing the levy only up to the amount of funds provided by the date of breach of budgetary discipline. For less serious breaches specific obligations may by also provided in the contract or the decision to grant these funds (Act on Budgetary Rules). Lower sanction (percentage range in relation to the funds provided). Multiple violations for the same subsidy or repayable financial aid are added, but with the above mentioned limitations (Deník veřejné správy, 2012).

5. Conclusion

This article deals with the breach of budgetary discipline as a result of unauthorized use or retention of funds from the European funds. In this area, the author sees the greatest deficiency in the lack of individual responsibility of infringers of budgetary discipline, especially if it is a public institution.

Legal regulation of breach of budgetary discipline, as such, would also deserve separate treatment in a special act, which would supplement the general rules concerning the management of public funds, but would also give more concrete expression of individual procedures and current rules. Inspiration can be found for example in Poland, where a similar arrangement exists in the form of a separate law on liability for breach of budgetary discipline in area of public funds. The current situation where there are different regulations at the state and local budgets level, certainly does not contribute to clarity. Breach of budgetary discipline is also deeply connected to other important topics, such as application of fiscal rules and their impact on budgetary discipline (see Holm-Hadulla, 2012), state responsibility for his actions against the law etc.

It should be positively acknowledged, that legislation like the perception of society in this area is constantly evolving, increases awareness and specialization among providers of public funds and their beneficiaries, and through practice and existing case law the gaps in the current legislation are gradually filled so as this important area of public law regulated in detail and precisely. But there were no fundamental changes in the regulation of breach of budgetary discipline since 2004. The state, local government units and the European Union institutions have an interest in seeing that the approach is carefully guarded when dealing with public funds coming from their budgets. It is surprising that many beneficiaries of subsidies, especially in terms of grants from the European Union, the threat of sanctions for breach of budgetary discipline, consciously or unconsciously ignore, and at the same time significant penalties for such behaviour threatens to them, including criminal law sanctions, on which this article was not focused, however, can have dramatic consequences particularly in the personal sphere of specific individuals.

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Application of Decision Analysis at Trading of Goods in the Selected European Union Member State

Michal Krajňák, Kateřina Krzikallová

VSB-Technical University of Ostrava

Faculty of Economics, Department of Accounting

Sokolská třída 33

Ostrava, Czech Republic

e-mail: michal.krajnak@vsb.cz, katerina.krzikallova@vsb.cz

Abstract

The paper deals with evaluation of tax-legal and economic aspects of trade in goods of the Czech business entity in one of the other European Union Member States – Poland. The aim of this paper is to determine by using the selected multi-criteria decision method such an alternative of realization of trade contracts, which maximizes the utility and minimizes the risk. The evaluation of individual alternatives is carried out by taking into account both the local income and value added tax law and Agreement for the avoidance of double taxation in Poland. Apart from the selected method of multi-criteria decision analysis, the methods of analysis, synthesis and comparison are used in this paper as well. Based on the results of the analysis, it is recommended to implement the alternative in which the Czech business corporation negotiates all business cases from its seat in the Czech Republic.

Keywords: *Corporate Income Tax, Value Added Tax, Multi-criteria Decision Analysis, Permanent Establishment, Tax Treaties*

JEL Classification: *D22, H21, H22, H32*

1. Introduction

The tax harmonization is an essential part of the European integration. The global markets are becoming more increasingly interconnected since economic globalization removes barriers of mutual trade (Tošenovský, 2014). For this reason, as well, accession of the Czech Republic into the European Union (hereinafter referred to as the EU) meant a significant change in value added tax policy. One of these changes was the implementation of EU directives into Value Added Tax Act to ensure proper functioning of the internal market. Not only this change has affected the foreign trade of the Czech Republic. For more information about development of foreign trade see e. g. Fojtková and Vahalík (2015). Based on the Council Directive on the common system of value added tax the minimum levels of VAT rates are set throughout this area. Development of VAT rates is analysed e.g. by Široký and Maková (2014). While the process of harmonization of indirect taxes in the European Union is a very advanced, this statement is not applicable to direct taxes (Nerudová and David, 2008 or Wasserfallen, 2014) and their harmonization is made mainly through the case-laws of the Court of Justice of the European Union (Rylová, 2012). One of reasons are differences in the accounting systems of the EU Member States and the consequent different methods for calculation of income taxes. Calculation of Corporate Income Tax is also influenced by a different system of deductible expenses, items deductible from the tax base and tax credits. Member States still give priority to the preservation of their sovereignty in the income taxes legislation. In spite of this fact the

aim in this area, as shown by Suhányiová and Korečko (2015) is to achieve the full harmonization in the EU.

2. Problem Formulation and Methodology

After the Czech Republic and its neighbouring countries joined the EU, the development of trade relations among neighbouring states increased in connection with the cancellation of regular customs controls at their borders and adapting tax laws. Each business case, however, in terms of utility and potential risks brings many alternatives of its realization. Business entity must choose, especially in cases of long-term contracts such an alternative of its implementation to maximize utility and minimize risk (Mikušová, 2013 or Randová and Krajňák, 2013).

The paper simulates a situation where the Czech resident, business corporation “K” with seat in Ostrava, registered to VAT in the Czech Republic has the opportunity to realize acquisitions of goods in Poland which would be always subsequently delivered directly from Poland to other EU Member States. The Czech business corporation “K” would source the goods directly from the seat of the Polish supplier “S” in Poland. Subsequently, through the Polish transporter “T”, a Polish VAT payer, the goods would be transported to the warehouse, which is also located in the territory of Poland. The warehouse is operated by the Polish business corporation “W” that is also registered to VAT in Poland. The goods would be continuously sourced by business partners registered to VAT in other Member States of the European Union. The customers would always arrange transport of the goods to their states by themselves. Due to these conditions the Czech corporation “K” will not be allowed to use simplified procedure at supply of goods in the EU territory by a form of triangular trade according to Section 17 of Czech VAT Act. Given this fact, the corporation “K” would have an obligation to register to VAT in Poland as well.

Due to the high volumes of negotiated contracts and increasing demand for traded goods the Czech Corporation “K” is considering several strategies how to implement these business transactions in order to maximize utility and minimize risk.

When trading goods within the EU it is also necessary, in addition to the regulations governing business and eventually labour law, to follow the procedure in accordance with the tax laws of the respective countries. It is particularly the legislation regarding taxes on income in this model case, where the most important is the Agreement between the Czech Republic and the Republic of Poland for the avoidance of double taxation and the prevention of fiscal evasion with respect to taxes on income (hereinafter referred to as Agreement for the avoidance of double taxation) which was published in the Collection of international treaties under No. 102/2002 and is effective since 6th of June 2002. As well the national legislation, especially the Czech Corporate Income Tax Act, No. 586/1992 Coll., as amended and the Polish Corporate Income Tax Act of the 15th February 1992, No. 21 prom. 86, as amended. Furthermore, among others, in accordance with the Czech Value Added Tax Act, No. 235/2004 Coll., as amended in Czech and Polish The Goods and Services Tax Act from 11 March 2004, No. 54, prom. 535, as amended.

The aim of the paper is to recommend, by using the selected multi-criteria decision methods, the Czech business corporation “K” such an alternative of realization of trade contracts, which maximizes the utility and minimizes the risk respecting the relevant legislation. At the same time the paper aims to help other Czech entrepreneurs with their decision in a similar situation by means of this model case.

2.1 Methodology of Multi-Criteria Decision Making

When finding the optimal alternative, various criteria of different significance are taken into account. In cases when more criteria are reflected, this is a multi-criteria decision making (Bierman, Bonini and Hausman, 1986). The methods of multi-criteria decision making are used in research also by e.g. Tošenovský (2015) or Sakhuja, Jain and Dweiri (2015). The final optimal alternative will be determined by AHP method, since this method is according to Valasquez and Hester (2013) widely used in the field of multi-criteria decision.

For determination of weights, one of the methods based on the pairwise comparison – Saaty’s method is used. Its author (Saaty 1980, 1994) uses the point scale from 1 to 9 to determine the criteria weights where the scale 1 characterizes the same significance criteria and scale 9 the state when the first criterion is absolutely more important than the other. Mutual comparison of criteria significance using the above mentioned point scale allows to establish the Saaty’s matrix (1),

$$S = \begin{matrix} & k_1 & k_2 & \dots & k_j \\ \begin{matrix} k_1 \\ k_2 \\ \vdots \\ k_i \end{matrix} & \begin{pmatrix} s_{11} & s_{12} & \dots & s_{1j} \\ s_{21} & s_{22} & \dots & s_{2j} \\ \vdots & \vdots & \ddots & \vdots \\ s_{i1} & s_{i2} & \dots & s_{ij} \end{pmatrix} \end{matrix}, \quad (1)$$

where S_{ij} are elements of Saaty’s matrix.

The weights of the i -th criteria v_i is determined by geometric mean proportion of the i -th criterion and the sum of the geometric mean of all criteria (2),

$$v_i = \frac{G_i}{\sum_{i=1}^n G_i} \quad (2)$$

where G_i is the geometric mean of i -th criterion and $\sum_{i=1}^n G_i$ is the sum of the geometric mean of all criteria.

A necessary condition for confirmation of the relevance of criteria significance is to calculate the consistency coefficient CR (3). Zmeškal (2012) states that the matrix is consistent if $CR < 1$.

$$CR = \frac{CI}{RI}, \quad (3)$$

where RI is the random index. CI is the consistency index determined by the equation (4),

$$CI = \frac{\lambda_{max} - N}{N - 1}, \quad (4)$$

where λ_{max} is the largest eigenvalue of the matrix and N is number of criteria.

The optimal alternative from the utility point of view is the one in which the resultant global weight TU determined by equation (5) has the highest value,

$$TU = \sum_{j=1}^n v_{gi}, \quad (5)$$

where V_{gi} is global weight of the j -th alternative.

Evaluation of risk phenomenon is done by applying the method of expected mean value, which is discussed e.g. by authors Fotr and Švecová (2010), that is determined by (6)

$$SO = \sum_{i=1}^k w \cdot p, \quad (6)$$

where SO is a degree of threat, p the probability of the negative effect and w is the weight of the negative effect. The optimal alternative is the one in which the value SO is the lowest.

3. Evaluation of Utility and Risk of Individual Alternatives

When creating the alternatives, it is necessary to take into account the aforementioned legislation of the Czech Republic and the Republic of Poland. As it has been also mentioned above, for all alternatives is applied the same assignment that the goods is being acquired by the company "K", the Czech resident and VAT payer, in Poland, then transported and stored in rented premises from which it is gradually taken by customers from other Member States and the goods is transported by these customers in their Member States. An obligation of registration for VAT in Poland automatically arises for the business corporation "K".

3.1 Analysis of Individual Alternatives

The first alternative A_1 represents a setting up of permanent establishment of Czech business corporation K in Poland. The definition of permanent establishment is defined in Article 5 of Agreement for the avoidance of double taxation. It is a fixed place of business through which the business is wholly or partly carried on. The term permanent establishment includes especially a place of management, a branch, an office, a factory, a workshop and place of extraction of natural sources. This alternative assumes that the business transactions are carried out through this permanent establishment.

The reason why the permanent establishment is set up is that the dependent agent is acting on behalf of the company "K" and has, and habitually exercises an authority to conclude contracts in the name of the enterprise "K" in Poland (Article 5, Paragraph 5 Agreement for the avoidance of double taxation). This agent develops a higher degree of active involvement in business activities of the company and is subjected to a close control. Apart from this agent, the manipulation with goods, acting with transporters and other auxiliary activities would be provided by the company "K's" other employees that it has acquired for these purposes in Poland. In this alternative there is also arises an obligation of registration for income taxes, obligations to employees and relevant institutions in connection with the conclusion of employment contracts, in this alternative. According to Article 7 Paragraph 1 of Agreement for the avoidance of double taxation the business profits achieved through permanent establishment situated in the other state may be taxed in this state. In accordance with Article (21) paragraph (2) point (a) of Agreement for the avoidance of double taxation the Company "K" as a resident of the Czech Republic includes in the tax base in the Czech Republic the items of income from Poland, but the amount of computed tax is allowed to be deducted in an amount of the tax paid in Poland by a credit method. The level of Corporate Income Tax rate in Poland is the same as in the Czech Republic i.e. 19 %.

The traded goods is subject to a standard VAT rate both in the Czech Republic and Poland. The same rules are applied for the national goods transport and warehousing services, as well. The level of the standard rate applied in the Czech Republic is 21 % and 23 % in Poland. By acquisition of goods in Poland, the right to deduct input VAT as well as from other received taxable supplies, i.e. primarily from lease storage space and transport would arise for the company "K". In respect of the supply of goods to persons registered for VAT in other Member States, the company "K" with the Polish VAT identification number would realize VAT exempted transaction with entitlement to VAT deduction. Consequently, the company K would create excess VAT deductions in Poland.

The second alternative (A₂) arises from the possibility of the Czech resident, the business company “K”, to provide the mentioned business operations in Poland through an independent agent. According to Article 5 Paragraph 6 of Agreement for the avoidance of double taxation if the independent agent is acting for the company “K” in the ordinary course of his business, the permanent establishment and relating obligations mentioned in Alternative A₁ would not arise. However, the one who bears the business risk is the company “K”. The commission charged by independent agent for negotiated transactions constitutes a cost of company K and at the same time the company K is allowed to exercise the right to deduct the input VAT tax from this received taxable supply, since it is used for carrying out the economic activities. The permanent establishment neither arises because the term permanent establishment does not include under Article 5, paragraph 4 point (a) the use of facilities solely for the purpose of the storage, display or delivery of goods belonging to the enterprise or under point (b) the maintenance of stock of goods or merchandise belonging to the enterprise solely for the purpose of storage, display or delivery. The company “K” once again uses the services of the operator of the Polish warehouse business corporation that ensures the storage and manipulation with goods.

The third alternative (A₃) is based on the fact that the Czech business corporation “K” negotiates all the business cases from its headquarters in the Czech Republic. Therefore the permanent establishment in Poland does not arise. The acquisition of goods in Poland, transport and subsequent supply to other Member States remains in the same regime as in alternative A₁. The storage and manipulation with goods is carried out by the store operator, Polish business corporation that is registered to VAT in Poland. The obligations and entitlements associated with Polish VAT are also solved as in alternative A₁.

Another from set of alternatives presupposes establishment of a subsidiary limited liability company in Poland (A₄). This alternative, in addition to the costs mentioned in the alternative A₁ means additional costs for setting up a company and performing a business in Poland. Nevertheless, this alternative would strengthen the company's “K” image in the Polish market with the possibility of further business development in this area. Therefore, the subsidiary company would be led by a highly skilled manager. As there would not be any transactions between the parent and subsidiary company there would not be imposed other conditions as in the case between independent businesses. In consequence, according to Article 9 of the Agreement for the avoidance of double taxation the income from this subsidiary company in Poland is not becoming a part of the income of the parent company “K” in the Czech Republic. Profits are taxed in Poland.

3.2 Classification of Criteria

The decision making concerning the selection of such an alternative which shows the highest utility is influenced by 6 criteria in total.

The criterion C₁ – costs – includes labour costs, administration costs, cost related to acquisition of goods, its transport, storage of goods and other general costs. They are generally the amounts which are needed to be used for the implementation of the relevant alternative. This criterion has a minimization character, since the aim is to achieve the lowest possible costs.

The criterion C₂ – the legislative (legal environment) evaluates by using the number of scale points the complexity and friendliness of the business environment in comparison of the Czech Republic with Poland from the perspective of the Czech business entity.

When choosing the j -th alternative, it is necessary to consider not only the effect of indirect taxes in the form of VAT, but also the possibilities of tax optimization from the perspective of tax on corporate income – criterion C_3 .

The fourth criterion C_4 – value added tax – ensures the evaluation of the j -th alternatives' effect in terms of VAT, especially the amount of the right to deduct input VAT, VAT obligation or excess VAT deduction and the other aspects connected with registration to VAT in the Czech Republic and Poland.

It is absolutely necessary to assess alternatives also in terms of profit – criterion C_5 , which is determined as the difference between revenues and costs. More about how to calculate profit and types of profit is shown by e.g. Dluhošová et al. (2014).

The last criterion C_6 - organizational complications, is the minimization criterion. It is desirable for decision makers that the organizational complications in business are at minimum.

3.3 Negative Effects

During decision making process the business corporation also reflects the risks that are associated with a given alternative. The realization of alternatives A_1 - A_5 brings these risk phenomenon:

- R_1 – failure of supplying the contracted amount of goods,
- R_2 – reliability of employees,
- R_3 – business competitors,
- R_4 – failure of ensuring the required quality of goods,
- R_5 – drop of demand for the goods on the world trade markets,
- R_6 – the language barrier.

4. Problem Solution

The evaluation of the utility and risks arising from the above mentioned alternatives A_1 - A_5 is processed in accordance with the mathematical formalization. The input data for the analysis are shown in Table 1. The less favourable the j -th alternative is for the decision maker, the less points from the selected scale when taking into account the i -th criterion are assigned. The evaluation is carried out using the number of scale points from 1 to 2 for the criterion C_4 , respectively 1 to 5 for the remaining criteria.

Table 1: Input Data

	A_1	A_2	A_3	A_4	A_5
C_1	2	3	4	1	5
C_2	2	2	3	2	4
C_3	2	3	3	2	3
C_4	1	1	1	1	2
C_5	4	2	5	3	1
C_6	4	2	5	1	3

Source: authors' calculations

4.1 Determination of Weights

When deciding about selection of alternative there are 6 different criteria evaluated in total. The weight is determined by the Saaty's method, in the first stage of which the Saaty's matrix (1) is assembled. By equation (2) there are determined the weights v_i of i -th criteria.

Table 2: Determination of Criteria Weights and Verifying of Consistency

Criterion	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	G _i	v _i	CI	CR
C ₁	1	7	5	3	5	5	3,714	0,444	0,090	0,072
C ₂	1/7	1	1/3	1/3	1/5	1	0,383	0,046	0,072	0,058
C ₃	1/5	3	1	1/3	1	3	0,918	0,110	0,030	0,024
C ₄	1/3	3	3	1	3	5	1,886	0,226	0,089	0,072
C ₅	1/5	5	1	1/3	1	5	1,089	0,130	0,115	0,092
C ₆	1/5	1	1/3	1/5	1/5	1	0,372	0,045	0,089	0,072

Source: authors' calculations

The results shown in Table 2 indicates that the most important criterion is C₁ – costs, the second one – C₄ – value added tax. The least important is criterion C₆ – the organizational complications.

The essential condition of the evaluation relevance is the confirmation of the data relevance by the consistency coefficient CR by the relation (3). According to Alonso and Lamana (2006) the value RI for 6 criteria is 1.24. In all cases the CR is calculated lower than 0.1 as it is shown in Table 2.

4.2 Utility

The local weights of the *j*-th alternatives are determined by similar procedure as it is described in the Chapter 3.1 by mutual comparison of the *j*-th alternatives. The input data for determination of significance is provided by Table 1. By multiplying the calculated local weights by the weight of *i*-th criterion using relation (5) the global weights are determined. The values of local and global weights are displayed in Table 3.

Table 3: Determination of Criteria Weights and Verifying of Consistency

Alternative	A ₁		A ₂		A ₃		A ₄		A ₅	
Criterion	v _i	v _{gi}	v _i	v _{gi}	v _i	v _{gi}	v _i	v _{gi}	v _i	v _{gi}
C ₁	0,064	0,028	0,130	0,058	0,264	0,117	0,033	0,015	0,510	0,227
C ₂	0,089	0,004	0,089	0,004	0,236	0,011	0,089	0,004	0,498	0,023
C ₃	0,091	0,010	0,273	0,030	0,273	0,030	0,091	0,010	0,273	0,030
C ₄	0,077	0,017	0,077	0,017	0,077	0,017	0,077	0,017	0,692	0,156
C ₅	0,264	0,034	0,064	0,008	0,510	0,066	0,130	0,017	0,033	0,004
C ₆	0,310	0,014	0,075	0,003	0,599	0,027	0,039	0,002	0,152	0,007
TU	-	0,108	-	0,121	-	0,268	-	0,065	-	0,446

Source: authors' calculations

By summing up the values of global weights the resultant global weight TU is subsequently found. The alternative with the highest value of TU is in evaluation in terms of utility recommend to the decision maker for implementation.

During evaluation, the highest calculated value of global weights is for the alternative A₅ - when is the business company “K” in the position of the trade intermediary. There are the lowest costs for the company in this alternative. Since the costs have the highest weight, it is a decisive factor affecting the overall amount of TU of the fifth alternative.

The second alternative with the highest utility represents a situation when the business transactions in Poland are negotiated from the Czech seat of the business company “K” in the

Czech Republic – alternative A₃. The main reason of the advantage is the fact that from the point of view of Polish taxes the company “K” has only obligations related to VAT in Poland.

Due to the high costs connected with the establishment, management and operating of the subsidiary company in Poland the global weight of the A₄ is the lowest. Low degree of the global weight is based on the results of alternative A₁ - a setting up of the permanent establishment of the business corporation “K” in Poland.

4.3 Evaluation of the Risk Factors

During the decision process the decision maker takes into the account the risks that come with the j -th alternative. Using the risk matrix in Table 4 there are shown the degrees of threat SO of the j -th alternatives. SO is determined by equation (6). The alternative, which takes the highest value is the riskiest.

Table 4: Risk Matrix

Alternative Negative effect (risk)	W	A ₁		A ₂		A ₃		A ₄		A ₅	
		P	SO	p	SO	p	SO	p	SO	p	SO
1	20	0,3	6	0,2	4	0,2	4	0,1	2	0,2	4
2	20	0,5	10	0,2	4	0,1	2	0,05	1	0,15	3
3	20	0,2	4	0,3	6	0,2	4	0,1	2	0,2	4
4	15	0,15	2,25	0,35	5,25	0,25	3,75	0,1	1,5	0,15	2,25
5	10	0,2	2	0,2	2	0,2	2	0,2	2	0,2	2
6	15	0,15	2,25	0,3	4,5	0,15	2,25	0,2	3	0,2	3
SO	100		26,5		25,75		18		11,5		18,25

Source: authors' calculations

The riskiest alternative is the A₁ – the creation of the permanent establishment. The reason is a higher risk concerning the reliability of employees and the necessity of their supervising by the Czech executives of company “K”, which increases other costs.

The least risky is the alternative A₄ – establishment of the subsidiary business company in Poland. Although this alternative takes lower degree of threat, its disadvantage, however, are the high costs which are significant in the decision-making process. Unlike the first alternative, the Czech company “K” would appoint a skilled, highly motivated manager to the subsidiary company who would also lead and supervise other employees. The lower degree of threat is also caused by a more favourable legal and business position of the subsidiary as a business company in comparison with e.g. a permanent establishment or a Polish non-resident.

The second lowest degree of threat SO was found in alternative A₃. It should be noted that this alternative takes the second highest global weight in terms of utility.

5. Conclusion

Multi-criteria decision making have played important roles in solving multi-dimensional and complicated problems (Ke and Chen, 2012). One of them may be a situation where the business entity is considering which alternatives can be used in connection with the mutual trade among the European Union countries. The free movement of goods is one of the pillars of the common market. The VAT concept complies with the conditions within the internal market.

If the decision maker, the Czech business corporation registered to VAT in the Czech Republic takes into the account only the utility, it follows as the best alternative to realize alternative A_5 - in which the company is only the intermediary. Selection of the final alternative chosen for implementation, however, depends not only on the degree of utility expressed in this case by the final degree of the global weight of the j -th alternative, but also on evaluation of the risks that this alternative brings. During the process of evaluating and selecting the alternative for implementation, the decision maker's attitude to risk plays also its role. In all cases, there was an assumption of a neutral attitude to risk, when the aversion and tendency to risk is in balance. If the risk factors are taken into account, it is recommended to implement the alternative A_3 - based on the fact that the Czech business corporation "K" negotiates all business cases from its seat in the Czech Republic and uses the services of storage, transport and manipulation with goods by external suppliers of these services, companies from Poland. There arises only obligation of VAT registration in Poland, as well. This alternative is the second least risky alternative. Although A_4 - establishing a subsidiary company in Poland gains the lowest degree of risk, in terms of utility evaluation it is at the lowest degree of the global weight. Therefore, the alternative A_4 is not appropriate to implement into practice in the current conditions.

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Major Trends and Developments in the Insurance Markets

Martina Krügerová

VŠB - Technical University of Ostrava
Faculty of Economics, Department of Law
Sokolská 33
Ostrava, Czech Republic
e-mail: martina.krugerova@vsb.cz

Abstract

For several years, the global insurance industry has been faced with an enormous amount of regulatory requirements. Their goal is to achieve integration, globalization, and the smooth functioning of a single insurance market in EU countries. Important aspects include the Solvency II Directive, the Insurance Distribution Directive (IDD), and the Regulation on Key Information Documents for Packaged Retail and Insurance-based Investment Products (PRIIPs), each of which impacts the insurance sector in a different way. This article is focused on trends in global insurance markets in relation to European integration in financial markets. Legislation changes, and their implementation, significantly influence the design of insurance products and the ways in which to sell and broker them. This article aims to outline the current problems on the Czech insurance market arising from the regulatory framework.

Keywords: *Insurance Markets Regulations, Global Insurance Markets, European Law, Czech Republic, Insurance Distribution Directive, Solvency II Directive, European Integration*

JEL Classification: *K23, K33, G220*

1. Introduction

For several years, the global insurance industry has been facing an enormous amount of regulatory requirements⁴⁸ that have different impacts on the insurance sector. Each insurance market is different; differences stem from the different history, demographics, education, financial literacy of consumers, risk management, market cultivation, etc., and therefore the impacts of regulatory requirements on the insurance sector differ in individual states. At the same time, the insurance industry is a dynamically developing market, which must cope not only with new regulations, but also respond to economic development, the situation in financial markets, the emergence of new risks, changes in risk management, consumer preferences and their needs. This paper focuses on the European integration process in the regulation of the insurance industry and its selected impacts on the Czech insurance market. The reason is that European integration fundamentally determines the space for Czech legislation of the insurance sector. In general, financial regulation and integration (insurance regulation including) aims to de-risk the financial (and insurance too) system by improving resilience and taming the financial cycle⁴⁹.

⁴⁸ An overview of the current legislation regulating the insurance industry is compiled, e.g. by MESRŠMÍD (2015a).

⁴⁹ Compare impacts financial integration in BELKE, KEIL (2016) or DEEV (2014).

There are few scientific publications dealing with the topic of the European integration in the insurance industry. Significant data are published by world reinsurance companies, associations or federations of insurers and reinsurers, and also by a supervisory authority. There are also studies of leading consulting companies (in the area of auditing and taxes) available, which usually focus on a specific issue. However, each organization or institution has a different view of the problem and mainly (but not exclusively) defends the interests of its group. An important source of information is Swiss Re (2016), through the Sigma publication, as well as specialized studies available online. Furthermore, more information comes from the European Insurance and Occupational Pensions Authority (EIOPA, online), selected studies compiled by the Centre for the Study of Financial Innovation or Ernst & Young (online); alternatively, a global perspective is brought by the OECD study Insurance and Private Pensions Committee (OECD, online).

The Czech authors dealing with the issue of development of regulation in the insurance industry primarily include researchers such as Ducháčková and Daňhel, Mesršmíd and Vávrová. Ducháčková and Daňhel (2012) describe changes in the status of the insurance sector triggered by the processes associated with globalization and crisis. Simultaneously, they work with the idea of whether or not the guarantee schemes for insurance services increasing the stability of the insurance market and client security are no longer beyond a reasonable limit. In his books, Mesršmíd (2015a, 2015b) defines selected areas of the European law and the current developmental stages of insurance industry regulation in the EU. The listed authors present their views also in a number of professional articles, in which they analyse current insurance issues. Vávrová (2012, 2013) in her articles analyses the regulatory measure known as Solvency II and the process of its implementation. In her book Vávrová (2014) closely focuses on the financial management of commercial insurance providers; what is important and interesting is her comparison of the given existing regulatory approach Solvency I to the regulatory concept Solvency II.

The current relevance of the topic is emphasized by the outcome of the Banana Skins 2015 investigation compiled by the PwC auditing company for the global environment, and for other national insurance markets. Not only on the global scale, but also in the Czech insurance market, regulation is perceived as the biggest risk⁵⁰ (PwC, 2016). This is a consequence of adopted regulatory requirements as well as preparation for the transition to the Solvency II mode.

2. Integration of the Insurance Market

The gradual process of integration in several stages of the European insurance market regulation has resulted in a well-functioning single insurance market. Creating a single passport in the commercial insurance industry has been a process of the gradual removal of barriers implemented by local legal systems as a defence mechanism against the infiltration of foreign capital. Introduction of individual EU directives led to the gradual removal of restrictions in national legislations. In the area of private insurance, these restrictions have been removed by three generations of life insurance directives and three generations of non-

⁵⁰ On the global scale, the number one concern is regulation (thus maintaining its 2011 and 2013 position as the number one risk). Macro-economic conditions are considered the second most serious threat (increase from the 3rd position in 2013). They are followed by interest rates (ranks for the first time), and cyber risk (ranks for the first time). In the Czech Republic, the top three risks for the insurance industry include regulation, political interference and macro-economy. Just for comparison, in 2013, Czech insurers marked business practices as the biggest threat.

life insurance directives, as well as by the gradually issued follow-up directives specialized in particular specialized insurance industries of non-life insurance. In 2002, the Directive on Insurance Intermediaries was adopted, which introduces the principle of a single premium passport in the area of insurance intermediaries. In 2005, the directive on reinsurance expanding a single passport for a reinsurer was adopted. In addition to the above main directives exist directive regulating relations in other individual segments of the insurance market and insurance areas of activity. Mráz (2002) and Čejková, Vávrová (2004) discusses the harmonization process in the Czech Republic in detail.

Recently, the regulatory measures of Solvency II⁵¹, IFRS 4 application, guarantee schemes in the insurance industry, regulation of insurance distribution as well as the regulation of PRIIPs⁵², whose aim is to support/achieve greater integration, globalization and functioning of the single insurance market in EU countries, have the greatest impact on the insurance sector. Directive constitutes an essential instrument for the achievement and functioning of the internal market, insurance and reinsurance undertakings authorised in their home Member States should be allowed to pursue, throughout the Community, any or all of their activities by establishing branches or by providing services. In connection with the implementation of legislative changes, the Czech insurance market (and not only here) faces a number of key issues.

2.1 Solvency II Directive and Implementation of the Insurance Act

The Solvency II Directive⁴, as amended by the Omnibus II Directive⁵³ brings a cautious supervisory mode to be applied across the European Union. The Solvency II shall replace the Solvency I, which represents 14 EU Directives and foresees the existence of 28 national supervisory modes. The essence of Solvency II is a new evaluation system of risks, which the insurance company faces or may face in the future based on the corresponding calculation of capital requirements (see MARTIN, 2015). The system brings with it a whole array of other new approaches and elements: changes in setting capital requirements, an emphasis on quality risk management, group supervision, expansion of the scope of disclosed information, regulation of life and non-life insurance. The directive's transparent approach to reporting, documentation and publishing of the data across the European Union is significant for both the insurance companies and the consumers. Everything leads to the adequate protection of policy holders, insured persons and beneficiaries. The deadline for implementation of SOLVENCY II was set for January 1, 2016.

The Czech legislation is supposed to implement the Solvency II through amendment to the Insurance Act⁵⁴. The government submitted a draft bill to the Chamber of Deputies in February 2015. The bill, however, in November 2015 did not pass the third reading and its disapproval ensured failure to meet the deadline set for January 1, 2016. Debate on the amendment became

⁵¹ Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II)

⁵² Regulation (EU) No 1286/2014 of the European Parliament and of the Council of 26 November 2014 on key information documents for packaged retail and insurance-based investment products (PRIIPs)

⁵³ Directive 2014/51/EU of the European Parliament and of the Council of 16 April 2014 amending Directives 2003/71/EC and 2009/138/EC and Regulations (EC) No 1060/2009, (EU) No 1094/2010 and (EU) No 1095/2010 in respect of the powers of the European Supervisory Authority (European Insurance and Occupational Pensions Authority) and the European Supervisory Authority (European Securities and Markets Authority) (Omnibus II Directive).

⁵⁴ The bill amending the Act no. 277/2009 Coll., On Insurance, as amended, and other related laws.

critical regulation of incentives for insurance intermediaries in life insurance premiums, which should reduce pre-negotiation (re-insurance) of investment life insurance contracts. Not entirely an ethical activity, with a very complicated solution, meaning that a certain level of regulation surely makes sense. However, it is the relationship between the insurers and insurance intermediaries, which is not part of the Insurance Act.

The Insurance Act is now a big problem. Failure to meet the deadline has resulted in the EU sanction to the state for failure to implement the directive.⁵⁵ It also means the delay in the legislative process in relation to the implementing decrees of the Czech National Bank toward the Insurance Act. Failure to approve the amendment is going to bring serious complications for Czech insurers in their adaptation to the new European legislation requirements, and complicate the exchange of information and supervision of insurance companies, which are members of multinational groups, because the Czech system of supervision will not correspond to those in other EU countries. Difficulties may also be seen in the relationship between the insurer and the consumer, since obligations of insurance companies; for example, publishing of information related to their financial situation will not be implemented in a timely manner.

2.2 Regulation of Insurance Intermediaries

Legislative changes and their implementation affect the design of insurance products and the method of their sale, and brokering. The first attempt to regulate insurance intermediaries was considered the release of Directive 77/92/EEC⁵⁶ on December 13, 1976 on measures to facilitate the effective exercise of the right to establish businesses and the freedom to provide services by insurance agents and brokers, and on transitional measures in respect to such activities. The Directive introduced a temporary scheme that allowed agents and brokers to expand their activities beyond their home countries. In order to provide quality insurance services and consumer protection and to allow insurance intermediaries to use their right to establish businesses as well as the freedom to provide services in the single insurance market, a new Directive 2002/92/EC on insurance mediation (IMD1)⁵⁷ was adopted on December 9, 2002. Gradually, it became clear that the directive was not sufficient. To modify just one distributor channel proved to be short-sighted, resulting in the modification being expanded to other insurance mediation methods. In early July 2012, the European Commission published a new directive on insurance mediation - Insurance Mediation Directive (IMD2)⁵⁸. In the legislative process, then in September 2014 the directive was renamed the Insurance Distribution Directive (IDD). The European Parliament and the European Council have adopted a wording of the Insurance Distribution Directive (IDD)⁵⁹ and it has been published

⁵⁵ The sanctions are decided by the EU Court of Justice based on the European Commission's proposal. The sanction rates cannot be clearly determined in advance. To determine the sanction, rate the given criteria are applied.

⁵⁶ Council Directive 77/92/EEC of 13 December 1976 on measures to facilitate the effective exercise of freedom of establishment and freedom to provide services in respect of the activities of insurance agents and brokers and, in particular, transitional measures in respect of those activities.

⁵⁷ Directive 2002/92/EC of the European Parliament and of the Council of 9 December 2002 on insurance mediation (IMD1).

⁵⁸ Proposal for a Directive of the European parliament and of the Council on insurance mediation (IMD2).

⁵⁹ Directive (EU) 2016/97 of the European Parliament and of the Council of 20 January 2016 on insurance distribution (recast).

in the OJEU. The Member States now have two years to transpose the IDD from February 22, 2016 when it enters into force.

The new name was selected to reflect its focus on regulating the distribution of insurance products, including the products by insurers directly where no intermediation occurs. Consumers should benefit from the same level of protection despite the differences between distribution channels, i.e. apply the same level of protection applies regardless of the channel through which customers buy an insurance product, (directly from an insurance undertaking or indirectly from an intermediary). The scope of the Directive is therefore including not only insurance companies or insurance intermediaries, but also other market participants who sell insurance products on an ancillary basis, such as travel agents and car rental companies, unless they meet the conditions for exemption.

In the Czech Republic, the directive will be implemented⁶⁰ by amendment to the Act on Insurance Intermediaries and Independent Loss Adjusters⁶¹. The amendment has been prepared since 2012, and was often criticized that it should be adopted before the final version of the directive on mediation (distribution) of insurance. The Government submitted a bill on November 21, 2012; the Chamber of Deputies received the bill in print under no. 853/0 on November 21, 2012. The discussion of the parliamentary print was then completed at the end of the election term. The bill was then newly submitted by the Government to the Chamber of Deputies on February 25, 2015. The bill was withdrawn in the second reading.

In accordance with the directive, the amendment to the Act brings several changes and is altering a number of important fundamentals of insurance intermediary regulation. One of the objectives of a comprehensive amendment is the introduction of a new categorization of insurance intermediaries and the elimination of the external and internal distribution of insurance. A great amount of attention is paid to the area of investment life insurance and remuneration of insurance intermediaries. Insurance intermediaries are paid primarily through commissions. According to IDD, the insurance intermediary should inform applicants for insurance of a form and source of remuneration for all insurance products. Before concluding the insurance contract, the insurance intermediary is to inform a customer of the nature of the remuneration, i.e. the fee, commission, or other type of remuneration, or a combination thereof, as well as the source of remuneration, depending on the type of distributor. The remuneration can then be paid by the insurance company, the policyholder or other intermediary. There is no requirement to specify the remuneration rate. The commission rate depends on many factors and is determined by insurance companies themselves, and thus it is up to them what rate they are willing to pay and to what extent they use the commission system as an incentive. The commission rate could be misleading to customers in their decision on the insurance product. My opinion is that it is especially important to change the perception of the general public that the commission is something unethical.

New changes amended by IDD (and subsequently implemented into Czech legislation) will benefit the insurance market, aiming to increase market transparency, to eliminate external and

⁶⁰ Member States will then have two years to transpose the IDD into national laws and regulations, i.e. to do so by February 23, 2018. The IDD will be the 'minimum harmonising' directive and Member States will be able to 'gold-plate' it by adding extra requirements to it when implementing it.

⁶¹ The bill amending the Act No. 38/2004 Coll., on Insurance Intermediaries and Independent Loss Adjusters and on amendment to the Trade Licensing Act.

internal distribution of insurance, and to strengthen the credibility of the profession of the insurance distributor (both external and internal).

2.3 Pre-contractual Information

A significant issue are the European regulations regarding the distribution of insurance products (IDD, PRIIPs, MiFID) and related information made available to consumers. This information is supposed to help consumers, i.e. the clients of insurance companies, make informed decisions. Unfortunately, the reconciling of the information obligation failed and so insurance companies and insurance distributors will need to adhere to the information obligation both under the listed regulations (IDD, PRIIPs, MiFID) and under the Solvency II Directive.

The Regulation on key information documents for Packaged Retail and Insurance-based Investment Products ("PRIIPs Regulation") set single rules in terms of the format and content of key information, the so-called standardised consumer-friendly information ("Key Information Document" - KID), covering not only collective investment schemes but also other 'packaged' investment products offered by banks or insurance companies. Each product's KID will be drafted by its manufacturer but will adhere to a common format. Article 8 (3) of the PRIIPs Regulation sets out the main sections of the document, which will provide answers to the following questions relevant to investors (European Union, 2015):

- "What is this investment?"
- "What are the risks and what could I get in return?"
- "What happens if the product manufacturer is unable to pay out?"
- "What are the costs?"
- "How long should I hold it and can I take money out early?"
- "How can I complain?"
- "Other relevant information."

Yes, it is true that consumers require sufficient information to select and compare various insurance products. They feel that transparency is essential to them. However, too much information can, on the other hand, be counterproductive and lead to a worse consumer orientation. Nevertheless, the recent trend is a disproportionate increase in the volume of pre-contractual information at the expense of quality information. *Under the existing EU legislation, a consumer who, for example, negotiates the online insurance product with an investment component through a broker, must receive 75 different pieces of information before concluding a contract* (Insurance Europe, 2015, p. 35). Under the new regulation of the Solvency II Directive and the IDD Directive, consumers must be provided with up to 147 pre-contractual pieces of information. The increase is almost double. In this regard, it is necessary to find the appropriate level of protection for the client. The client should not need to be in an asymmetric position toward the insurance company or the intermediary (lack of information, misleading information), and at the same time should not be exposed to an excessive amount of information that can overwhelm him/her. And since there was no reconciliation of pre-contractual information, the client will be flooded by information.

2.4 Self-regulatory Measures as the Appropriate Supportive Element of Regulation in the Czech Republic

An important element of insurance market regulation in the Czech Republic are self-regulatory standards⁶² (the Czech Insurance Association, ČAP, hereinafter referred to as the Association), which aim to increase the improved management and efficiency of the insurance market and to increase consumer protection. Tomáš Sikora, Executive Director of the Association (ČAP, 2014) perceives effective self-regulation to be more effective than directive regulation by the state, which often focuses on quantity of the measures in their relations to consumers rather than their quality. As of January 1, 2015, the Association members introduced several self-regulatory measures to provide greater transparency and clarity of their products for the client on a practical level.

The first standard is a broadening of the scope of pre-contractual information to simplify orientation in insurance investment life insurance products. The purpose is to unify the extent of information about the offered product across the market, for the purpose of easier comparison of competing offers for the client. Other standards made life insurance more transparent. The so-called 'shaping' of the insurance development was introduced, intended to inform the client about the development of the estimated amount of the capital value of the insurance and purchase in time, and also the Standardized Cost Ratio, which provides information about key costs of investment life insurance. This way, each client gets an idea of the distribution of his/her premium (how much their fees and bonuses are, how much is contributed toward risk coverage, what amount of premium shall appraise its value in the investment component). Insurance companies have united the scope of the information provided in their annual letters. An important measure, due to upcoming regulatory changes, is the recommendation to identify each individual insurance intermediary in the insurance contract working for an intermediary company. It enables insurance companies to monitor the production quality of each insurance intermediary and to effectively evaluate its business conduct. The objective is to effectively manage and control the external distribution networks of insurance companies (ČAP, 2014, 2014b).

3. Conclusion

As stated in the introduction to this article, the insurance market is a dynamically growing market, which must cope not only with new regulation, but must also flexibly respond to economic developments, the situation of financial markets, the emergence of new risks, changes in risk management, plus consumer preferences and needs. Growing technological development, whose availability is also reflected in the insurance sector, has a significant impact too. Due to it, the insurance sector, at times, hasn't enough input information about clients (consumers) and there is thus a problem with the processing, analysis and proper use of the data obtained in the optimal range of insurance solutions, or when preparing new or upgraded insurance products.

Examples of novelties (and, at the same time, necessary new information analyses and new opportunities) include the following products:

- on-line modes for the negotiation of insurance contracts; biometric signatures,
- cyber risk management and insurance,

⁶² A self-regulatory measure is recommended, the use of which is not legally binding and can neither be enforced nor sanctioned for its non-use.

- innovations in the automotive industry, for example, telematics in cars, with the impact of the change on insurance products and insurance conditions,
- insurance of drones,
- insurance of assisted reproduction,
- products at the edge of the banking sector,
- captive products.

Some of them will call for new, additional regulation and integration.

The Solvency II will be a significant milestone in the insurance sector. Application of the regulatory framework of Solvency II will bring a lot of problems, but we can also expect a positive benefit e.g. in terms of increasing the use of alternative risk transfer products. Utilization of these resources allows, compared to traditional products, provision for a greater transfer of risk from the first insurer to the reinsurer, high flexibility in changes of the reinsurance contract terms, more cost-effective prices, and more flexible management of the regulatory capital amount. They will thus be a popular tool for effective management of capital and insurance risks under the Solvency II mode. The Solvency II system will bring significant changes. Future development of its implementation, in practice, shall reveal the practical implications of the whole project.

The IDD directive aims to effectively improve the legislative modification of the retail insurance market. It focuses on ensuring fair conditions between all participants in the sales of insurance products and on strengthening customer protection. We must not forget that the IDD includes additional specific and stricter requirements in relation to packaged retail insurance-based investment products (PRIIPs). And, in this context, we cannot forget about the flooding of the consumer with pre-contractual information, which can be counterproductive. Consumers need good-quality information, with the minimal amount of duplication, instead of more information disclosed in two different formats.

The problem with some of the legislative changes (not just those outlined in the article) is political representation. Various reform attempts often fail due to different political interests. It is important to realize that some reforms cannot be addressed in one election term, but should rather be effective systemic changes (trusted and long-term ones), which will optimally last for decades.

European integration in the insurance industry segment is headed in the right direction, even though it bears slight excesses, with which the insurance market has coped with honour. The benefit is transparency and efficiency. For example, the integration will also continue in other areas. The preparation of the European insurance contract law (Principles of European Insurance Contract Law (PEICL)) with a reflection on the creation and use of the unified insurance contract law, and thereby an increase of the cross-border demand for insurance products, which is now low can be noted herein.

European integration fundamentally defines and will continue to define the space for Czech legislation of the insurance sector. To complement the above, we must review the current state of the insurance market in relation to the oversight system. Interconnected European insurance (financial) markets with a number of insurance institutions operating across borders are desirable for insurance market participants, however, it is a challenge to ensure an effective, independent, coherent system of supervision.

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Standard of Life in the Changes of Time: Real Socialism and Democratic Capitalism

Darina Kubíčková

The University of Ss. Cyril and Methodius in Trnava
Faculty of Social Sciences, Department of Social Services and Counselling
Bučianska 4/A
Trnava, Slovakia
e-mail: darina.kubickova@ucm.sk

Abstract:

Almost 27 years have passed since the Velvet Revolution and in the course of this time many changes have taken place. As it results from the name of this paper itself, so we are going to deal with evaluation of standard of life in the conditions of Slovakia. From the point of view of methods, we are planning to use a questionnaire and we assume that our focus will be on the selected age categories of 45 years and more with the aim to assess their standard of life in comparison between two socioeconomic formations, which are the so called real socialism and the present democratic capitalism. In doing this we are going to distinguish individual age categories, gender, residence etc. The aim is to ascertain, how individual categories assess their present and past standard of life.

Key words: Slovakia, Real Socialism, Democratic Capitalism, Standard of Life

JEL Classification: I310, Z130, P000

1. Introduction

The following paper carries the title: “*Standard of Life in the Changes of Time: Real Socialism and Democratic Capitalism*”. Almost 27 have passed since the Velvet Revolution. This time is sufficiently long to assess, what this change has brought. The Velvet revolution and the whole process of democratisation of the society and politics, as well as introduction of market principles into economy bring different almost opposing assessments depending in particular on the fact, what impact this change had on a given individual or as the case may be on his dependants and close relatives and on his life. This impact can be measured through the standard of life and through the facts, how it has been changed in comparison between the two systems of government, which in our case are real socialism in the past and democratic capitalism at the present time. In this connection it is not possible to forget the fact, that transformation processes in the politics, economics and in the society were also accompanied by integration processes and accession of Slovakia to the European Union. The aim of EU is interregional balancing and cohesion in order to ensure the prosperity for all of us. In our paper we are using a questionnaire method, by means of which we measure the standard of life of the respondents according to various criteria, such as age, gender, type of municipality, the highest reached education.

2. Problem Formulation and Methodology

Whereas in Western Europe the European integration took place after 1945, the countries of Central or Eastern Europe were assigned to the so called socialist camp. In 1989 the Velvet

revolution took place, which launched the transformation of economy, society and politics. The socialist system of government led to egalitarianism, which resulted in small differences between individuals and on the whole the society was quite uniform. The nucleus of political systems in the countries of the socialist camp were the socialist or as the case may be communist parties. In their declarations they were oriented on proletarian classes. (Bočáková, 2015)

As a consequence of establishing the principles of market economy the increase of differences between the citizens is taking place. The system of government collapsed mostly because of the reason that it was not capable to compete to the more dynamic capitalist economies of the West. (Fulcher, 2010) The countries of the eastern block were lagging behind the western world, e.g. in the area of competitiveness, which is to a certain degree over-connected with social cohesion. It is just the competitiveness in the environment of the EU, which is a factor, which has to be strengthened in comparison with the remaining world.

Artificially maintained employment ended and some negative phenomena have arisen, such as e.g. unemployment or homelessness, extremism, which became everyday part of the life of the society. (Mihálik, 2015) In connection with the efforts for integration into European structures, there were not only economic criteria here, but also political criteria, such as e.g. democracy and human rights. At the present time the decrease of the middle class is taking place, the poorer are becoming even more poorer and on the contrary the richer are becoming even richer. Global capitalism is relentless. European Union is trying to fight against it and it advocates the principles of solidarity and social cohesion.

While the previous socioeconomic formation was more paternalistic, which led to equality, so the present system acquired the liberal elements and also the political system became liberal-democratic. The social cohesion was very noticeable in the previous system. As a consequence of more freedom an individual can realize their full potential and it depends on their capabilities and powers, how s/he gets established in the society. In capitalism great emphasis is laid on private ownership as a decisive means of production. (Albert, 2009) The whole architecture of the capitalism of the 20th century was based on the joint stock companies. These companies were based on the ownership separated from management, we are talking about the so called manager revolution. (Duménil, Lévy, 2013) A manager is a person, who is planning, controlling, checking and efficiently fulfilling his aims. (Mura, Horváth, 2015) Also at the present time great emphasis is laid on skills such as leadership, team work or communication skills. (Dudžáková, Slovák, 2015) After 1989 the change of ownership relations took place, which often led to the changes of standard of life. Among the processes and changes that took place, belonged: restitutions, privatisation, possibility to do business. (Čemez, 2013)

At present after accession of Slovakia to EU we have been included among the advanced democratic countries. The changed situation requires from the European countries to preserve the basic common values of our civilisation. European Union fights against social inequality and is making every effort to promote social cohesion, which is one of the basic concepts of European integration. (Hetteš, 2013)

European integration process is perceived mainly as the result of development of political and social-economical processes, which occurred on the European continent after the World War II. Opinions, which were directed towards the need to unify the European continent, had also some influence on later formed integration theories. These conceptions had many times very strong social aspect, which represents one of priorities of the EU. Also nowadays, there are

initiatives, which are focused on improvement of social dimension of the EU – Europe 2020. (de la Porte, Heins) Among basic principles, by which is managed the EU, belong solidarity and cohesion, and so balancing between particular regions and states also in the standard of living. In this regards, it is possible to state that there are several conceptions of European integration, such as federalism, transactionalism, multilevel governance, functionalism, neo-functionalism, according to which, in the interest of achieving the objective, the integration should be extended between states also to neighboring areas. (Statham, Trenz, 2014).

Also Slovak republic had to overcome the integration process. After 1989, significant changes in society occurred in Slovakia and also in Czech Republic. These changes could be seen also in the quality of life. There started the transformation of the society, economy and politics. Simultaneously with transformation processes, there also occurred European integration processes. The process of transformation left the deep trace on living standard of population. In the interest to catch up countries of Western Europe, we had to sacrifice one or two generations. To challenges after entering of Slovakia to EU, belongs the process of mutual balancing and catching up western countries, which was not easy. Although Slovakia is the member country of the EU since 2004, citizens are still not identified with European institutions, and that represents another challenge. As the example can be introduced elections to the European Parliament, which reach very low participation, because citizens consider these elections as the second order election. (Schakel, 2014).

2.1 The Methodology and Characteristics of a Sample

In our paper we are going to use a questionnaire method and subsequently the analysis of results, which we have obtained. The respondents in the number of 1200 are going to serve us as a sample. The respondents have been selected by random selection. Questionnaire sheets were distributed during months November and December 2015, in streets of villages and towns in all 8 self-governing regions in Slovakia. During January, questionnaire sheets were collected and evaluated after achieving the number of 1200. In relation to the analysis of results, we have used the statistical comparison.

If we pass over to the sample of respondents itself, so we can arrive at such position that from the point of view of sex the structure is approximately the same. From the point of view of age, the structure of respondents has been divided into ten categories. The lowest age category is from 45 to 60 years and the highest is from 76 years higher. From the point of view of municipality, the town prevails over the village, from the point of view of highest achieved education most respondents have secondary school education (68%).

Table 1: Sample of Respondents according to their Gender

sex	n	%
men	621	52
women	579	48
total	1.200	100

Source: author's calculations

Table 2: Sample of Respondents According to their Age

age	n	%
45 – 60	414	35
61 – 75	405	34
76 a viac	381	31
total	1.200	100

Source: author's calculations

Table 3: Sample of Respondents According to the Type of Municipality

type of municipality	n	%
town	672	56
village	528	44
total	1200	100

Source: author's calculations

Table 4: Sample of Respondents According to their Highest Reached Education

education	n	%
elementary	188	16
secondary	816	68
university	196	16
total	1200	100

Source: author's calculations

2.2 Aim of Research

The aim of the research is to find out how respondents subjectively perceive the change of regime in relation to the change of their living standard. It is only subjective evaluation of respondents, and not the objective fact.

2.3 Research Tasks

We have set ourselves the following tasks:

1. Finding out the overall assessment of the standard of life on the part of the respondents,
2. Finding out, whether (very) positive or (very) negative change of standard of life of our respondents took place as a result of the change of the system of government from the point of view of their age,
3. Finding out, whether (very) positive or (very) negative change of standard of life of our respondents took place as a result of the change of the system of government from the point of view of their gender,
4. Finding out, whether (very) positive or (very) negative change of standard of life of our respondents took place as a result of the change of the system of government from the point of view of their municipality,
5. Finding out, whether (very) positive or (very) negative change of standard of life of our respondents took place as a result of the change of the system of government from the point of view of their highest achieved education.

3 Problem Solution

3.1 Assessment and Analysis of Research Results

As it arises from the table 5, positive and negative evaluations reach approximately the same level. Similarly, very positive and very negative evaluations do not differ much from each other.

Table 5: Overall Assessment of the Change of Standard of Life of the Respondents upon the Impact of the Change of the System of Government in 1989

living standard evaluation	n	%
very negative	203	17
negative	341	28
positive	317	26
very positive	187	16
no answer	152	13
total	1200	100

Source: author's calculations

As we can see in the table 6, negative and very negative evaluation increases with the age; positive and very positive evaluation decreases with the age. In the case of age, the decreasing of living standard can be caused by the whole transformation process after 1989, while before 1989 there were relatively low nominal wages, and from this arises that also pensions are relatively low. Within the transformation process, we have sacrificed one whole generation. As the cause it is necessary also to see the current lifestyle and the cult of youngness. Moreover, nowadays still more opportunities are opened for young people.

Table 6: Living Standard Evaluation by Respondents under the Influence of Regime Change in 1989 by Age

age	very negative		negative		positive		very positive		no answer	
	n	%	n	%	n	%	n	%	n	%
45 - 60	43	10	58	14	162	39	97	23	54	13
61 - 75	78	19	139	34	88	22	55	14	45	11
76 a viac	82	22	144	38	67	18	35	9	53	14

Source: author's calculations

On the basis of the table 7, no significant differences are visible between sexes. From the point of view of sex, there is no reason that one sex should have significantly higher standard of living than the other one. It is also given by the democratic political system, which is characterized by equality of sexes.

Table 7: Living Standard Evaluation by Respondents under the Influence of Regime Change in 1989 by Sex

sex	very negative		negative		positive		very positive		no answer	
	n	%	n	%	n	%	n	%	n	%
man	112	18	179	29	170	27	96	15	64	11
women	91	16	162	28	147	26	91	16	88	14

Source: author's calculations

The table 8 signalizes that there are significant differences between villages and towns. In the village dominates the negative and very negative evaluation and in the town dominates positive and very positive evaluation. Higher living standard in towns and cities is connected with the fact that there are more employers and work opportunities in comparison with the countryside; people have also higher salaries in towns.

Table 8: Living Standard Evaluation by Respondents under the Influence of Regime Change in 1989 by the Residence Type

residence type	very negative		negative		positive		very positive		no answer	
	n	%	n	%	n	%	n	%	n	%
town	55	8	236	35	186	28	135	20	60	9
village	148	28	105	20	131	25	52	10	92	17

Source: author's calculations

The table 9 shows that with the higher level of education decreases the very negative and negative evaluation. In contrast, very positive evaluation increases with increasing level of education. The explanation can be based in the fact that the higher education enables to receive better paid work and progress in the social hierarchy.

Table 9: Living Standard Evaluation by Respondents under the Influence of Regime Change in 1989 by Highest Achieved Education

education	very negative		negative		positive		very positive		no answer	
	n	%	n	%	n	%	n	%	n	%
elementary	38	20	59	32	28	15	17	9	46	24
high school	147	18	237	29	236	29	131	16	65	8
university	18	9	45	23	53	27	39	20	41	21

Source: author's calculations

3.2 Summary of Research Conclusions

The following conclusions resulted from our research:

1. Generally, positive and negative evaluations achieve approximately the same level. Additionally, very positive and very negative evaluations do not differ much from each other,
2. Negative evaluation and very negative evaluation increases with the age; positive and very positive evaluation decreases with the age,
3. From the point of view of sexes, there are no significant differences,

4. Between the town and village are significant differences; in the village dominates very negative and negative evaluation and in the town dominates positive and very positive evaluation,
5. With the higher level of education decreases very negative and negative evaluation. Very positive evaluation increases.

4. Conclusion

On the basis of the presented paper it is possible to say that the assessment of standard of life is to a certain degree controversial. Everybody can assess their standard of life in their own way, everybody can understand something different under this concept. Some people consider material riches to be of cardinal importance, for others it is the feeling of personal freedom or the possibility of travelling abroad. Therefore, the perception of standard of life is very subjective. In our research we have arrived at the following conclusions: Positive and negative evaluations reach approximately the same level. Also, very positive and very negative evaluations do not differ much from each other. Negative evaluation and very negative evaluation increases with the age; positive and very positive evaluation decreases. From the point of view of sexes, there are no significant differences. Between the town and village are significant differences. In the village dominates very negative evaluation and negative evaluation and in the town dominates positive and very positive. With the higher level of education decreases very negative and negative evaluation. Very positive evaluation increases.

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Europeanization of Central European Countries

Irah Kučerová

Charles University of Prague
Faculty of Social Sciences, Department of International Relations
U Kříže 8
Prague, Czech Republic
e-mail: irah.kucerova@fsv.cuni.cz

Abstract

If I am talking about Central Europe, then I am considering in the context of the seven states, including Germany and Austria. However, in these two countries went going on Europeanization in other contours. The rest of Central European states after the fall of the iron curtain, have had to adapt to the rules of democracy and the market economy, which brought no small difficulties. The process of their adaptation to "western" standards was conducted in a wide range of planes. The mechanism of such formation, dissemination and institutionalization of formal and informal rules is connected with the processes of Europeanization. It is true that research of Europeanization relates not only to the new member states, but it is also true that this process in Central Europe has acquired a completely new connotation. Europeanization here took place in the framework of the economic and institutional transformation. We will consider in the context of vertical and horizontal Europeanization and institutional adaptation. The Europeanization of Central Europe there was no just on the principle of top-down, but up-load too.

Keywords: Central Europe, Europeanization, Europeinization as a Gravity Mechanism, Economic and Institutional Transition

JEL Classification: F15, N14, P20, P30

1. Introduction

Europeanization “is an institutional process in the political, economic and social level focused on creating rules and standards in all dimensions of integration activities... Europeanization is a phenomenon of design, dissemination and institutionalization of rules” (Kučerová, 2015b: 89). „Europeanization Research is a dynamic area of political sciences both internationally and in the Czech Republic“ (Zemanová, 2007: 29).

The aim of this study is the assessment of the effects Europeinization of Central Europe, but its manifestations because of limited scope of this article. Europeanization is demonstrated as a relevant mechanism and the theoretical model for the analysis of the development of the Central European region after the fall of the iron curtain, particularly in the context of the accession negotiations with the European Union. Europeanization in Central Europe it is associated mainly with democratization and emancipation manifestations, including the improvement of the economic competitiveness. No less then re-orientation business and co-operative towards the West (Kučerová, 2015a: 8, 209-213).

2. Demarcation of Central Europe

Central Europe is European subregion with a non-accurate demarcation geographical, and geopolitical. There is some construction historical affected the specific distribution of political power. Centre of Europe forms a 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.

Crucial question relates to a purely geographical boundary of Central Europe is, logically, only then can come the query as to which states to include in the analysed area. Geography, however, does not follow only the natural-geographical characteristics, but examines the relations between society and the natural environment, or cultural and civilization aspects of individual regions. Current geography is even focusing more on social or human geographical dimension of analysis (de Blij, 2012: 6-8). For Central Europe, "however, it is apparent inertness geographic conditions compared with economic or political conditions" (Maryáš-Vystoupil, 2004: 16).

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. We are talking about the so-called mental map – the perception of geography is very subjective and is a reflection of the historic, empirical, political orientation, institutional aspects.

Central Europe can be designed also as a mutual process of collaboration leading to the formation of an economic region with growing economic cooperation, emerging market, and the interconnectivity of national economies (Kastner, 2002: 21). Then, as the working group for our analysis can be number of Central European countries to narrow down to seven. As the most commonly perceived as the countries of the Visegrad Four, Slovenia, and no doubt Germany and Austria, whose centuries of influence on the rest of the states is immense.

3. The Concept of Europeanization

The phenomenon of European integration is reflected in the many planes of practical life, influences the development of mutual cooperation. It is, inter alia, associated not only with the dissemination of the rules of joint activities, but also with what we call European values – whether you below by we introduce anything. Adoption of the rules, their standardization is explained by the processes of Europeanization. Although these processes have accompanied the European integration practically from the beginning, to theorizing Europeanization speeches by academics inclined to over 90' years. The concept of Europeanization is, therefore, one of the latest theoretical approaches.

Europeanization is a wide ranging institutional process on political, economic, social level focused on creating rules and standards in all dimensions of integration activities (Featherstone-Radaelli, 2003: 12-14). Europeanization is a phenomenon of "formation, dissemination and institutionalization of formal and informal rules ... and sharing beliefs and norms which are first defined and consolidated in the EU political process and subsequently incorporated into the logic of speech, political structures and public policies of nation states" (Radaelli, 2003: 27-56).

Not only top-down principle from EU institutions to member states, however it is the mainstream of perception of Europeanization. The European day-to-day reality refers to real influence of member states over European institutions, i.e. principle bottom-up, else horizontal effects between member states. If initially, the Europeanization was associated only with downloading European attitudes, decisions, and then later began to be evident manifestations of uploading from member states, when their governments have sought to transfer their affairs to the community level. "But Europeanization as a process involving the gradual erosion of national sovereignty does not weaken the state, either, through the transfer of competence and control to the supranational level." (Cowles-Caporaso-Risse, 2001: 2). "This all reflects the complexities of the EU and its multiple policy-making processes, both formal and informal, and the multiple roles for Member States (Ferrero-Ackrill, 2016: 4). "On the basis of the input from the internal environment of the states, continually leads to the development of the EU. Also the activity of the EU permanently affects the domestic sphere" (Zemanová, 2007: 37).

On the Europeanization so can be seen as a governance, institutionalization, or discourse (Radaelli, 2004: 6).

In the European union, within the Union, Europeanization is associated with the standardization on the principle of *de minimis*, or if the principle of the lowest common denominator, where "the core of the activities is subject to the common standards, binding for all member countries, but at the same time, it is possible to apply even stricter criteria in some states – without hampering the throughput of the internal market" (Kučerová, 2010: 83).

Although gravity models is used for the analysis of bilateral trade relations, then can the Europeanization acts both as a gravity mechanism for the actors inside the EU (in way of higher convergence), and outside the EU (because of benefits from the internal market and its scope). First, e. g. the Baltic states effort to reach membership in EMU, something of the sort the case of European Economic Area, second, also non-European countries: China and its readiness to adapt to the strict technical/safety/quality standards of the EU, the USA within the framework of the project TTIP willingness to accept some environmental standards of the EU. Some countries outside the EU, such as Norway, may be affected by the Europeanization far more than the Britain; an EU member is (Dančák – Fiala, Hloušek, 2005: 15). We can deliberate with three dimensions of Europeanization – membership, accession states and neighbourhood facet (Katsaris, 2015: 5-7), alternatively with four dimension – geographically distant cooperation, e. g. East Asia countries, Latin America..."Europeanization as exporting forms of political organization and governance that are typical and distinct for Europe beyond the European territory focuses on relations with non-European actors" (Olsen, 2002: 924). As in the historical context was of Europeanization is seen as promoting the values of the European civilization in all spectra of social and political and economic life, is even today the concept of Europeanization is perceived as a necessity to adapt to the standards of the European union, and even for the non-member states, in some areas of mutual cooperation, even for non-European states. The essence is therefore not changed, changed the methods and circuits Europeanization efforts, Europeanization is therefore today directly tied to the European community/European union as a typical European values and rules (Kučerová, 2014). The willingness to adopt European standards or to accommodate them attests to the strong gravitational force of the European Union, and its vast internal market. The enlargement of the EU is actually the result of Europeanization, based on the attractiveness of the integration architecture for non-member countries (often greater than for the existing members) (Jakš, 2005: 120).

The premise of the gravity model is the intensity of the gravitational force, which grows with the size of the object (EU) and decreasing with the distance from the centre, which even for distant countries such as the US, China pays only partly due to its geographical isolation. But in the era of information revolution, at the time of the internet-banking, internet-investing is geographical distance irrelevant. Indeed, Europeanization is defined as voluntary acceptance of institutional and legislative rules, i.e. *acquis communautaire* on which the EU works - especially connection to the EU internal market (Jakš, 1998:59). If Europeanization effects are apparent for outside states, it logically has a great impact on Central European countries.

3.1 Methodology of Europeanization

The methodology could be defined as the study of methods used in scientific research, sometimes it also refers to the range of issues (Nedomlelová, 2013: 412-413). Methodology refers to the search algorithms of the possible solution(s). The methodology explains not only the angle of view, but also the ways of dealing.

The concept of Europeanization is an analytical tool used in a wide range of meanings (Plechanovová, 2005: 272). It is a broad spectrum process, as its mechanisms of action have a very significant impact in following directions (Kučerová-Nedomlelová, 2015: 73):

- a) **vertical Europeanization** - separating community, national and regional, respectively local level when Europeanization leads to political dialogue and economic subjects of multi-layered hierarchy. Central penetration of national systems of governance, when through Europeanization implies adapting national and sub-national systems of governance to a European political centre (Olsen, 2002: 923). Vertical Europeanization is an argument against the statements on the democratic deficit of the EC/EU;
- b) **horizontal Europeanization** – pressure of EC/EU states to adapt, not only with directive channels, but also implicitly, e.g. market adjustment due to liberalization of the internal market; absorbing norms and standards of behaviour (Radaelli,2004);
- c) **institutional adaptation** – integration idea, beliefs, expectations of a priori lead to "moderation" in decision-making process. The increase in Communitarian legislation ... there is an increase as the individual EU member states, Europeanization of the decision-making processes, adapting national legislation EU - standards" (Jakš, 1998: 59); adaptation to European legislation and institutions is connected with download mechanism of EU's pressure; and further...
- d) **upload principle** - the deliberate influencing of the decision-making processes at the Community level by interests of the member states;
- e) **circular Europeanization** - a holistic concept combining top-down approach and bottom-up leading to the mutual linking and spreading European values (Wach, 2015: 12-15); or **cross-loading Europeanization** (Howell, 2004: 5-7), therefore, across each other. It is important that the vectors of the real action of the Europeanization processes are identifiable in all directions.

From the above text shows, the concept of Europeanization is broad, which is applicable to the analysis of Central Europe.

Europeanization's mechanism to understand the process or as a result of which there is a proliferation or the formation of European standards, institutions leading to the emergence of so-called Euro-models. We can differentiate between **three mechanisms of Europeanization** (Schimmelfennig-Sedelmeier, 2005: 8-10):

- a) **external incentives mechanism** – which is based on conditionality inside European institutions using top-down principle. This mechanism is in place method of the carrot and the stick - rewards and sanctions against the member countries; it must be said - a very effective mechanism...;
- b) **social learning mechanism** – based on identification with EU standards with the support of institutional capacity building, persuasion and the provision of good patterns and practices by the European union;
- c) **lesson-drawing model** – proceeds from own initiative of states for easier incorporation of European norms into their practice. It is connected with willing adoption of European standards is motivated by own interests of the states for faster convergence and harmonisation. Europeanization is mainly driven by the identification of national policy-making level. „The process of lesson-drawing starts with scanning programmes in effect elsewhere, and ends with the prospective evaluation of what would happen if a programme already in effect elsewhere were transferred here in future. Lesson-drawing is part of a contested political process; there is no assurance that a lesson drawn will be both desirable and practical“ (Rose, 1991: 3).

The prevailing view on Europeanization is as socialization and collective learning (Börzel-Rise, 2003: 59). Quite simply it others see the authors as a three step-approach – Europeanization, adaptation pressures and mediating factors – represents the conceptual framework (Cowles-Caporaso-Risse, 2001: 2). There is no doubt about the validity of the overall, circular conditionality as a mechanism for the dissemination of Europeanization. But the other situation was for the candidate states, when applied the clear asymmetry of the countries of Central Europe, because they had no option in the pre-trial period, the influence of Community institutions and policies. He was then for them the process of Europeanization one-way. Conditionality thus works as a direct mechanism of Europeanization, especially for the new member states – see required convergence, the fulfilment of the Copenhagen criteria, and the implementation of the *acquis communautaire*. It should be noted, that the Central European countries have been able to partially “Europeanization” the foreign policy of the EU on the principle of the so-called upload, and in the context of the issues of energy security and the enlargement of the European policy on the eastern dimension.

The current research on Europeanization focuses primarily in connection with the mechanisms not on the solution method, but the problem of barriers to Europeanization, and it misfit and pressure for adaptation (Börzel-Risse, 2003: 70, resp. 57-81). These are but factors of Europeanization, and not their mechanism, as it is often – in my opinion - interpreted. I understand that setting the barriers is important for their solutions, however, not to confuse the different categories of the examination. Without it, but it was the professional public perceived, thus then there is a shift in research of the mechanism of Europeanization, to the confusion of the body (mechanism of Europeanization) and the object (barriers to Europeanization).

Back to the key moments of the mechanism of Europeanization, to the misfit and adaptation pressure. While in the mid 90's years there was talk about inconsistency, therefore the contradictions, irregularities, in the first decade of the new century suddenly talking about bad fit bodies (misfit), which is somewhat more pronounced definition to the opponents. It is linked with the then candidate states and their post-transformation problems? Probably yes. Definitely. The expectations of both the parties was substantially different – both the democratic states of the West, and transforming society in the East assumed that this engagement occurs before, basically within the next few years – four, five. But reality was

different, and the barriers mainly on the side of the candidate countries were unexpectedly high.

For the analysis of the progress and the impacts of Europeanization in Central Europe, it is necessary to work with a certain **set of variables**. **The independent variable** is itself Europeanization as a process. As **the dependent variable** acts to internal changes in the result of the Europeanization (together, in parallel with the ongoing economic and institutional transformation post- socialist countries). **The intermediate variables** are the institutional adaptation, changing competitive conditions and changing beliefs and expectations on the part of domestic entities.

Hypothesis: Europeanization in Central Europe takes place as downloading, so uploading, precisely circular mechanism (cross-loading Europeanization).

4. The Application of Europeanization in Central Europe

In general, the Central European states have undergone a faster and more successful Europeanization than Eastern European countries. The reasons may be different, but certainly there have played significant role historic economic ties, mainly to Austria and Germany and social consensus on the so-called natural return to Europe. That means also a higher willingness to not always in pleasant reforms. A justified factor was the even higher level of economic performance, the qualifications of the labour market and technological skills compared to the eastern countries. And also the remains of the democratic experience from the interwar period, therefore, also greater readiness for institutional adaptation.

“Central European countries as a new member states of the EU combine with the high volume of the rules attached to membership, allow an unprecedented influence in restructuring domestic institutions and the entire range of public policies” (Schimmelfennig-Sedelmeier, 2005: 1). The new member countries have demonstrated a greater level of Europeanization compared to the EU₁₅. One manifestation has been the speed of the adoption of institutions and policies of the EU, the openness of the Central European countries to the influence of the EU, and the weakness of domestic institutions as well. The reason for a more intense Europeanization was also a very wide range of agenda of the EU towards candidate countries and the higher pressure on the harmonisation of the economic sphere, the greater severity with the adoption of the *acquis communautaire* than to their own countries (Grabbe, 2006: 42-44).

If we deliberate about enlarged Central Europe to Austria and Germany, then they will be manifestations of the Europeanization of little specific. But in both cases took place from the 90's years strong Europeanization trends, albeit different in comparison with post-socialistic states.

But - the concept of Europeanization has gained after the fall of the iron curtain, a completely new connotation, albeit not immediately, but only at the turn of the next two decades. Theorizing about the development of the post-socialistic companies in the first half of the 90.years practically been absent, because the majority view was that the former Soviet satellites to unreservedly and immediately adapt themselves to the institutional framework of the West, represented here by the European Union. The situation had proven to be significantly more complicated. Europeanization is presented not only as the way by which political institutions and processes to pursue, but that watch have (Dančák-Fiala-Hloušek, 2005: 18).

Central European countries have undergone mainly in the 90s quite a difficult Europeanization process in the form of a top -down in the economic, social and particularly in the institutional

(i.e. political and legal) dimension. It should be noted that the Central European countries have also affected the foreign policy of the entire European Union with the up-load principle of their priorities, namely in relation to the issues of energy security and enlargement of the European Neighbourhood Policy by the Eastern dimension (Kučerová, 2014). One of the few examples where one can identify the influence of the member state, and even the small and as well the new state, the official position of the European Union in foreign policy was the enforcement of the hard process, or sanctions against Cuba. The Czech Republic, Slovakia and Poland together with the Netherlands in the year 2005 managed to convince the other member countries of the EU that the sanctions regime against Cuba since 2003 didn't let up. The Czech Republic successfully defended its position even in the year 2008. These are examples of the bottom-up mechanism of the Europeanization. "Multilevel dimension represents the core in the Central European cooperation. Closer links between local, regional authorities, perhaps on the basis international community, or vice versa on Communitarian or transnational cooperation. Development of real vertical, particularly branch cooperation in Central Europe came with a huge emphasis in the second half of the 90s, however more vigorously, because it was based on the bottom-up principle" (Kučerová-Nedomlelová, 2015: 74).

4.1 The Differences of Europeanization in the Individual Countries of the Central European Region

It is clear that the urgency of Europeanization for the countries of Central Europe was different. Post-socialist states of the urgent need to change the institutional and economic environment, while Austria showed a high level of harmonisation with the EU policies.

However, the differences were evident even within the group post-socialist – transitive states, and, in more levels. In the first place, this concerned the areas of property relations, when up on the exception of Czechoslovakia, everywhere remained the private sector, albeit heavily pruned back. Another factor was the relatively large difference in economic performance and labor productivity, when for the most advanced was considered the economy of Slovenia, Czechoslovakia compared to Poland and Hungary. The other was also the sectoral structure of the economy measured by the share of the national economic sectors to GDP and to employment. While Czechoslovakia, East Germany, Slovenia had the character of industrial economies with a high share of the manufacturing sector, Poland and Hungary have been understood as a primarily agrarian countries. E.g. the agricultural sector of Poland was considered a threat by the then EU common agricultural policy for its inefficiency: in the late 90's years employed more than 25 % of the labor market, while almost 20% of GDP, in opposite to Czechoslovakia with 3,9 % employment in agriculture (Kučerová, 2015a: 26).

Yet, the EU leaders did not anticipate more significant regional disparities the countries of Central Europe, since they were automatically considered for the periphery of the EU.

A somewhat different development of Europeanization took place in the eastern regions of Germany (former Democratic Republic of Germany), whose progress anchored Germany, respectively its western part by western patterns. The new federal states assume the economic legislation of West Germany en bloc to 1. 7. 1990 in the context of the emergence of the monetary union and the common currency (Kučerová, 2015a: 149). However, even for Western Germany paid the obligation of Europeanization mainly with the building of the internal market and monetary union. And there have also been unintended Europeanization by uploading mechanism of German monetary measures on the level of the European monetary system in September 1992, which directly affects the whole of the EU. The core was connected with the financing of the restructuring and modernization of the former East Germany, in

consequence of which grew the deficit of the federal budget. Due to the appalling historical experience with hyperinflation in 20s years, the central bank has responded by raising interest rates to make it harder to access credit. The result of the policy of hot money, but it was the opposite effect - to a stable and prosperous German economy at the time of the functional liberalisation of capital flows came the capital from all other countries of the EU, so its supply has increased enormously. The result was the crisis of the EMS and the abandonment of some currencies from the system (Kučerová, 2010: 210). This is an interesting case up-loading own problems to European level.

Austria is a completely different case of Europeanization. Of course, that prior to its entry into the EU in 1995, had to adapt to the part of their institutions, especially in connection with the building of the internal market of the EU. However, the degree of harmonisation with EU rules was high, so the adoption of the *acquis* has not been for Austria, the crucial issue.

Because they are Central European states heterogeneous group, the course of the Europeanization was and is manifold.

4.2 The Process of Europeanization of Central European Countries - Empirical Findings

The need for the Europeanization of candidate countries has been expressed, *inter alia*, in the so-called Impact study from 1997, which referred to the obligation of these states to maximally adapt to their environment, in order to avoid dilution of activities of the EU (Kučerová, 2010: 44). Transition and Europeanization has often been understood as a binary relation, often merged in a single stream of considerations and actions (Hloušek-Pitrová, 2009: 38).

In the case study of the Europeanization of Central Europe we are working with the model of variables, thanks to which you can point out for sure of the specifics. The independent variable is the Europeanization, therefore, the process of standardization and inclusion in the context of the EU institutions. Conditionality as the external incentive of membership was the key mechanism leading to the adoption of EU rules (Sedelmaier, 2011: 25). Europeanization takes place at the individual countries differently, but in some aspects is a distinct connection. E. g. deferred the implementation of the reforms of the agricultural policy of the EU new member states three or four years later in the 2008 year than the core of the EU in 2004 (Kučerová, 2010: 172). By analogy, it was unduly delay the liberalisation of the postal services compared to the first term in the year 2007, when even the 11 countries was given the opportunity to the year 2013. In the case of the so-called implementation deficit is the Europeanization of Central Europe does not appear well, especially repeatedly in the Czech Republic with 2 % missed directives in 2011. „The link between determinacy and credibility is reflected in an episode in the run-up to the Copenhagen European Council in June 1993. Despite their diametrically opposed preferences concerning the speed of enlargement, both the French and Czech government were pressing for the EU to use quantitative membership criteria – for example, relating to GDP/capita – the former in order to avoid politically motivated decision in favour of an early enlargement and the latter to avoid that political bias would lead to a postponement of enlargement“ (Schimmelfennig-Sedelmaier, 2007: 9). However, there is no doubt about the actual of Europeanization, which has become a tool of convergence post-socialistic states to the EU standards.

As a dependent variable stands out changes inside Europeanization's economies. Rule adoption as a dependent variable – than the definition of Europeanization is simple: this is „a process in which states adopt EU rules“ (Schimmelfennig-Sedelmaier, 2005: 7. The focus of

gravity changes the internal environment post-socialist countries took place in the 90's years. The economic transformation took place the stages of development of private enterprises, price liberalisation, privatisation, restitution, reform of the tax system, banking system, changes in the exchange rate. The costs of internal changes were related to the macroeconomic destabilization, with high unemployment, inflation, fiscal deficits, so typical for Poland, Hungary, Slovakia or Slovenia. Not forget to mention the corruption, tunnelling, i.e. the fraudulent supply of finance from the enterprises – Czech language the thus enriched in 90 years of international dictionary (Kučerová, 2015a: 63).

The real institutional adaptation, a change in the behaviour and expectations of domestic actors, but especially crucial re-orientation in external economic relations and increasing the competitiveness serves as the intermediary variable. The strategic objective and the actual result happened to create the real market environment non-malformed directive management and planning. The result of strenuous and painful the process was to increase the competitiveness, although the majority of the way of low-cost strategy, mainly due to the low wage costs. But the change of trade partners, their demanding character is reflected gradually in a qualitative change of exports. It is of course not applicable in Austria, where the legal and economic environment it was a seamless inclusion into the EU, the social environment was not a problem. The main focus of disputes in the environmental and energy field, more specifically in the nuclear power industry. A special, yet unique instance of Europeanization concerning efforts to regulate the internal political development of Austria after the election of 1999.

If we were to think in terms of distribution of power in the EU, then the European Union and its Europeanization is the independent variable and the member states in their adaptive process are the dependent variable. Interesting is the reflection on the intermediate variables in the case of Europeanization as a subject of research. Right here can manifest national interest of a member state, the need for support for promotion own proposal for changes in the integration process.

5. Conclusion

Europeanization was, and is, seen as promoting the values of the European civilization in all spectra of social and political and economic life, today represented by the European Union.

The Central European countries have undergone mainly in the 90s quite a difficult Europeanization process in the form of a top -down in the economic, social and particularly in the institutional (i.e. political and legal) dimension. It should be noted that the Central European countries have also affected the foreign policy of the entire European Union with the principle of an up-load of their priorities, namely in relation to the issues of energy security and enlargement of the European Neighbourhood Policy by the Eastern dimension.

Europeanization of Central European countries has been confirmed. Hypothesis about Europeanization in Central Europe by downloading, so uploading, precisely circular mechanism (cross-loading Europeanization) is confirmed too, and this despite some of the negative manifestations.

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Multi-criteria Analysis of the Involvement of European Union Member States in B2C E-commerce

Hana Kunešová

University of West Bohemia

Faculty of Economics, Department of Marketing, Trade and Services

Husova 11

Plzeň, Czech Republic

e-mail: kunesova@kmo.zcu.cz

Abstract

The paper focuses on an analysis of the involvement of EU member states in B2C electronic commerce. The aim of this paper is to determine and compare the positions of EU member states in the use of B2C e-commerce in the year 2015. The author uses the multi-criteria analysis Weighted Sum Approach (WSA) method and cluster analysis. Criteria for evaluating countries in terms of their participation in B2C e-commerce are determined on the basis of available statistical data from the Eurostat database. In terms of the use of B2C e-commerce, EU member states are a very heterogeneous group. The leading position is occupied by Great Britain, followed by Ireland. At the other end of the spectrum there are several Southern European countries. The results of the analysis confirm that there is still a great unutilized potential in B2C e-commerce in the European Union.

Keywords: E-commerce, European Union, Multi-criteria Analysis, Weighed Sum Approach

JEL Classification: F15, C44, M21

1. Introduction

Electronic commerce (e-commerce) represents a significant factor in the competitiveness of companies and whole economies of EU member states, and is one of the tools for ensuring sustainable economic development in the European Union. This idea is stressed in the Digital Agenda for Europe and other significant documents issued by the European Commission in recent years. The Digital Agenda for Europe has been applied in the European Union since 2010 and is one of the seven flagship initiatives of the Europe 2020 strategy. The Digital Agenda for Europe emphasizes the key role of information and telecommunications technologies in achieving the goals of the Europe 2020 strategy. The goal of the Digital Agenda for Europe is to ensure sustainable economic growth and development of all the benefits resulting from the European Union's Digital Single Market (European Commission [online], 2010a). A Digital Single Market is “one in which the free movement of persons, services and capital is ensured and where the individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence” (European Commission [online], 2016). The Digital Single Market offers new possibilities for supporting the economy through electronic commerce and online services. The Digital Agenda for Europe has set key performance targets for the Digital Single Market. Two of these are directly related to B2C e-commerce: (1) 50% of the population should be buying online by 2015; (2) 20% of the population should be cross border buying online by 2015 (European

Commission [online], 2010a). The premise for accomplishing the second target was “to convince the growing number of consumers who shop online domestically to try cross-border online shopping, and to convince retailers to sell cross-border” (Spakovica and Moskvins, 2012).

To monitor B2C e-commerce in the European Union, Eurostat uses not only indicators of the share of the population shopping online domestically and cross-border, but also other indicators. The aim of this paper is, based on selected indicators, to determine and compare the positions of EU member states in the use of B2C e-commerce in the year 2015. Achieving this aim will make it possible to determine which member states currently use the potential of B2C e-commerce the least.

2. The Framework of Measuring B2C E-commerce in the EU

The massive growth in online business transactions and the need to track them requires a precise and internationally acceptable definition of the term electronic commerce (e-commerce) and the setting of appropriate indicators for the purpose of measuring and international comparison thereof.

2.1 Defining E-commerce in the EU

According to the European Union, “electronic transactions, i.e., electronic procurement or sales, constitute e-commerce. The suppliers or customers can be other companies (“B2B” – business-to-business), consumers (“B2C” – business-to-consumers), or governments and their public administration (“B2G” – business-to-government) (European Commission [online], 2010b). Eurostat has come up with a more detailed definition of the term e-commerce: “E-commerce can be defined generally as the sale or purchase of goods or services, whether between businesses, households, individuals or private organizations, through electronic transactions conducted via the internet or other computer-mediated (online communication) networks. The term covers the ordering of goods and services which are sent over computer networks, but the payment and ultimate delivery of the goods or service may be conducted either on- or off-line” (Eurostat [online], 2015).

B2C e-commerce has significant benefits for both businesses and consumers. “E-commerce can boost consumer welfare through lower transaction costs, increased diversity of supply and more price competition. Online trade opens up a potentially much larger geographical catchment area, both for suppliers and consumers, with an increase in the variety of available products and in price competition” (Gomez-Herrera et al., 2014). These benefits are multiplied in the realization of cross-border e-commerce in the EU. However, consumers may be discouraged from online purchases by concerns about the abuse of personal data provided, making online payments, the resolution of any issues with the delivery of goods or potential claims, and concerns about communication in a foreign language in the case of cross-border e-commerce. All of the above-mentioned facts act as barriers to the development of e-commerce.

2.2 Measuring the Level of B2C E-commerce in the EU

Although e-commerce has been realized over the Internet for over 20 years, monitoring its development is problematic. There are no long-term statistical data on e-commerce or they are not mutually comparable due to the use of different indicators. Duch-Brown and Martens point out the problem with statistical data on e-commerce in the EU: “There are no comprehensive EU data for B2B, B2G and C2C markets. Moreover, a large part of online activity is based on

“free” or “freemium” business models, driven by advertising or other sources of financing” (Duch-Brown and Martens, 2015). Gomez-Herrera say the following on the subject: “Data are generated mainly by private companies involved in online e-commerce. Commercial interests stop them from publishing these data” (Gomez-Herrera et al., 2014).

The statistical office of the European Union, Eurostat, currently uses various indicators to measure B2C e-commerce, which according to the OECD methodology can be divided into four categories, each of which focuses on a different aspect of e-commerce (OECD, 2001). These four indicator categories are:

- 1 Indicators focused on B2C transactions: e.g., the value of sales via a website over the last calendar year, the source of purchases from the geographical point of view (domestic or foreign retailer).
- 2 Indicators focused on the consumer: e.g., the share of consumers shopping online, the frequency of online purchases, the benefits and barriers of e-commerce as perceived by consumers.
- 3 Indicators focused on the sellers: e.g., retailers with Internet access, the share of online retailers, the obstacles for online sales as perceived by retailers.
- 4 Indicators focused on the conditions of B2C e-commerce development: e.g., the share of households with Internet connection, the quality of Internet connection, the share of Internet users among the population, the use of Internet banking.

It can be expected that in the near future more indicators of B2C e-commerce defined will be, which will monitor, for example, purchases by consumers realized via discount websites and the use of social networks in e-commerce. What is becoming increasingly significant for retailers is communication with consumers using social networks and utilizing the potential that social networks have in e-commerce. “Cooperation with customers, their broader involvement in the relationship to a company, product, brand and suchlike requires new marketing approaches that are related to the core of social media and social networks” (Eger, Petryl, 2011).

3. Formulation of the B2C E-commerce Analysis

The previous segment presents indicators used by Eurostat to measure B2C e-commerce. From these, five indicators have been selected that represent criteria for evaluating B2C e-commerce in EU member states. The analysis focuses solely on the use of B2C e-commerce in the year 2015, and it does not deal with a comparison of conditions for the development of e-commerce in individual member states.

3.1 Methodology of the Analysis

To achieve the goal of this paper, the Weighed Sum Approach (WSA) method, one of the methods of multi-criteria evaluation of alternatives, was used.

Methods of multi-criteria evaluation of alternatives belong to the category of multi-criteria decision analysis (MCDA) methods. Multi-criteria decision analysis is both an approach and a set of techniques, with the aim of providing an overall ordering of options, from the most preferred to the least preferred option (Dinçer, 2011).

MCDA is based on the assumption of the existence of a matrix, which consists of a finite list of alternatives, which are evaluated against a finite number of criteria. The elements of this matrix express information about the alternatives according to the various criteria, either in ordinal form (the position of the alternative according to a particular criterion) or in cardinal

form (the actual values of alternatives according to individual criteria in various units). The prerequisite for use of the WSA method is the existence of a finite list of alternatives and a finite number of assessment criteria. The finite list of alternatives in this paper is made up of the 28 EU member states. The finite list of assessment criteria is made up of selected criteria, according to which the use of B2C e-commerce can be evaluated. The matrix data are expressed in cardinal form, which means that they express specific values of e-commerce indicators.

The WSA method works on the principle of utility maximization. That means that it sorts alternatives in an order according to the total utility, which takes into account all the criteria. The range of the utility value of a particular alternative is $\langle 0,1 \rangle$. The higher the utility value of an alternative, the more suitable the alternative is according to the assessment criteria. In the analysis conducted in this paper it means that the higher the utility value of an alternative, the more involved the particular EU member state is in e-commerce. A total utility value of 1 can be assigned only to the alternative (EU member state) which is the best according to all the assessment criteria. A total utility value of 0 can be assigned only to the alternative (EU member state) which is the worst according to all the assessment criteria. The procedure in the use of the WSA method is divided into three steps (Novotný et al., 2011).

Step 1: Data Normalization

Original data normalization allows the effect of various units and numerical scales of various sizes that relate to the criteria used to be canceled out. The normalized values for each criterion range within the interval $\langle 0,1 \rangle$ and express the percentage maximum or minimum value depending on the type of criterion. There are value maximization criteria (i.e., preferring higher values) and value minimization criteria (preferring lower values).

The Weighted Sum Approach method uses the following formula for value maximization criteria:

$$r_{ij} = \frac{y_{ij} - D_j}{H_j - D_j} \quad (1)$$

In the case of value minimization criteria, the following formula is used:

$$r_{ij} = \frac{H_j - y_{ij}}{H_j - D_j} \quad (2)$$

Where: r_{ij} = the normalized values for i alternative and j criterion; i = index variant; j = index criteria; y_{ij} = the original value for i alternative according to j criterion; H_j = the ideal alternative composed of maximum values according to each criterion; D_j = the basal alternative composed of minimum values according to each criterion; H_j = the values of the ideal alternative; D_j = the values of the basal alternative.

The best alternative according to a particular criterion has the normalized value $r_{ij} = 1$; the worst alternative has the normalized value $r_{ij} = 0$.

Step 2: Evaluation of the Utility of Each Alternative

The total utility u_{ij} can be calculated as the sum of the normalized values r_{ij} and the weights of the particular criteria, followed by the summation of those values, i.e., in the following relation (Novotný et al., 2011).

$$u(a_i) = \sum_{j=1}^k r_{ij} \cdot v_j \quad (3)$$

Where: $u(a_i)$ = the total utility of the alternative; a_i ; r_{ij} = normalized values from the previous step; v_j = the weight of the j criterion; k = the number of criteria.

Step 3: The Order of Alternatives and their Subsequent Division into Clusters

The order of alternatives is determined by their total utility values. Subsequently, the alternatives are divided into clusters using the cluster analysis. The cluster analysis is a multi-dimensional statistical method which is used for the classification of objects. It serves the purpose of dividing items into clusters so that the items belonging to the same cluster are more similar to one another than items from other clusters. In this case, the clusters will be made up of EU member states with similar total utility values. Following the division into clusters, the centroid method may be applied using the appropriate software.

To determine the order of EU member states in the use of B2C e-commerce, the WSA method is first applied within the individual categories and subsequently to each individual category as a whole, where the original total utility values of EU member states (i.e., the total utility values of the alternatives) in the given category are used as the original values for other calculations. The weights of all criteria in this analysis are equal (i.e., equal to $1/k$, where k is the number of criteria). The order of countries is then determined by the size of total utility values.

3.2 The Assessment Criteria and Original Data

To establish the order of EU member states in the use of B2C e-commerce, five criteria were selected.

Criterion A: Individuals who ordered goods or services over the Internet from national sellers in the last 12 months (percentage of all individuals aged 16-74).

Criterion B: Individuals who ordered goods or services over the Internet from sellers from other countries (EU or non EU) in the last 12 months (percentage of all individuals aged 16-74).

Criterion C: Enterprises which sold via a website - B2C (percentage of all enterprises, without financial sector).

Criterion D: Sales via a website over the last calendar year - B2C (percentage of turnover, all enterprises, without financial sector).

Criterion E: Individuals who have never ordered goods or services over the Internet for private use (percentage of all individuals aged 16-74).

The A, B, C and D criteria are maximization criteria that provide information about the use of B2C e-commerce. These criteria express the involvement of individuals (consumers) and businesses in domestic and cross-border e-commerce. The E criterion (Individuals who have never ordered goods or services over the Internet for private use) is a minimization criterion which describes the size of the population not taking part in e-commerce. The original data used come from the Eurostat database and relate to the year 2015. The original data for the selected criteria are presented in Table 1.

For criterion D (Sales via a website over the last calendar year - B2C), the original data for 2015 were not available for several countries. In this case, the data for 2014 were used instead. For Luxembourg, the original value of criterion D is not available in the Eurostat database at all. The average (rounded off) value of the given criterion for EU countries was used instead,

which may have led to a certain undervaluation of Luxembourg, though it can be assumed that given the sum of effects of multiple criteria, any distortion has no significant impact (Novotný et al., 2011, p. 159).

Table 1: The Matrix of Alternatives and Criteria for 2015

Alternatives	Criterion A* (%) Max.	Criterion B* (%) Max.	Criterion C* (%) Max.	Criterion D* (%) Max.	Criterion E* (%) Min.
Belgium	42	37	18	1	25
Bulgaria	16	8	6	0	40
Czech Republic	41	10	17	2	26
Denmark	67	39	13	1	10
Germany	71	17	16	1	12
Estonia	50	35	10	1	25
Ireland	41	33	23	6	25
Greece	24	13	6	1	35
Spain	35	22	9	1	33
France	54	24	12	2	21
Croatia	18	18	12	1	37
Italy	21	12	6	0	37
Cyprus	6	22	9	2	46
Latvia	29	24	6	1	37
Lithuania	28	13	15	2	37
Luxembourg	22	72	5	2	15
Hungary	33	12	9	1	39
Malta	13	49	16	2	24
Netherlands	66	26	13	3	13
Austria	38	46	11	1	23
Poland	35	4	7	1	25
Portugal	25	19	10	2	37
Romania	10	2	6	1	47
Slovenia	30	21	13	0	32
Slovakia	42	23	9	2	24
Finland	58	42	11	2	18
Sweden	65	31	14	3	14
United Kingdom	75	30	15	4	10

* For the names of the criteria, refer to the text above Table 1.

Source: Eurostat, 2016

4. The Results of the Analysis Conducted Using the WSA Method

The original data for the maximization criteria A, B, C and D were converted to normalized values using formula (1). For the names of the criteria, refer to the text above Table 1.

Table 2: Normalized Criterion Matrix, Criterion Weights and Utility Values for 2015

Alternatives	Criterion A*	Criterion B*	Criterion C*	Criterion D*	Criterion E*	Utility Values
	Weight 0.20	Weight 0.20	Weight 0.20	Weight 0.20	Weight 0.20	
Belgium	0.521739	0.500000	0.722222	0.166667	0.594595	0.501045
Bulgaria	0.144928	0.085714	0.055556	0.000000	0.189189	0.095077
Czech Republic	0.507246	0.114286	0.666667	0.333333	0.567568	0.437820
Denmark	0.884058	0.528571	0.444444	0.166667	1.000000	0.604748
Germany	0.942029	0.214286	0.611111	0.166667	0.945946	0.576008
Estonia	0.637681	0.471429	0.277778	0.166667	0.594595	0.429630
Ireland	0.507246	0.442857	1.000000	1.000000	0.594595	0.708940
Greece	0.260870	0.157143	0.055556	0.166667	0.324324	0.192912
Spain	0.420290	0.285714	0.222222	0.166667	0.378378	0.294654
France	0.695652	0.314286	0.388889	0.333333	0.702703	0.486973
Croatia	0.173913	0.228571	0.388889	0.166667	0.270270	0.245662
Italy	0.217391	0.142857	0.055556	0.000000	0.270270	0.137215
Cyprus	0.000000	0.285714	0.222222	0.333333	0.027027	0.173659
Latvia	0.333333	0.314286	0.055556	0.166667	0.270270	0.228022
Lithuania	0.318841	0.157143	0.555556	0.333333	0.270270	0.327029
Luxembourg	0.231884	1.000000	0.000000	0.333333	0.864865	0.486016
Hungary	0.391304	0.142857	0.222222	0.166667	0.216216	0.227853
Malta	0.101449	0.671429	0.611111	0.333333	0.621622	0.467789
Netherlands	0.869565	0.342857	0.444444	0.500000	0.918919	0.615157
Austria	0.463768	0.628571	0.333333	0.166667	0.648649	0.448198
Poland	0.420290	0.028571	0.111111	0.166667	0.594595	0.264247
Portugal	0.275362	0.242857	0.277778	0.333333	0.270270	0.279920
Romania	0.057971	0.000000	0.055556	0.166667	0.000000	0.056039
Slovenia	0.347826	0.271429	0.444444	0.000000	0.405405	0.293821
Slovakia	0.521739	0.300000	0.222222	0.333333	0.621622	0.399783
Finland	0.753623	0.571429	0.333333	0.333333	0.783784	0.555100
Sweden	0.855072	0.414286	0.500000	0.500000	0.891892	0.632250
United Kingdom	1.000000	0.400000	0.555556	0.666667	1.000000	0.724444

Source: author's own research

The original data for the minimization criterion E were converted to normalized values using formula (2). Based on the normalized data, the total utility values for each alternative were calculated using formula (3). The calculations were performed in MS Excel. The resulting values are presented in Table 2. After the evaluation of the utility of each alternative, alternatives (EU member states) were ordered according to the utilities; from the highest to the lowest. The ranking alternatives and utilities for 2015 are represented in Table 3.

Table 3: The Ranking of EU Member States in Terms of the Use of B2C E-commerce

Ranking	EU member states	Utility values	Ranking	EU member states	Utility values
1	United Kingdom	0.724444	15	Slovakia	0.399783
2	Ireland	0.708940	16	Lithuania	0.327029
3	Sweden	0.632250	17	Spain	0.294654
4	Netherlands	0.615157	18	Slovenia	0.293821
5	Denmark	0.604748	19	Portugal	0.279920
6	Germany	0.576008	20	Poland	0.264247
7	Finland	0.555100	21	Croatia	0.245662
8	Belgium	0.501045	22	Latvia	0.228022
9	France	0.486973	23	Hungary	0.227853
10	Luxembourg	0.486016	24	Greece	0.192912
11	Malta	0.467789	25	Cyprus	0.173659
12	Austria	0.448198	26	Italy	0.137215
13	Czech Republic	0.437820	27	Bulgaria	0.095077
14	Estonia	0.429630	28	Romania	0.056039

Source: author's own research

Based on the similarity of their utility values (see Table 3), the EU member states were divided into clusters (see Table 4). The division of countries into clusters was carried out using the centroid clustering method and the appropriate software. Countries assigned to the same group are more similar to one another in terms of overall use of B2C e-commerce than countries assigned to other clusters.

Table 4: The Division of EU Member States into Clusters for 2015

Clusters	EU member states	Centroid
1	United Kingdom, Ireland	0.716692
2	Sweden, Netherlands, Denmark, Germany, Finland	0.596653
3	Belgium, France, Luxembourg, Malta, Austria, Czech Republic, Estonia, Slovakia	0.457157
4	Lithuania, Spain, Slovenia, Portugal, Poland, Croatia, Latvia, Hungary	0.270151
5	Greece, Cyprus, Italy, Bulgaria, Romania	0.130980

Source: author's own research

5. Conclusion

The results of the analysis prove that in terms of using B2C e-commerce, EU member states form a rather heterogeneous group. This fact results in a situation where only certain economies are capable of utilizing B2C e-commerce for their growth and take advantage of the benefits that e-commerce offers sellers and consumers. We see intensive use of B2C e-commerce in Great Britain and Ireland. Great Britain's leading position in the area of B2C e-commerce is not surprising: the high involvement of the population of Great Britain in online shopping and the turnover from B2C e-commerce of large online retailers (e.g., Amazon, Tesco, Sainsburys) places Great Britain in the long term in the top spot within the EU in terms of B2C e-commerce. Ireland also ranks high on the list. Of all the EU countries, Ireland displays the highest share of turnover from B2C e-commerce in the total turnover of businesses, and also a fairly high engagement of Irish consumers in online shopping in other countries. Great Britain and Ireland are followed by highly developed economies of Western and Northern Europe; these are included in cluster 2 and form a homogenous group.

The third group includes EU member states with average and below-average use of B2C e-commerce. The distinctive feature of this group is that it is made up (with the exception of France) of small and very small economies, which greatly vary in terms of their economic level. On the one hand, there are highly developed economies (Luxembourg, Austria, Belgium and France), and on the other hand this cluster includes countries with a significantly lower economic strength (Malta, Czech Republic, Estonia and Slovakia). In terms of the use of e-commerce, what characterizes this cluster is the fact that it includes three economies that are intensively engaged in cross-border e-commerce (Luxembourg, Malta and Austria). For these three countries, engagement in cross-border e-commerce is a solution to the limited offer of their domestic economies. Without a detailed analysis, it can be assumed that the high level of engagement in cross-border e-commerce in these countries is also due to the non-existence of a language barrier between the consumers from these countries and the retailers who speak the same language (Austria – Germany, Malta – United Kingdom, Luxembourg – Germany, Belgium and France). The EU member states in clusters 4 and 5 engage in B2C e-commerce on a small scale only. Especially problematic is the situation in the southern countries (Romania, Bulgaria, Italy, Cyprus and Greece), where there is a high percentage of individuals who have never bought anything online and a small share of businesses with online sales on the B2C market.

The conducted analysis indicates that in the European Union there is still a large unutilized potential for B2C e-commerce, which hinders further development of companies as well as whole economies, and prevents consumers from reaping consumer benefit. The focus of the European Commission needs to be on the conditions for the development of B2C e-commerce, particularly in EU member states at a lower economic level, where the use of B2C e-commerce is very limited. However, there is room for improvement in the use of B2C e-commerce even in highly developed EU member states. To further develop the economies of individual EU member states as well as the economy of the EU as a whole, it is essential to eliminate the causes of the current unfavorable condition and focus primarily on supporting cross-border e-commerce. Steps addressing this issue have been taken by the European Commission, which in 2015 revised the Digital Agenda for Europe and defined measures aimed at stimulating the digital economy, including measures to boost cross-border e-commerce. E-commerce is a factor which should significantly contribute to achieving the objective of the Europe 2020 strategy: to generate smart sustainable and inclusive growth by 2020. At this time, it can be

said that B2C e-commerce, due to its limited use, does not contribute fully to achieving the set goal.

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Planning and Implementation of Infrastructure Investments Financed from EU Funds in Czestochowa in 2010-2015

Olga Ławińska

Czestochowa University of Technology
Faculty of Management
Czestochowa, Poland
e-mail: olawinska@op.pl

Abstract

Capital intensity and the amount of infrastructure investments in Polish communities require searching various sources of financing. For most infrastructure investments implemented by local authorities an optimal source of funding is the European Union funds. The main advantage of these grants is non-refundable character. Infrastructure investments are basic conditions for local development. Therefore, investment projects financed from EU funds should be carefully planned. The aim of the article is to evaluate the planning and implementation of investments in technical infrastructure financed from EU funds by the local authorities of Czestochowa in 2010-2015. Article is a theoretical and empirical. The theoretical part includes a review of the literature concerning the management of infrastructure projects financed from EU funds in communities. However, the empirical part includes an analysis of data obtained using standardized interview conducted with the Czestochowa local authorities. The conclusions are presented in the summary.

Keywords: EU Funds, Investment Management, Technical Infrastructure

JEL Classification: R51, R53, R58

1. Introduction

Today, technical infrastructure is one of more important factors determining the social and economic development of a given area. (Gramlich, 1994, p. 1179-1196) Infrastructure determines attractiveness of a region, its living and working conditions, influences spatial distribution of production activity, determines the structure of settlement pattern and is an element of economic and social integration in a region, as well as a condition of effective environmental protection.

Investment expenditure is an important measure that affects the living standard of the population in a given community. Investment decisions taken by community's authorities also determine activities of the owners of economic entities who decide about location of investment in a specific place (viewed in terms of pull and push factors), which in turn may impact the financial situation of a community (Button, 1998, p. 145-162). It should be noted that almost half of infrastructure investments are still financed from community budgets. On the other hand, the last decade brought many changes in terms of possibilities of financing investments due to Poland's accession to the European Union and emergence of possibilities of obtaining financial resources for modernisation and development of infrastructure. (Piszczyk, Biczkowski, 2013, p. 71-76)

Financial instruments designed to support Poland's membership in the European Union are one of the areas of the implementation of the process of Poland's integration with the European Union. Support funds are a chance for local government units for execution of infrastructure investments. Such activities make it possible to reduce long lasting disproportions in the access to infrastructure, which creates conditions for long-term development through increase in economic activity. The deciding role in the choice of investment types, especially in recent years, is played by the possibility of using EU funds by local government units. Proper financial and investment planning allows local government units to use EU funds to support their own limited possibilities of financing investment tasks (Misterak, 2009, p. 120).

Before accession to the European Union, Polish local government units received financial assistance from pre-accession funds. Their aim was to reduce economic divergence and to support the development of candidate states. Since the accession, funds in the following financial perspectives have been functioning: 2000–2006 and 2007–2013. (Zawora, 2012, p. 136)

After 2006, EU's support policy has continued, but its priorities and instruments have changed. Between 2007 and 2013, two structural funds existed: European Fund for Regional Development (EFRR) and European Social Fund (EFS). Cohesion Fund was also maintained. The present financing period covers the years 2014–2020. It is estimated that in this period the largest amounts will be invested in Poland in transport infrastructure (road and railway), but the biggest increase in expenditure will be in the sphere of innovativeness and support for entrepreneurs. The following investments will still be financed: environmental protection and energetics, projects in the area of culture, education, employment and prevention of social exclusion.

Voivodship cities together with encompassing communities will receive large support for implementation of joint projects in the area of communication accessibility. Moreover, funds will finance investments in cities, especially projects connected with comprehensive revitalisation, green urban transportation, and low-emission economy. The EU also requires development of the so-called smart specialisations, i.e. focus of individual regions on selected priorities of innovation policy. Apart from non-reimbursable subsidies, the European Union also offers the so-called repayable instruments, i.e. loans and credits. They can be used by both entrepreneurs and local governments.

The 2014–2020 financial perspective is implemented in Poland through 6 national operational programmes managed by the Ministry of Development and 16 regional programmes managed by Marshall Offices. (www.funduszeuropejskie.gov.pl [online])

The aim of the paper is to evaluate the planning and implementation of technical infrastructure investments co-financed from EU funds in the territory of Czestochowa between 2010 and 2015. The theoretical part is based on literature studies conducted by gathering, specifying and characterising data. Based on the information gathered in the theoretical part, the empirical part was conducted to achieve the aim formulated using the method of standardised interview (using a questionnaire).

2. Selected Aspects of the Management of Infrastructure Investments Co-financed from EU Funds

Poland's membership in the European Union significantly broadened its possibilities to use European Investment Bank credits and guarantees to support the development of infrastructure, and to use EU structural funds. Poland's membership in the EU and

implementation of the regional policy enabled stimulation of development processes in problematic regions and access to various instruments of financial support.

The main aim of the implementation of infrastructure investments co-financed from the EU funds is to improve the living conditions of the population, contributing at the same time to the improvement of regional cohesion through changes in access to basic elements of technical infrastructure and development of local business.

EU's regional policy, by co-financing the implementation of its fundamental objectives, provides support for improvement of regional cohesion, while observing the principles of sustainable development and protecting the natural environment. Therefore, the main beneficiaries of the co-financing are local governments that implement appropriate investment projects. "Key determinants of the activity and effectiveness of local governments in obtaining financing from the EU include: social and economic conditions in which they function and the financial situation that conditions the securing of funds for the implementation of projects. (Zawora, 2012, p. 144-145)

The implementation of developmental changes is inseparably connected with improvement of access to communication for the region and access to fundamental elements of technical infrastructure. Development and improvement of the local infrastructure significantly contribute to the development of a given area, in particular to the increase in the attractiveness of an area as a place of living and improvement of the quality of residents' life as well as stimulation of economic activity. (Lipińska, 2010, p. 242)

Transport infrastructure is one of the factors determining the European integration. (Martin, 1998, p. 757-774) An advantageous design of transportation network has a positive impact on the development of international cooperation. Lack of connections with homogeneous parameters limits such cooperation, hinders contacts and international trade, and may create a barrier to integration. In EU countries, the important role of transport infrastructure was recognised already in the Treaty of Rome. Recognising the principle of free movement of people, goods and services as the fundamental freedom forced the need to develop common transport policy.

Poland's accession to the European Union has been connected with the necessity of investing in infrastructure, in particular in transport infrastructure. The development of transport in Poland and possibilities of increasing its competitiveness depend to a large extent on the improvement of the state of transport infrastructure. Large quantitative and qualitative differences can be seen between the Polish and EU's transport systems. Due to the biggest and constantly increasing share of road transport in transport, road infrastructure is of fundamental importance. The density of the road network in Poland is by one third lower than the average for the "old" Union. This difference is a proof of spatial incoherence between Poland and other EU countries. (Sobiech, 2006, p. 12)

Project Cycle Management (PCM) as a methodology for development and implementation of projects using EU funds has been recommended to all beneficiaries by the European Commission since 1993. The development of this methodology resulted from the need to unify terminology during implementation of aid programmes. The aim of using PCM is to raise awareness of the necessity to take into account important issues and conditions of a project at the stage of its preparation and launch, as well as during implementation. Focus on these aspects impacts effectiveness of the whole process of project management. The path of preparation and implementation of projects always involves a certain sequence of activities.

This cycle begins with defining the idea of a project and converting it into a plan of action, which is then implemented and evaluated.

The life cycle of a project, in line with PCM, comprises five phases:

- programming - this phase precedes further operational activities of a beneficiary in the context of reference to micro and macro goals and general development strategies of a given entity,
- identification - this phase consists in thorough analysis of problems of the beneficiary's environment in general and in detail,
- formulation - this phase is directly related with empirically confirmed analysis of verified problem situations around a project or its environment, i.e. the current state of the beneficiary's environment before the implementation of a project,
- implementation - this phase describes how the defined activities, i.e. tasks or contracts, will be implemented operationally and logistically,
- assessment and audit - evaluation of activities for which another party is responsible and formulation of conclusions for users about the activity being evaluated.

The last of the above-mentioned phases of a project focuses on estimation processes. i.e. evaluation of objectives and implementation of all the main and detailed original assumptions of the project. It also involves monitoring and evaluation of the project - both internally, by the beneficiary, and externally, by third-party institutions. (Sebastianczyk, 2010, p. 8-9)

Sequence of events concerning preparation of an application for financing with EU funds.

- identification of investment needs of a local government unit,
- choosing investments to be implemented in the assumed period,
- definition of an investor's financial possibilities in the assumed period,
- assessment of the need and possibilities of obtaining co-financing for the implementation of investment from external sources (including, among other things, from the European Union),
- accurate definition of the way and sources of financing selected investments (financial engineering),
- preparation of feasibility study/studies for them,
- preparation of appropriate application/applications for co-financing of the implementation of investment from external sources.

It is necessary to stress the special importance of European Cohesion Policy for the social and economic development of Poland. An important value of this policy was not only support for investment projects, but also implementation in Poland of principles and best practices of development programming as well as pursuing a modern development policy at the national and local government levels. Currently, it is important to be well-prepared for using 2014-2020 perspective funds so as to create a sound basis for the future, long-term development of the country.

3. Problem Formulation and Methodology

The empirical studies were conducted by the method of an interview, using a questionnaire. The interview questionnaire consists of 41 questions connected with management of investments in communities in the area of technical infrastructure and covers the period 2010-2015. The questions were so arranged to ensure that the whole process of the management of the development of community's technical infrastructure can be examined.

The questions included in the questionnaire were answered by: Chief of the Department of Investments and Public Procurement, Chief of European Funds and Bureau of Czestochowa City Council. The study was conducted in February 2015. Below are selected issues connected with holding public consultation in the process of management of technical infrastructure investments by Czestochowa authorities in the period analysed.

4. Research Findings

One of the first questions presented to respondents concerned factors determining the order of the implementation of investment projects in Czestochowa between 2010 and 2015 in the process of infrastructure investment planning by the authorities of the city. The answers provided by the respondents have been presented in table 1.

Table 1: Factors Determining the Order of the Implementation of Investment Projects in the Process of Planning Infrastructure Investments* in Czestochowa between 2010 and 2015

Factors	Water system	Gas network	Sewerage network	Water treatment plant	Landfill site	Roads
Residents' needs	5	4	5	2	3	2
Business environment	3	3	3	3	3	2
Community's financial capacity	1	1	4	4	4	5
Possibilities of obtaining EU funds	1	1	3	4	4	5
Possibilities of the location	1	1	1	5	5	5

* on the scale from 1 to 5, where: 1 - no impact; 2 - little impact; 3 - medium impact; 4 - significant impact; 5 - very significant impact

Source: own elaboration

According to the respondents, residents' needs had greater impact on the planned order of the implementation of investments than the conditions of carrying out economic activity. The greatest impact of this factor was indicated for water system and sewerage network. Possibilities of the investment location were ranked high for construction of roads, water treatment plant and landfill sites. In the case of other plants (facilities), this factor was indicated as insignificant.

Possibilities of co-financing from the UE funds were indicated as important or the most important factor for construction of roads, water treatment plants and landfill sites. The highest impact of this factor was indicated for line facilities: water system, sewerage network and gas network. The impact of community's financial possibilities on the planned order of investment implementation was evaluated as high.

Table 2: Extent of Using External Sources of Financing Technical Infrastructure Investments in Czestochowa between 2010 and 2015*

Source	Extent of use	Type of financed technical infrastructure facilities/plants
subsidies from the poviat	1	-
subsidies from the voivodeship	3	Sanitary sewage system
credits and loans	5	Sanitary sewage system
municipal bonds	1	-
public-private partnerships	1	-
EU funds	3	Ensuring infrastructure in the investment site

* where: 1 – never; 2 – once; 3 – sporadically; 4 – often, 5 – most often

Source: own elaboration

The data presented in the table 2. shows that between 2010 and 2015 the authorities of the community analysed did not issue municipal bonds, did not establish cooperation in the form of public-private partnerships, and did not receive subsidies from Czestochowa poviat for implementation of technical infrastructure investments. The period analysed saw a sporadic use of voivodeship financing (subsidies from Voivodeship Fund for Environmental Protection and Water Management) for construction of a sanitary sewage system. These investments were also financed by credits and loans granted on preferential terms by Voivodeship Fund for Environmental Protection and Water Management. Funds obtained from the EU were used sporadically and allocated to financing technical infrastructure of investment site (construction of a road, sanitary sewage system and rain water sewage system, lighting and water pipe). The large share of credits and loans may result from the fact that in order to obtain financing from the EU, community authorities used credits and loans as their own contribution (or supplemented it by them) in financing the investment.

Next, respondents were asked whether between 2010 and 2015 up-to-date information was available in Czestochowa on possibilities of obtaining external (including those from the EU) financial resources for implementation of infrastructure projects. The answer was Yes. Despite very high availability of information, this knowledge was not always effectively used, since in the period analysed this source of financing was not often used in the process of implementing technical infrastructure investments. The answers provided to further questions included in the questionnaire will help to explain this situation.

Next, respondents were asked whether between 2010 and 2015 a unit (group of people or a person) was established in Czestochowa that would be responsible for obtaining external financial resources (including EU funds) for infrastructure investments. The answer was Yes. Currently, this is Department of European Funds and Development, which was established in 2004. In the period analysed, four people with higher education were employed in this department. Their competences included: preparation of projects, conducting formal assessment of applications, collection of required documents for execution of applications. The Department exists to this day, independently from Department of Investments and Public Procurement.

Respondents were also asked whether between 2010 and 2015 the authorities of Czestochowa established cooperation with neighbouring communities to implement projects co-financed

with EU funds, prepared jointly or separately by a person employed by these communities. The answer was Yes. However, respondents did not describe details of this cooperation.

Next, respondents were asked whether the communities implemented an investment project in the area of technical infrastructure using EU funds while giving up (or postponed) building other facilities/plants. The answer was No. At the same time, the respondents answered that as for the possibilities of obtaining funds from the EU, the authorities of Częstochowa applied for financing of infrastructure investments only with reference to planned investments, in accordance with identified needs.

Table 3 presents investment types, period of implementation, total costs (in PLN) and extent of their co-financing with EU funds (in %), as implemented by the authorities of Częstochowa between 2010 and 2015.

Table 3: Technical Infrastructure Investments Co-financed with EU Funds, Implemented in Częstochowa between 2010 and 2015

Project name	Period of implementation	Project cost (in PLN)	% of co-financing from the EU
<i>European Fund of Regional Development as part of the programme Infrastructure and Environment</i>			
Redevelopment of DK91 national road along with construction of an interchange of DK91 and DK1	2013-to this day	55.6 million	85%
Redevelopment of DK1 road, construction of a flyover at the intersection with DK46; connection with Srebrna Street	2011-2013	184 million	85%
Connection of DK1 with the northern part of the city of Częstochowa	2010-2011	23.7 million	78%
<i>European Fund for Regional Development as part of Regional Operational Programme of Silesian Voivodeship for the years 2007-2013</i>			
Construction of Korytarz Północny two-lane road in Częstochowa, Stage II	2012-2013	18.1 million	85%
Redevelopment of footpaths for pedestrians along with construction of cycle lanes in the existing road strips of Jagiellońska Street and Al. Bohaterów Monte Cassino	2013-2014	2.2 million	82%
Construction of Tatrzańska Street in Częstochowa	2010-2011	5.2 million	75%
Conversion of the intersection of Powstańców Warszawy, Gościnną and Leśna Streets into a small roundabout in the strip of voivodeship road no 908	2014	3 million	82%
Development of a regular intersection of Młodości and Ludowa Streets into a channelled intersection of a roundabout type along with redevelopment of drainage, lighting and colliding technical infrastructure	2014	2.5 million	80%
Redevelopment of footpaths for pedestrians in Al. Wolności and Jana III Sobieskiego Street to adjust them to cycling	2014-2015	1.1 million	80%
Construction of an extension of Al. Bohaterów Monte Cassino up to Śląska Street	2014-to this day	8.3 million	50%
Construction of a modern system of public transport, development of tram, road and passenger infrastructure	2010-2012	98.7 million	15%
Purchase of tram sets for the needs of a new line in Częstochowa	2012	503 million	70%
Development of Waste Management Plant for Northern Subregion of Silesian Voivodeship	2013-2014	45.5 million	40%

A system of separate collection in Northern Subregion City of Częstochowa	2008-2011	5.3 million	70%
Strengthening the role of Pilgrimage Centre through modernisation of Al. NMP in Częstochowa	2010-2013	60 million	57%

Source: own elaboration based on www.czestochowa.pl (cit. 10.03.2016)

The information presented in table 3 indicates that in the period analysed the authorities of Częstochowa obtained financing mainly for transport infrastructure investments, in particular road infrastructure. The main source of financing was the European Fund for Regional Development as part of the Regional Operational Programme of Silesian Voivodeship for the years 2007-2013.

5. Conclusion

In the years 2010-2015 the authorities of Częstochowa actively applied for external sources of funding their infrastructure investments. First of all, they applied for funds from the European Union allocated by the regional program. They benefited both the competition procedure, system, and non-competition. Department of European Funds and Economic Development in the City Hall of Częstochowa planned and coordinated work related to the preparation of applications. They obtained funding for the implementation of road investment, transport and environmental protection.

In the concepts mentioned in the introduction, the technical infrastructure factor is presented as one of the elements determining the economic development of a given area. These concepts are based on the assumption that a certain minimum level of infrastructure is necessary to ensure economic growth.

The results of the existing studies show that among the factors that have a negative impact on application for co-financing as part of Regional Operational Programmes, community authorities named in the first place the following problem areas: application and settlement procedures, securing of funds for the implementation of projects, debts of communities, lack of strategies, plans and programmes concerning the use of European funds. (Zawora, p. 145)

Obtaining subsidies, in particular as part of EU programmes of quasi-competitive nature, requires real effort and often a competent team of employees (or consultants) who will prepare the application.

For eligibility of expenditure in projects co-financed from EU funds, it is important that beneficiaries implementing projects strictly observe all provisions in the grant agreement, monitor risk and quickly react to it. A huge mistake – one that is often made - is hiding difficulties threatening the achievement of effects from the institution overseeing the implementation of a project. (Korombel, Wojciechowska, 2013, p. 479-485)

Both against the background of new EU member states and with reference to the efficiency of implementation of other developmental projects financed from national sources, the policy of cohesion is implemented in Poland in a much better way than it was predicted before the accession. Implementation of structural measures, participation in the single European market as well as investment and trade cooperation bring visible effects in the economic, social and institutional spheres at the level of the whole country and individual regions. (Ministerstwo Rozwoju i Infrastruktury, [online], p. 11)

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Internationalization of Small and Medium-Sized Enterprises in the Slovak Republic

Renáta Madzinová

International School of Management ISM Slovakia

Duchnovičovo námestie 1

Prešov, Slovakia

e-mail: madzinova@ismpo.sk

Abstract

Small and medium-sized enterprises are an essential component in almost every EU country. Their production is intended to domestic market. But the natural essence of enterprise is that after a certain time the enterprise goes into the growth phase. SMEs are penetrating to the foreign market. Export/import is often only the first phase of internationalization of SME. The paper deals with internationalization of SMEs in the Slovak Republic compared with chosen countries of the EU. At the same time paper evaluates the industry where the SMEs have the highest level of internationalization and sets out the reasons of the higher level of the SMEs internationalization.

Keywords: *Internationalization, Industry, Small and Medium-sized Enterprises*

JEL Classification: *F20, F2, F02*

1. Introduction

The current world economy represents a complex of mutually economically, politically, but also financially interconnected sovereign states. The dependence among countries is reflected not only in the formation and presence of regional groups, but is an integral part of globalisation. Several authors perceive integration, internationalisation and interdependence as a precursor of globalisation that continues by transnationalisation and a process of mutual economic adjustment. Globalisation represents a never ending reaction to global issues, and on the other hand, it creates new global problems itself.

We come across the term internationalisation in literature quite often. The term internationalisation is defined in diverse manners. Most often, the term internationalisation is understood as growth of a business activity over a state border. According to Varadzin (2013), internationalisation is “a precursor of globalisation. It is a process in which the scope of economic activities starts to surpass borders of national markets.” All forms of international cooperation may be included in the term internationalisation, starting from foreign trade, via foreign direct investments and transnational corporations, all the way to networks.

Calof and Beansiha define internationalisation as a “process of adapting the firm’s operations (strategy, structure and resources) to the international environment” (Kubičková, L. et al. 2014).

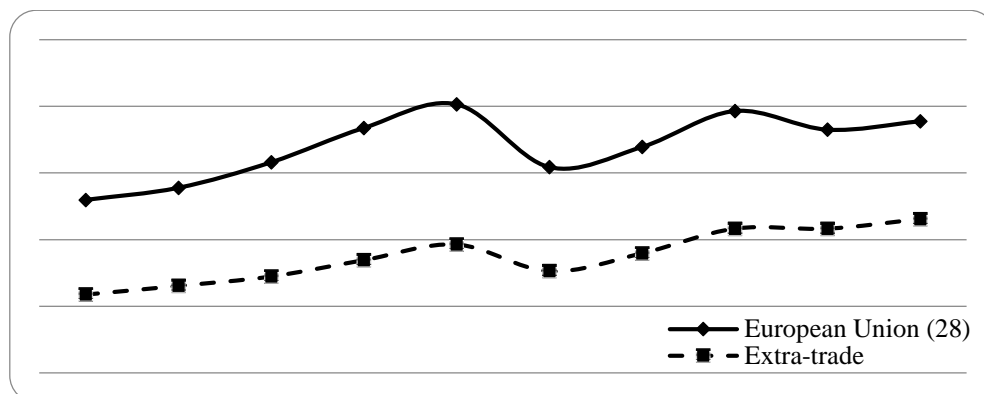
Magdolenová (2010) speaks of internationalisation as of a “process which takes place in the area of the world economy mostly as a result of international economic interdependence – thus, of dependence among its individual parts, and ultimately among national economies.”

One of the broadest definitions of internationalisation focused on small and medium-sized enterprises (SME) is presented by the European Union (2014). “The term internationalisation relates to all activities thanks to which SME establish a meaningful business relationship with a foreign partner: exports, imports, foreign direct investments, international assignment of orders to a subcontractor, and international technical cooperation. In other words, business activities that correspond to opportunities and challenges brought up by globalisation.”

Small and medium-sized enterprises have long been considered as entrepreneurial units that trade only within their domestic market. However, SME are beginning to focus their sales and production as such increasingly on foreign markets. Regardless the size of an enterprise, Stopford’s model and Uppsala model of internationalisation belong to the best known models of internationalisation. If we focus on internationalisation of SME, then their internationalisation is most likely carried out in accordance with Stopford’s model of internationalisation. From the entry of an enterprise into a foreign market via imports/exports, through a licence sale and purchase and creation of capital interconnection of enterprises by the means of joint-ventures, to establishing an affiliate. Exceptions are those SME that are oriented globally from their very establishment (Štrach, P. 2009).

According to several authors (Antoldi, F. et al 2013, Beier, M. et al. 2016 Falk, et al. 2015) as well as studies (e.g. GEM, EK, OECD), internationalisation of SME allows SME to increase their ability to compete, to prolong their lifespan, and to employ more staff. This is the reason why the aim of internationalisation on the EU level is to increase exports/imports of SME mostly, and to gradually provide for higher forms of cooperation with countries outside the EU. That means to encourage small and medium-sized enterprises to direct their foreign activities into countries outside the EU. Since the biggest enlargement of the EU by 10 new countries in 2004, the EU has enlarged by further 5 countries. The gradual enlargement of the EU means also the enlargement of internal, common market of EU member countries. As the most important business partners, in particular of the SR, are EU countries, the internal market of the EU is enlarging alongside the growing internationalisation and the EU as a whole is closing. The share of trading of enterprises among EU countries is influenced also by the fact that internal borders of the EU have been removed and there are almost no barriers. External borders of the EU mean overcoming of barriers of different nature – distance, duty, barriers of non-tariff character. Barriers of diverse nature have a negative influence on development of small and medium-sized enterprises in particular. Integration of new countries into the EU as a whole and internationalisation in this case mean growth of trading over the border of a country, but at the same time, internationalisation occurs when the EU as a whole immures itself.

The trading of enterprises mainly inwards into the EU is recorded in Figure 1. In the period between 2004 and 2013, the extent of exports of EU countries into other countries of the world is on average 51 % of the value of exports of enterprises into EU countries.

Figure 1: Ratio of Exports to Imports in the EU

Source: OECD, own adjustments

The crisis of 2008 was reflected in a decrease of the overall world trade, but also in the trade within the EU. Until 2013, the intra-union trade had not returned to its original level of 2008. In spite of the fact that the trade of 28 EU countries with countries outside the EU has increased, with the exception of the crisis year, it does not reach values of the intra-union trade yet.

2. Problem Formulation and Methodology

The European Union has defined the size of enterprises in terms of the number of their employees as micro enterprises (the number of employees 0 - 9), small enterprises (10 – 49 employees), medium-sized enterprises (50 - 249), and large enterprises (over 250 employees). Further conditions to determine the size of enterprises are, apart from the number of their employees, the amount of their annual turnover and the amount of assets. A condition in order to classify an enterprise into the SME category is also independence of such enterprise of other enterprises via its capital or voting rights (The new SME Definition 2008).

When analysing internationalisation of enterprises according to the size categories, available data from OECD databases have been used. For the purpose of the analysis, descriptive statistics are mostly used, and consist of the following steps:

1. Selection of an industry with the most exported value
2. Expressing a ratio of intra exports to overall exports in numbers
3. Expressing the Terms of Trade (ToT) value in numbers
4. Calculation of the extent of internationalisation in case that a turnover indicator is available for given industries and their size category
5. Conclusions

If we do not take into account those enterprises that are established as international/global enterprises, then a significant majority of SME that want to enter into foreign markets go through several stages of internationalisation. The most frequent first way of internationalisation is the export/import. Although data regarding the export/import are commonly available, only a few databases focus on classification of exports/imports according to the size categories. One of the available databases is the OECD statistics database, where the data concerning the export and the import of SME have been drawn from. These data are available for the period from 2008 to 2013. According to the availability of the data, it is possible to assess the level of internationalisation of SME on the basis of an export intensity

indicator (export-to-total sales ratio), which is a share of exported value in the overall turnover of an enterprise (Beier, M. 2016). The share of foreign turnover in the overall turnover, the share of foreign assets in the overall assets, and the share of foreign in the overall employment are part of a transnationality index (Baláž, P. et. al 2010).

The ToT indicator expresses the ratio of exported value to the imported value in a respective category of products. An advantage of the indicator is the simplicity of calculation, a disadvantage is mostly the interpretation of the final value of the indicator. With regard to the fact that the value of the indicator is influenced by changes in prices of traded products, but also by changes in global prices, for instance oil prices, its interpretation is quite difficult.

Individual categories of products are classified in compliance with the OECD methodology on the basis of International Standard Classification of All Economic Activities, Rev.4 (OECD, ISIC, rev.4). Since the export/import is stated in millions of USD and the turnover of enterprises in the currency of their country, average annual exchange rates have been used to calculate the amount of USD from the amount of domestic currencies.

Within international comparison, Slovakia is most frequently compared to other V4 countries, which are all geographically, historically, culturally, and religiously closest to each other. For the analysis, those EU countries which have a comparable number of citizens as Slovakia have been chosen – Slovakia, Finland, Iceland, Denmark, and Croatia. For the purposes of the final analysis, information related to Iceland was not available, and data related to Croatia were available only for the last two assessed years. That is the reason why a comparison of three countries – Slovakia, Finland, Denmark – is used in the analysis.

3. Problem Solution

Enterprises with the number of their staff between 0 and 9 rank among **micro enterprises**. These are usually enterprises in which the owner is very often the only employee of such enterprise and their field of activity is mostly within their domestic market. Despite this fact, a part of micro enterprises decides to broaden the field of their activities into foreign markets. The highest volume of exported production is held by micro enterprises in all analysed countries in the area of Wholesale and retail trade; repair of motor vehicles and motorcycles (W/R). Micro enterprises from *Denmark* from the W/R area export more than 60 % of their export volume into EU countries. Their share in the overall export in the W/R area is 12 to 34 %. When assessing the ToT indicator, i.e. when expressing the volume of exported products in the volume of imported products in numbers, micro enterprises show values of 57 - 70, whereas the values were decreasing during the assessed period. Added value of Danish micro enterprises is low. For the W/R area, the turnover of enterprises according to their size is also available, that is why we can quantify the extent of internationalisation (export intensity) of enterprises. Micro enterprises in Denmark in the W/R area have a high rate of internationalisation as the share of exported value in the overall turnover was 17 % on average during analysed years, whereas the rate of internationalisation was decreasing over the years from 20 to less than 10 %.

A similar development to the one in Danish micro enterprises is also seen in micro enterprises in *Finland*. The biggest volume of exported value is shown by micro enterprises in the W/R area, whereas about a half of the traded value is directed to EU countries. The share of micro enterprises in the W/R area is about 31 % and during the assessed years, their share decreased significantly from 51 to less than 15 %. ToT of micro enterprises is low and oscillates about the level of 24. The rate of internationalisation of micro enterprises of Finland is in the W/R

area significantly lower than it is in Denmark. On average, these enterprises export about 8 % of their traded value into foreign countries, while between 2008 and 2013, the export intensity of the enterprises decreased from 17 to 5 %.

Slovak micro enterprises as well as micro enterprises in Denmark and Finland focus on the W/R area in terms of exports. The share of the enterprises in the overall export of the sector is more than 40 %, whereas in the period from 2008 to 2013, the share was quite equal. Unlike Denmark and Finland, almost 92 % of the exported value is directed to EU markets. The ToT value of micro enterprises in the SR is 42, which is low, but the value of exported production to imported value of production is higher than in both Denmark and Finland. Export intensity of micro enterprises in the W/R area in Slovakia reaches the level of 22 %.

What is interesting about Slovak micro enterprises is the fact, that on top of the W/R area, the enterprises show a high activity in foreign markets in the area of Professional, scientific and technical activities. Their share in the overall export is about 32.5 %, whereas more than 90 % of their production is exported to EU markets. The ToT value increased from 76 to 81, which is less than 100, nevertheless, provided that the enterprises follow the trend, added value might increase even more. The rate of internationalisation of micro enterprises was growing during the assessed years, and increased from 12.6 to almost 20 %.

A third group of micro enterprises in Slovakia with a high export rate consists of enterprises operating in the area of Information and communication. Their share in the overall export within the given sector product group is 35.7 %. Almost their entire production (94 – 97 %) is directed to EU countries. The ToT value was growing during the assessed years increased from 71 to almost 79, which can be evaluated as a positive trend. The rate of export intensity was oscillating about the level of 10 % during the assessed period and was growing in the period from 2008 to 2013.

Internationalisation of **small enterprises** with the number of employees between 10 and 49 is shown in all analysed countries not only in the W/R area, but also in the industrial production. The biggest share in the exported value in the overall export in the W/R area is about 20 % in *Denmark*. The share increased during the analysed years 2008-2013 mainly in the last years. The share of exports of small enterprises inside the EU is higher than 65 %. In the W/R area, the ToT value is low and is about 43, which is a proof of the fact that the value of exported production is lower than the value of imported production. The rate of internationalisation of small enterprises in the W/R area is about 10 %, the rate of internationalisation was increasing from 9 to 13 % during the assessed years.

Among industrial sectors in Denmark, the highest export value is held by the Manufacture of metal products sector. The share of the sector in the overall export is at the level of 18 % on average and increased from 11 to 20 % during the assessed years. About 65 % of production is intended for EU markets. ToT is high, at the level of 150, which is positive for the given enterprises, because the amount of added value is significantly higher than in the case of W/R.

The highest rate of internationalisation of small enterprises in *Finland* is in the Manufacture of chemicals and chemical products sector. The value of the export of the small enterprises sector in the overall export increased during the analysed years from almost 9 to more than 26 %. Export activity is directed mostly to EU markets, where 60 – 73 % of exported production is placed. ToT of small enterprises is at the level of 100 to 128. A significantly lower level of internationalisation of small enterprises is in the W/R area (ca. 15 %).

Slovak small enterprises are mostly internationalised in the Agriculture, forestry and fishing sector. The share of small enterprises in the overall export is 37 %, whereas the share was stable during the assessed years. Almost the entire agricultural production of small enterprises is placed in EU markets. Terms of trade whose value increased from 191 to 306 prove a high rate of added value in the area of agriculture.

A high rate of export activity is also shown by small enterprises in Slovakia in the W/R area. Their share in the overall export value is 25 %, while during the analysed years, the share was decreasing. Micro enterprises together with small enterprises carry out more than 60 % of their business abroad. About 90 % of the business is directed to EU markets. ToT is slightly decreasing and is at the level of about 40, which represents an appropriate value for the given industry. The rate of export intensity is lower as in the case of micro enterprises, and is closely below the level of 10 %.

Mainly thanks to a higher number of employees, **medium-sized enterprises** are able to use savings from the scope, specialization, but also innovations. That is why medium-sized enterprises that employ between 50 – 249 employees are more internationalised than micro and small enterprises. Medium-sized enterprises in *Denmark* have the biggest export share in the overall export in the area of Manufacture of metal products. Their share in the overall export was 40 % in the assessed years, whereas their share increased from 38.7 to 48.3 %. About 68 % of exported production is directed into EU countries and exports into the EU countries were increasing mainly in the last years (63 – 73 %). ToT of medium-sized enterprises is high and ranges from 192 to 216 %.

Apart from a big share of exported value in the W/R area, production from the area of Manufacture of paper and paper products has a high export rate in case of medium-sized enterprises in *Finland*. In both product groups, there is a big share of sales into EU markets, and in case of W/R, it is 70 – 80 %, in case of paper production, exports into EU countries account for about 65 %. If we assess efficiency of foreign trading of medium-sized enterprises of Finland, then a significantly high added value is shown mostly by medium-sized enterprises in the area of paper production. ToT reaches the values from 780 to 1658. In the W/R area, ToT is significantly lower and is about the level of 20.

In *Slovakia*, Manufacture of textiles may be included among stable sectors with a high value of exports. Medium-sized enterprises in the area of textile production account for about 65 % in the overall export and this share was only slightly oscillating during individual years. More than 80 % of exported production is directed into EU countries. As the value of imported production is not available for the given sector, the ToT value cannot be estimated.

In the area of Manufacture of fabricated metal products, except machinery and equipment, the share of exports of medium-sized enterprises in the overall export increased from 35 to more than 40 %. Almost 90 % of exported production ends up in EU markets, even though the share decreased slightly in the course of the assessed years. ToT shows high values which are about the level of 200, which signifies production with a high rate of added value.

Enterprises in the area of Manufacture of machinery and equipment n.e.c. have increasing volume of exports in the overall export of medium-sized enterprises in the SR. The volume of exports increased from 24 to more than 30 %. Production of the given sector is directed, similarly to the whole production from Slovakia, mainly to EU markets (ca. 80 %) Medium-sized enterprises that shoe activity in the given sector have a high added value which is at the level floating between 180 and 190.

In the course of the last three assessed years (the other years are not available), export intensity in the area of Professional, scientific and technical activities increased significantly in Slovakia. The export value of medium-sized enterprises in the area of Transport and storage develop alongside noticeable deviations. Nevertheless, both sectors show such deviations that we did not engage their detailed analysis.

4. Conclusion

Globalisation is related to the establishment, growth, and intensification of regional groups, among which the EU classifies as well. The European Union as a whole has many supporters as well as opponents. The liberalisation of foreign trading is considered to be one of the biggest advantages of the EU by its citizens and entrepreneurs. In spite of the fact that the Schengen Area currently faces several forms of threat, mostly in connection with the migrant wave, it provides SME with opportunities to make use of the markets of the other member countries in order for them to carry out their production in the same manner as in their domestic market.

In general, internationalisation represents an activity of an enterprise during which the enterprise engages itself in a foreign market, In case of SME, internationalisation of an enterprise usually starts with exports and imports. In the integrated EU, SME are offered new opportunities of internationalisation, which are supported mostly by reducing or removing barriers within the EU. However, limiting the group to only trading among its members can result in serious economic deficiencies in all participating countries (One example can be the cooperation in the former Comecon organization). To stand a test in a foreign market is not completely a commonplace. That is why we wanted to find common and different features of those SME that carry out their business activities in foreign markets by the means of the analysis of the SME internationalisation rate in three EU countries.

The analysis of exports and imports of enterprises according to their size category within selected EU countries has confirmed that all size categories participate in foreign trading.

Although the analysed countries have a similar number of citizens (Denmark 5.614 million, Finland 5.439 million, Slovakia 5.417 million), the economy is different in all the countries. Despite this fact, all the countries rank among open countries with a high share of foreign trading and all kinds of enterprises are active in their domestic and foreign markets.

On the basis of the analysis, we have come up to the following conclusions.

Micro enterprises in all the countries show the biggest share of exports in the overall export in the W/R area. In spite of the fact that the value of exports is lower than the value of imports in the given group, their export intensity measured via the share of exports in the overall turnover ranks between 8 to 22 %. The W/R area is suitable for micro enterprises mostly for relatively low capital demands and minimum special requirements for employees. The presence of four freedoms in EU countries allows micro enterprises to carry out exports despite the fact that ToT is low within the W/R area in all countries. The focus on EU markets is mostly visible in the SR, which can be caused by the fact that although the SR has an external border of the Schengen Area, Ukraine is located behind the border, and trading with this country is more difficult than trading with the countries inside the EU. Not only in order to overcome barriers of various character, but also due to the fact that Slovak entrepreneurs have already got accustomed to using € as a single currency, the export of the SR is directed more into the neighbouring EU countries than to the neighbouring country outside the EU.

Small enterprises show a big share of exported value in the overall value not only in the W/R area, but also in the industrial sector in each of the countries. In case of those enterprises, the value of exported and imported value is incomparable higher and is above 100. On the other hand, in any of the countries, exports of small enterprises do not represent a kind of industry that is considered to be the leading export industry of the country. Industrial production requires better capital equipment and more qualified manpower than owned by micro enterprises. These factors are subsequently reflected also in the high value of ToT. As in the case of micro enterprises, the intra export within the SR bears the highest value.

Medium-sized enterprises with the highest rate of exports share in the overall export are the most active in the area of industrial production. All enterprises show a big share of exported value in imported value and the value of indicator is often higher than 200. Medium-sized enterprises can use the specialization of production to even greater extent than small enterprises and can join the deepening division of labour. All these factors are reflected in the growing ToT, which ranks highest among all analysed size categories.

All enterprises in all the analysed countries focus their production on EU markets, whereas the biggest share in the intra export is held by enterprises from Slovakia, which export over 80 % of their production into EU markets.

From several studies carried out on the level of the EU but also on the level of the SR, it could be concluded that Slovak SME perform the export of their production only to those countries that are geographically close. The reasons are mostly high financial transportation demands which make the Slovak production in EU markets more expensive and this way also non-competitive. That is why the most of exports from Slovakia are directed into EU countries.

Therefore, on the basis of the performed analysis, we recommend Slovak SME to increase their export activity in those markets that are located further. This will allow the enterprises to export their production not only into EU markets, but also into markets outside the EU. The growth of their export activity is only possible by a permanent growth of the added value of such production, with the help of which their competitiveness will increase even in demanding developed markets that are geographically remote.

As transportation costs for individual SME are currently financially demanding, it is necessary for SME to perform their cross-border activities in a form of, for example, export consortia, piggy back, or to make use of modern methods of sales via information and communication technologies when exporting. In the long term view, the competitiveness of an enterprise in foreign markets is possible only when the added value is high by processing.

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The Principle of Universality versus the Principle of Territoriality in the European Insolvency Law

Silvie Mahdalová
Masaryk University
Faculty of Law
Veveří 158/70
Brno, Czech Republic
e-mail: 362636@mail.muni.cz

Abstract

The international insolvency law is based on two main principles – the principle of universality and the principle of territoriality. Under the principle of territoriality, the insolvency proceedings shall be limited to the assets located in the state in which the proceedings were opened. In light of the principle of universality, there is one single insolvency proceeding which shall affect all assets of the debtor and shall be governed by one national law. The universalism ensures efficiency and economy of the insolvency proceedings. On the other hand, due to widely differing national insolvency laws the application of universality without exception may cause difficulties. Therefore, European insolvency law is based on the modified universality which is a compromise between these two main principles. The article aims to outline the theoretical basis of these principles and analyze their concrete manifestations within cross-border insolvency proceedings.

Keywords: *International Insolvency Law, Insolvency Proceedings, the Principle of Universality, the Principle of Territoriality, Modified Universality*

JEL Classification: *K22, K35, K40*

1. Introduction

The insolvency proceedings shall ensure the situation in which no assets of the debtor in the international level remains unaffected by the insolvency of the debtor. The problems may occur when the assets of the debtor are located in different states. In accordance with the principle of territoriality, the debtor may be divested of his assets only under an act of the state which has territory effects (Kapitán, 2000, pp. 369-370). The effectivity of the insolvency proceedings may be ensured by the principle of universality. Respecting the universality of insolvency proceedings, the insolvency estate includes all the assets of the debtor regardless of where they are located (Virgos, Garcimartin, 2004, p. 12, LoPucki, 2000, p. 2220). The article aims to present the theoretical basis of the main normative models of international insolvency law and analyse their concrete manifestations within the European insolvency law.

2. The Main Normative Models

In the following chapter, the author will analyse the main normative models of the international insolvency law. There are two main approaches – the territoriality and universality – and the intermediate approach combining some aspects of them.

2.1 The Territoriality Model

The territoriality principle is one of the fundamental principles of the international law. Pursuant to its main idea, each single state has an exclusive power to govern within its own borders (LoPucki, 2000, p. 2218). This principle is consistent with the principle of sovereignty and jurisdiction which allows the national courts to administrate only the local assets of the debtor in compliance with their own national laws (Anderson, 2000, p. 681).

In sphere of insolvency law, application of territoriality means that each state in which the assets of debtor are located opens insolvency proceedings with effects limited to its own territory (LoPucki, 2000, pp. 2218-2220; Virgos, Garcimartin, 2004, p. 11). In case the application for insolvency is filed in the Czech Republic and assets of the debtor are located in the Czech Republic and Germany, the insolvency estate would include solely the assets located in territory of the Czech Republic. If the creditor would like to satisfy his claim from the asset located in Germany, he would have to file for opening of insolvency before German courts. Some author calls the territoriality the “grab rule”, because the courts must “grab” the assets located in their territories to satisfy the national creditors (Kipnis, 2008, p. 166).

In this light, the territoriality is associated with the principle of plurality of the insolvency proceedings. Pursuant to this principle, the relating insolvency matters are administrated in multiple *forum concursus* (Israel, 2005, pp. 27-28.).

The concrete manifestations of the principle of territoriality are following:

- a) There are as many insolvency proceedings opened against one debtor as there are states in which his assets are located;
- b) the particular insolvency proceedings shall be governed by the law of the state in which it was opened;
- c) each particular proceeding may be participated by creditors coming from the state in which it was opened (Virgos, Garcimartin, 2004, p. 11);
- d) the liquidator may exercise his powers only in the state in which he was appointed (Wessels, 2007, p. 117).

The systems based on this principle are predictable and very simple. However, consistent application of the principle of territoriality may be uneconomical and inefficient.

In such territoriality system, the insolvency proceedings may be twice as costly (Anderson, 2000, p. 681). Moreover, the principle of territoriality may undermine the main goals of insolvency proceedings - the effectivity of the proceedings and the equitable distribution of the assets of the debtor among his creditors. These principles may be frustrated by dissipation of the insolvent estate due to the incentive of the creditors to obtain as many assets as they can in the fastest possible way (Israel, 2005, p. 30).

2.2 The Universality Model

After 1970s, the international insolvency “paradigm”⁶³ started to change from the territoriality model to the universality model (Anderson, 2000, p. 681). In accordance with the principle of universality, the insolvency proceedings opened against the debtor affects all his assets regardless of in which state it is situated (Fletcher, 2005, pp. 12 – 13).

⁶³ The term „paradigm“ was used by Anderson in order to define „the legitimate problems and methods of a research field for succeeding generations of practitioners“ and „from which spring particular coherent traditions of scientific research“ (Kuhn, 1996, p. 10).

Professor Westbrook says that the principle of universality “stems from the principle of symmetry between legal regulation and economic activity” (Virgos, Garcimartin, 2004, p. 12). It means that despite the fact the economic activities of the debtor exceed many countries (and the debtor has various creditors), there is one insolvency proceeding opened against him under the authority of one single court (LoPucki, 2000, pp. 2220-2221).

In this light, the universalism is associated with the principle of unity. According to this principle, all the insolvency matters shall be administrated within one single *forum concursus* (Israel, 2005, pp. 27 – 28).

The concrete manifestations of the principle of universality are following:

- a) There is only one single insolvency proceedings affecting all assets of the debtor regardless of where they are situated;
- b) the procedural and substantive questions of such insolvency proceedings shall be governed by a single national law;
- c) the single proceeding may be participated by both national and foreign creditors;
- d) each decision issued in relation to the insolvency proceedings shall be recognized in all other states (Virgos, Garcimartin, 2004, p. 12);
- e) the liquidator shall realize the liquidation or reorganization of all the assets of which the debtor was by the insolvency divested and the administration of his affairs (Wessels, 2007, p. 117).

In light of aforementioned, this approach seems to be the ideal model of regulation of the insolvency proceedings with cross-border element.

On the other hand, the effectiveness depends also on how the countries accept this principle in practice. Generally, the debtor may be divested of his assets only under an act of the state which has territory effects. Other states may not accept these effects due to many kinds of reasons (either political or economic). The state of recognition must have really perspective attitude (such as real transfer of the assets to the state of opening, reducing barriers for recognition of foreign insolvency proceedings, et.), otherwise the principle of universality would be only a meaningless proclamation (Kapitán, 2005, p. 370). Such perspective attitude is mostly guaranteed within the European insolvency law, which will be analysed in following chapter.

2.3 The Intermediate Model

The principle of territoriality may be diluted and combined with some elements of the universality (Virgos, Garcimartin, 2004, p. 11).

The examples of aforementioned model are following:

- a) The foreign creditors may participate on some body of creditors while the insolvency proceeding remains to be governed by the territoriality principle (e.g. the insolvency estate remains territorial);
- b) all territorial proceedings may be coordinated in order to ensure more effective conduct of the proceedings opened against the same debtor or to ensure the equal right to payment for the creditors (this model is often called “the cooperative territorialism”);
- c) the universality may be modified by subordinated parallel territorial proceedings or by opening of the territorial proceedings without opening the main proceedings with universal effects;

- d) the universality may be modified also by establishing exceptions to conflict-of-law rules determining law applicable to insolvency proceedings (Virgos, Garcimartin, 2004, p. 12).

3. The European Union Model

Despite the high level of integration within the European Union, the original idea to adopt one single system of insolvency proceedings with unlimited effects within all the member states was not successful. This idea could not be realized due to widely differing national insolvency laws (Bělohávek, 2007, p. 10). Already prof. Westbrook thought that it was “*unrealistic to think that universalism will be accepted absent roughly similar laws*” (Westbrook, 1991, p. 18). According to him, it is almost impossible to harmonize the national governing laws of all countries in order to make appropriate conditions for the universality (LoPucki, 2000, p. 2217).

The European insolvency law is based on the “compromise” between the two main principles. It is called “modified” (Israel, 2005, p. 66), “mitigated” (Garcimartin, p. 1), “mixed” (Wessels, 2006, *European Union Regulation on Insolvency Proceedings*, p. 7) or “coordinated” (Wessels, 2006, p. 68) universality.

3.1 The Insolvency Regulation

The main source of the European insolvency law is the regulation no. 1346/2000 on insolvency proceedings (hereinafter referred to as “the Insolvency Regulation”).⁶⁴ The Insolvency Regulation contains rules on international jurisdiction to open the insolvency proceedings (Article 3), on recognition of the decisions in insolvency matters (Articles 16 – 18, 21 – 23 and 26), on law applicable to the insolvency proceedings (Articles 4, 5 – 15), on coordination of particular proceedings (Articles 27 – 38) and rules ensuring the impartial treatment of creditors (Articles 39 – 42).

The purpose of the Insolvency Regulation is to hold a single main insolvency proceeding which is governed by one national law and in which all both national and foreign creditors may participate the main proceeding (Virgos, Garcimartin, 2004, pp. 15 – 16).

The jurisdiction to open the insolvency proceeding shall have courts of the member state in which the debtor has *the centre of his main interests* (Article 3 of the Insolvency Regulation). The insolvency proceedings, covered by the scope of the Insolvency Regulation, which are opened in one of the member states, shall be automatically recognized in all other member states (Article 16 of the Insolvency Regulation). The Insolvency Regulation does not require any formal act for recognition of the decision on opening of the insolvency or any other decision in the insolvency matters (Article 17 of the Insolvency Regulation).

These insolvency proceedings shall be governed by single national law. Article 4 of the Insolvency Regulation subjects each of the proceedings to the law of the state in which the insolvency proceedings were opened. This national law (*lex fori concursus*) governs both the procedural and substantial effects of the proceedings (Recital 23 of the Preamble of the Insolvency Regulation). Article 4(2) of the Insolvency Regulation states a demonstrative list of matters which are covered by the cited conflict of laws rule (Moss, Fletcher, Isaacs, 2002, p. 179).

⁶⁴ In 2015, new regulation (EU) no. 2015/848 of the European Parliament and of the Council of 20 May 2015 on insolvency proceedings was adopted. This regulation shall repeal the Insolvency Regulation after 26 June 2017.

3.2 The Corrections of the Principle of Universality

The following subchapter will be devoted to the special rules modifying the universal effects of the aforementioned general rules. Due to widely differing national insolvency laws, it is not practical to provide insolvency proceedings with universal effects in the entire European Union. “*The application without exception of the law of the state of opening of proceedings would, against this background, frequently lead to difficulties*” (Recital 11 of the Preamble of the Insolvency Regulation). As an example the Insolvency Regulation presents laws regulating the security interests. In some cases, there are differing preferential rights of creditors. In this light, the Insolvency Regulation uses the concept of modified universality in two following modifications: a) possibility to open parallel territorial insolvency proceedings which affect only the assets located in territory of the state of opening and b) exclusion of some rights and legal relationship from the scope of application of *lex fori concursus* (Wessels, 2006, *European Union Regulation on Insolvency Proceedings*, p. 7).

In this light, the modified universality is associated with both the principle of unity and plurality. Therefore, the Insolvency Regulation is based on combination of these principles: a) universalism, b) territorialism, c) unity and d) plurality. The main position has the universalism which is partly limited by the other principles (Bělohávek, 2007, pp. 6-7.).

3.2.1 The Secondary and Independent Insolvency Proceedings

The Insolvency Regulation respects that there is no uniform system of security rights within the European Union and thus it establishes a possibility to open two or more insolvency proceedings against one debtor (Virgos, Schmit, 1996, p.13). Concurrently with the main insolvency proceedings with the universal effects, it is possible to open insolvency proceedings territorially limited to the country in which they were opened (Article 3 of the Insolvency Regulation, Goode, 2011, p. 748). This possibility aims to ensure protection of local interests (Virgos, Schmit, 1996, p. 14). The insolvency regime may be unfamiliar or less favourable for some of the creditors and therefore the Insolvency Regulation reduces this unfairness by a possibility to open such territorial proceedings governed by the local rules (Fletcher, 2005, p. 374).

There are two kinds of such territorial insolvency proceedings:

- a) “secondary insolvency proceedings”: insolvency proceedings which are dependent to the universal proceedings, although they are governed by different national law (Bělohávek, 2007, p. 127). These territorial proceedings may be subject to certain mandatory coordination measures (e.g. liquidators/administrators would have an obligation to mutually cooperate). If there is any surplus assets of the debtor, it must be returned to the main insolvency proceedings (Virgos, Garcimartin, 2004, p. 18);
- b) “independent insolvency proceedings”: particular proceedings which are opened in some member state before the main insolvency proceeding was opened, although there is not the place of the main interests of the debtor. These are not derived from the main insolvency proceedings. These proceedings should be opened only in exceptional cases (Recital 17 of the Preamble of the Insolvency Regulation). After opening of the main insolvency proceedings, these independent proceedings become secondary insolvency proceedings (Virgos, Garcimartin, 2004, p. 18, for more detail analysis of both of these territorial insolvency proceeding see Bělohávek, 2007, pp. 122 – 186, Duursma-Kepplinger, Duursma, Chalupsky, 2002, pp. 151 – 173, Goode, 2011, pp. 719 – 725, Virgos, Garcimartin, 2004, pp. 54 – 66, Fletcher, 2005, pp. 373 – 375).

3.2.2 The Exceptions to Applicability of *Lex Fori Concursus*

As the author mentioned above, the Insolvency Regulation establishes the general rule, that the insolvency proceedings shall be governed by the law of the state in which the proceedings were opened (Article 4 of the Insolvency Regulation). The Insolvency Regulation establishes few exceptions to application of the *lex fori concursus*. It states special rules on law applicable with regard to some significant rights and legal relationships (Recital 11 of the Preamble of the Insolvency Regulation).

There are two different types of these rules: a) rules of the immune nature; and b) conflict-of-law rules (Bělohávek, 2007, p. 254).

- a) In some cases the Insolvency Regulation excludes some rights from the effects of the main insolvency proceedings. These rights shall not be governed by the *lex fori concursus*. The main insolvency proceedings shall not affect the rights in rem of third parties (Article 5 of the Insolvency Regulation), rights to demand the set-off against the claims of the debtor (Article 6 of the Insolvency Regulation) and rights which are based on a reservation of title where the asset is located in any member state other than the state of opening of the proceedings (Article 7 of the Insolvency Regulation).
- b) Some other aspects shall be governed by other law determined by special conflict-of-law rules contained in the Insolvency Regulation. These special rules are stated by Articles 8 – 15 of the Insolvency Regulation. The author will present only few of them. For example, the applicable law for effects of insolvency on contracts relating to immovable assets shall be the law of the state in which the assets are located (Article 8 of the Insolvency Regulation). The effects on employment contract shall be governed solely by the law which is governing for the contract (Article 10 of the Insolvency Regulation). Effects of insolvency on pending lawsuits, including the pending arbitration (Pfeiffer, 2014, p. 217), concerning any asset of which the debtor was divested shall be governed by the law of the state in which the proceeding is pending (Article 15 of the Insolvency Regulation, for more detail analysis of all of the exceptions see Bělohávek, 2007, pp. 254 - 556, Duursma-Kepplinger, Duursma, Chalupsky, 2002, pp. 204 – 351, Goode, 2011, pp. 758 – 776, Virgos, Garcimartin, 2004, pp. 89 – 143, Fletcher, 2005, pp. 401 – 420).

4. Conclusion

The article was devoted to two fundamental principles of the European insolvency law - the principle of universality and the principle of territoriality - and their concrete modifications within particular provisions of the Insolvency Regulation. Territorialism in its pure form is not effective system for international insolvency law, especially within the sphere of highly globalized economy. On the other hand, the universalism in its pure form may exist only in system where the national insolvency laws are uniformed; therefore the European integration provides the modified type of universality respecting the differences among the national governing laws and priorities of creditors. The exclusive form of universality is the ideal model, whilst its modified version is the reality. The European Union established the system in which the insolvency proceedings affect all assets of the debtor located in all member states of the EU, but it is possible to open territorial insolvency proceedings. Also the application of law governing the insolvency proceedings is not without exceptions. There are few exceptions to the applicable law in order to protect some special rights and legal relationships. Recently, the European insolvency law undergoes some changes due to the revision of the Insolvency Regulation adopted in 2015. For purpose of this article, there is no significant change between

the two versions tending to one of the principles. In this light, the modified universality appears as a stable basis of the international insolvency law.

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The Issue of Competitiveness: A Case of Visegrad Group Plus Countries

Ingrid Majerová, Jan Nevima

Silesian University in Opava

School of Business Administration in Karvina, Department of Economics and Public Administration

Univerzitni nam. 1934

Karviná, Czech Republic

e-mail: majerova@opf.slu.cz, nevima@opf.slu.cz

Abstract

The aim of the paper is to determine the relationship between measurable output indicators of competitiveness, namely the degree of openness and transformational performance in the countries that form the Visegrad Group Plus – Austria, Czech Republic, Hungary, Poland, Slovenia and Slovakia. These relationships have been tested through correlation and regression analysis in the years 1995-2013, when we assumed significant correlation between value of export and export performance in these countries. The second aim is to compare these countries according their size. It means that the smallest countries as Slovakia and Slovenia should show similar results, as well as the bigger countries – the Czech Republic, Hungary and Austria, and Poland extra. Our assumptions have not been confirmed, very similar dependence showed a group of countries with different size and history – the Czech Republic and Slovakia, Hungary and Slovenia, then Austria and Poland.

Keywords: Comparison, Competitiveness, Degree of Openness, Regression Analysis, Transformational Performance

JEL Classification: F14, O11, O57

1. Introduction

The competitiveness is explained as the ability not only to produce goods and services that will succeed in the international market, but also the ability to maintain and enhance high and sustainable level of economies. There is very popular the comparison of the competitiveness of the European Union and the countries of the Visegrad Group (hereafter V4) in the last years (e.g. Honová and Hon, 2014). We decided, as part of a research project, to analyse this problem on a group of countries, namely selected countries of the Visegrad Group plus (hereafter V4+), which include the V4 countries and Slovenia and Austria, on the ground of Regional Partnership Agreement from 2001.

This paper deals with the relationship of degree of openness of economy and transformational performance in these six countries during the period 1995-2013. There are two reasons for it: firstly these countries are economically and politically part of the Central European region, which plays an important role in the development of Europe and its competitiveness. The second reason is the heterogeneous size of these countries, while Poland is ranked to the economies of medium size with an expected lower level of openness and the rest of these countries belong to the small economies whose openness should be large (and research results should therefore be similar despite the differences in the past).

Because we considered that increasing intensity of foreign trade tend to increase its value added and thus contribute to improvement of macroeconomic competitiveness, the size of the countries plays important role as well. We assumed significant correlation between value of export and export performance in these countries, according their size. It means that the smallest countries as Slovakia and Slovenia should show similar results, as well as the bigger countries – the Czech Republic, Hungary and Austria, and Poland extra. Our assumptions have not been confirmed, very similar dependence showed a group of countries with different size and history – the Czech Republic and Slovakia, Hungary and Slovenia, than Austria, Poland.

The observations were being proven by using the correlation and regression analysis, annual data were collected from Eurostat and converted into indexes.

2. Literature Review

As Krugman (1994) wrote – trying to define the competitiveness of a nation is much more problematic than defining that of a corporation. As well as Siggel (2007) which argues that the most controversial kind of competitiveness indicator is the macroeconomic one, although in may be the most popular one. The micro and meso-economic concepts, which apply to single producers or industries ate less controversial despite the variety of indicators within this group.

According Scott and Lodge (1985) national competitiveness refers to a country's ability to create, produce, distribute and/or service products in international trade while earning rising returns on its resources. This definition is equivalent to that adopted by Tyson (1992) which defines international competitiveness as ability to produce goods and services that meet the test of international competition while the citizens enjoy a standard of living that is both rising and sustainable. According EU, the competitiveness is explained as the ability not only to produce goods and services that will succeed in the international market, but also the ability to maintain and enhance high and sustainable level of economies (EC, 2010).

Buckley, Pass and Prescott (1988) argue that competitiveness cannot be considered as a static concept, but rather as an ongoing process that is based on three different stages so called "3P's" – potential (inputs), performance (outputs) and process (management). Approach to evaluate the competitiveness that use the real exchange rates or real effective exchange rates was proposed by Lipschitz and McDonald (1991) or March and Tokarick (1994). They argue that under-valuation enhances and over-valuation reduces the international competitiveness of domestic producers.

Dollar and Wolf (1993) define the competitive nation as one that can succeed in international trade via high technology and productivity, with accompanying high income and wages. This definition is the same as the approach of Hatsopoulos, Krugman and Summers (1988) or Markusen (1992). Petrović, Antevski and Vesić (2008) analysed the national competitiveness from the integration point of view and argue that the regional economic integration gives the supportive conditions for development of the national economy competitiveness trough regional trade liberalization, carrying out of business activities in the wider integrated market and a certain level of common protection against the competitors from the third countries.

Rutkauskas (2008) says that regional and national competitiveness measure is assumed as three dimensional indicator, which depends on the fields of activity, dominating in the country, international economic relations and legal, financial, ecological, natural resources and geographical location of environment competitiveness. Delgado et al. (2012) define the new term – the foundational competitiveness that is the expected level of output per working-age individual given the overall quality of a country as a place to do business. Their definition goes

beyond the expected level of productivity per employed worker, because prosperity is ultimately rooted in the ability to both achieve high productivity as well as mobilize a high share of the available workforce. Atkinson (2013) says that true definition of competitiveness is the ability of a region to export more in value added terms than it imports then including for term of trade to reflect all government “discounts” and import barriers. Halásková and Halásková (2015) add that very important determinant of competitiveness are the expenditures of research and development in every country.

3. Problem Formulation and Methodology

The competitiveness, the macroeconomic one, is measured by two kinds of indicators, both those measurable, quantitative, to which we rank the indicators of inputs (costs) and outputs (measure results) as well as immeasurable, in other words, qualitative. To the input (measurable) indicators we rank the analysis of unit labour costs, labour productivity, relative prices and the real effective exchange rate. Output (measurable) indicators are degree of openness of economy and the export performance of economy, intensity and structure of specialization through relative specialization indicators, adding value of exports through the transition effect and unit (kilogram) export prices. Immeasurable indicators include comprehensive competitiveness of the economy and are determined by two ways: through the World Competitiveness Scoreboard of the Institute for Management Development (IMD) and through the Global Competitiveness Index of the World Economic Forum (WEF). Measurable data include only part of competitiveness and are calculated on the basis of hard data. Immeasurable indicators use both hard data and soft data because the questionnaire surveys capture indicators that cannot be measured with hard data (Majerová and Horúcková, 2014). This article aims to analyse two macroeconomic measurable indicators and their mutual relations in the six countries of the V4+ from 1995 to 2013 – the degree of openness and transformational performance. Longer time series could not be used with respect to availability of certain data. Annual data were collected from the database of Eurostat and converted into indexes.

3.1 Degree of Openness in the Countries of V4+

The degree of openness of economy is the basic indicator that characterizes the intensity of foreign trade (Majerová, 2014). It shows the degree of connection to national economy with the world economy. It is measured by the share of exports (turnover) of the country's GDP in the year, as shown in equation (1).

$$DOE = \frac{VX}{GDP} \quad (1)$$

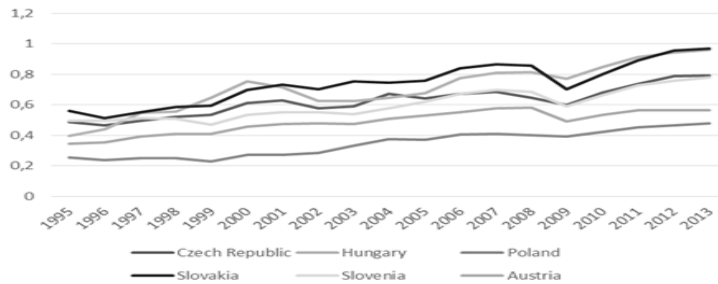
where DOE is degree of openness (index), VX is value of exports of goods and services and GDP represents gross domestic product.

There is a relationship between the size of economy and its maturity on one hand, and its openness on the other hand. From the empirical analyses of foreign trade in the world economy, the following relations were made out: The greater the economy, the less is the average relative involvement into international division of labour, for small economies it is vice versa and the more advanced the economy is – regarding comparable economic size, the more intensive is its involvement in the international division of labour, compared to the economy with a lower level of economic development (Majerová and Nezval, 2013).

The above problem can be seen from our point of view in two ways. When we analyse the individual economies in particular, we can conclude that the above rule does not apply, since

the Slovakia and Austria would be the most open economies (but not the smallest), followed by the Czech Republic and Slovenia (the smallest one). But if we take into account the division by country's size - ie Slovakia and other four countries as a group of the small economies and Poland such as the economy of medium size (ie larger), the rule is confirmed (see Figure 1).

Figure 1: Development of Degree of Openness in the Economies



Source: own calculation according to Eurostat

The development of this indicator includes both the impact of lower GDP levels achieved in both economies, as well as the problem of prices achieved in foreign trade. This implies a further comparison of transformational performance.

3.2 Transformational performance in the Countries of V4+

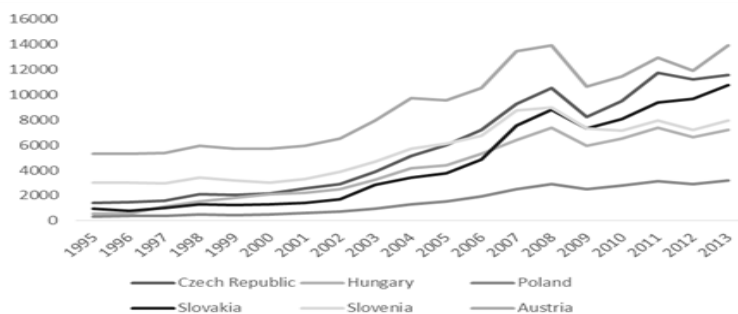
This relationship is expressed through the difference of manufactured products' exports and the import of primary production per capita (2):

$$TRANS = \frac{EX_M - IM_P}{NC} \tag{2}$$

where EX_M is export of manufactured products (SITC 5-8) and IM_P represents the import of primary production, NC is number of citizens.

As the Figure 2 shows, the added value of exports per capita is the highest in Austria, in comparison with other economies by almost half on the beginning of the reporting period, it consists nearly ten times the value added of Poland. The second economy in the order is the Czech Republic, then Slovakia, Slovenia, Hungary and the last one is Poland. The most improvement was in the Czech Republic and Slovakia (till 2008), whose added value more than doubled in the analysed period.

Figure 2: Development of Transformational Performance in the Economies



Source: own calculation according to Eurostat (2014)

Transformational performance of economies, which is a more conclusive indicator of competitiveness measuring, is no longer valid in distinction between small and large economies, since the smallest performances are reached by the largest monitored economy (Poland) and the highest performance is reached by the third smallest economy (Austria). Among them we can find the other economies of V4+, when the smallest one (Slovenia) is in the middle. In this statement of competitiveness, we see an opposite effect than in the previous indicator - while in DOE the economies mutually converged, in the TRANS the divergence appears.

4. Problem Solution

Foreign trade is the basic source of growth for a small economy. This economy does not objectively have all the necessary factors of production, which would have to ensure the same economic level as in case of larger economy. Small economy can import everything it needs and lacks, provided by the fact that the needed import will be paid by export. For a small economy a high degree of integration into the world economy and its high degree of openness is characteristic.

The basic indicator characterizing the intensity of foreign trade is the degree of openness of economy, while transformational performance expresses the value added of economy in foreign trade. Although the higher values of TRANS correlate with higher competitiveness of economies, the same cannot be with certainty argued about the DOE, where the excessive openness of economy can cause its deeper interdependence and thus greater vulnerability to external shocks. Nevertheless, both of these two indicators are used to express the degree of macroeconomic competitiveness (Plchová, 2011).

The aim of this paper was determine the dependence of transformational performance on the degree of openness of every analysed economy, the correlation and regression analysis was performed on data from the years 1995-2013. Values of openness degree and transformational performance for individual member states of V4+ were calculated from the data of Eurostat database (Eurostat [online], 2014).

Regression analysis is carried out using least squares method. Firstly, spatial correlation was determined by using the Pearson correlation coefficient, further constancy variance was tested using graphical methods. Secondly the test of significance and T-test were used. These assumptions were tested in program Excel. A correlation has been made of mutual linkages of measurable aggregates of macroeconomic competitiveness in individual economies for the period 1995-2013. The two analysed indicators are correlated, and the information is supposed to show the relationship between the intensity of foreign trade and its value added.

By using the Pearson correlation coefficient r (see equation 3) the assumption should be fulfilled that both variables are random variables and have a common two-dimensional normal distribution - then a correlation coefficient of zero means that the variables are independent, with a value of one factor shows the absolute dependence of the monitored variables.

$$r_{xy} = \frac{\sum_i (x_i - \bar{x})(y_i - \bar{y})}{(n-1)s_x s_y} \quad (3)$$

where n is the number of measurement, i is 1, ..., n , x_i , y_i are normally distributed random variables X and Y , \bar{x} , \bar{y} are average values and s_x , s_y are standard deviations.

The equation for expressing our function is the following (4).

$$DOE = \beta_0 + \beta_1 TRANS + \varepsilon \quad (4)$$

there β_0 and β_1 are the values of the parameters of the regression line, ε is a random component. These values obtained estimates b_0 and b_1 , which are called the regression coefficients, and can be calculated using the least squares method.

Regarding the statistical significance of the model as a whole, it is first necessary to establish a zero (H_0) and alternative (H_1) hypothesis and then test these hypotheses at the significance level $\alpha = 0.05$.

H_0 : The linear regression model is statistically insignificant.

H_1 : The linear regression model is statistically significant.

Another important requirement is to perform T-test, which examines each parameter β_0 and β_1 separately, if they are not equal to zero. Even in this case null and alternative hypotheses are determined and tested at a significance level $\alpha = 0.05$.

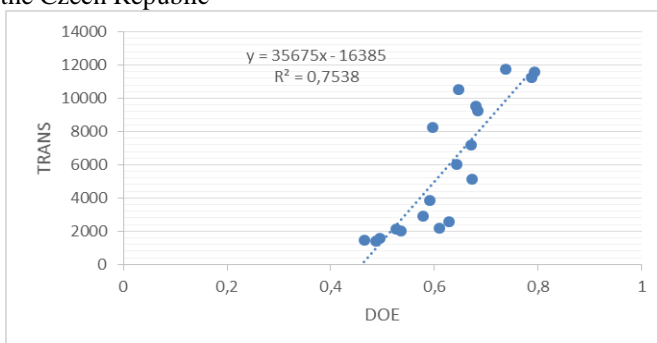
H_0 : Parameters β_0 a β_1 are equal to zero.

H_1 : Parameters β_0 a β_1 are not equal to zero.

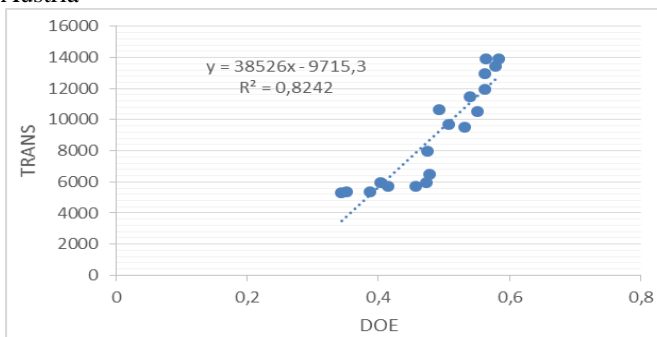
To perform regression analysis, one independent variable was selected, that explain one dependent variable in individual economies for the period 1995-2013. The dependent variable in the model is transformational performance, expressed as a value added of exports per capita. Figure 3 below shows the dependence of the DOE and TRANS in the states of V4+.

Figure 3: Linkages between Degree of Openness and Transformational Performance in the V4+ Countries

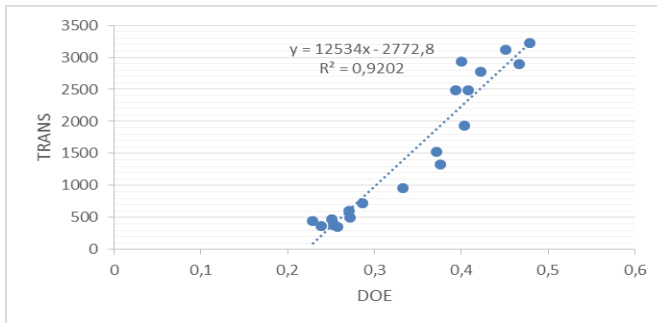
The Results of the Czech Republic



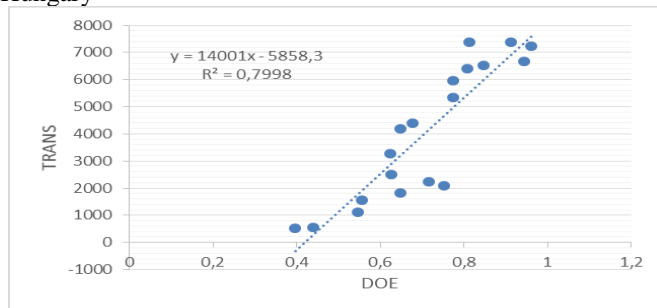
The Results of Austria



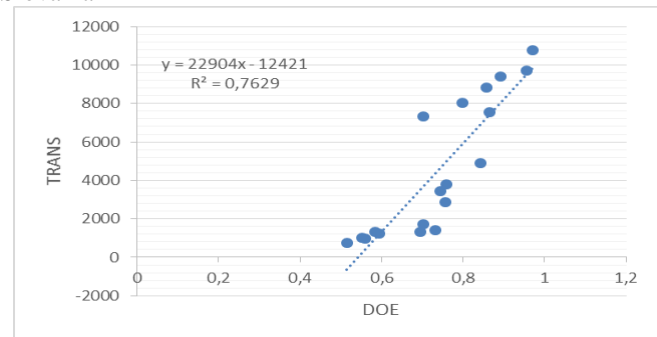
The Results of Poland



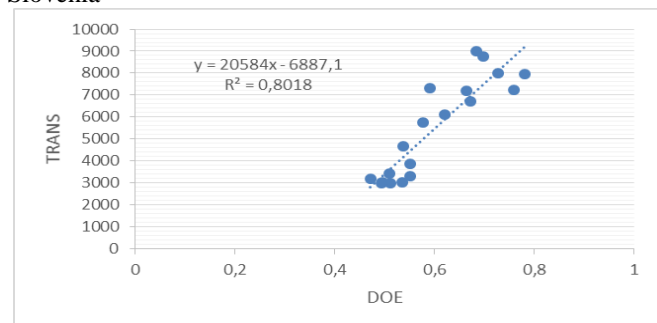
The Results of Hungary



The Results of Slovakia



The Results of Slovenia



Source: authors' calculations

Figure 3 shows that there is a relation between the degree of openness and added value of export of the V4+. From the equations of line of regression analysis is evident that in all countries is confirmed the positive relationship of examined variables, therefore, when the value of export rises, the value added rises as well.

The results of the regression analysis are shown in the Appendix. In this model, the probability value (significance F) is less than tested significance level of 0.05, which means that the null hypothesis is rejected, and regression model is statistically significant.

The value of correlation coefficient, which is shown as R-squared indicates the strength of dependence of selected variables. Specifically, this means that the transformational performance is approximately 96% dependent on changing of the value of export in Poland, 91% in Austria, 90% in Slovenia, in Hungary 89% and 87% in the Czech Republic and Slovakia. Other value that table shows is the value of adjusted R-squared – also coefficient of determination. This indicates how much of the total variance of the dependent variable, ie transformational performance, is explained by the regression model. It is more than 82% in the case of Austria, 92% in the case of Poland, 79% in Hungary and Slovenia and only 75% in the case of the Czech Republic and Slovakia.

The level of significance is compared with the P-value. Thus, if P-values are lower than the level of significance (all values are < 0.05), we reject null hypothesis and so alternative hypothesis is valid, therefore, that both parameters are not equal to zero.

5. Conclusion

The competitiveness is ability of a firm or regions or nation to offer products and services that meet the quality standards of the local and world markets at prices that are competitive and provide adequate returns on the resources employed or consumed in producing them.

Economic competitiveness was initially synonymous with export performance, and its evaluation and testing was also performed on that basis. Over time, this narrower concept has been replaced by a broader concept that includes the concept of competitiveness as also the ability to maintain and enhance a high level of sustainable economies. The measurement of competitiveness can be approached from the perspective of input indicators and output indicators in the macroeconomic conception.

The aim of the paper was to determine the relationship between measurable output indicators of competitiveness, namely the degree of openness and transformational performance in the countries that form the Visegrad Group Plus – Austria, Czech Republic, Hungary, Poland, Slovenia and Slovakia. These relationships have been tested through correlation and regression analysis in the years 1995-2013, when significant correlation between value of export and export performance in these countries was assumed.

Although the Slovak economy (the second smallest one) is the most open economy of the compared, followed by Austria and the Czech Republic, the productivity of foreign trade is up for Austria. Regarding the hypothesis of the interdependence of measurable output indicators of competitiveness, a strongest linkage between export performance, which reflects the productivity of foreign trade, and degree of openness of economy, which reflects the value of exports, was found in Austria and Poland, then Slovakia and Hungary, whereas the Czech Republic and Slovakia report weaker relationship than other states of V4+. The first estimated hypothesis was thus confirmed only partially.

The second aim was to compare these countries according their size. It means that the smallest countries as Slovakia and Slovenia should show similar results, as well as the bigger countries – the Czech Republic, Hungary and Austria, and Poland extra. Our assumptions have not been confirmed, very similar dependence showed a group of countries with different size and history – the Czech Republic and Slovakia, Hungary and Slovenia, than Austria, and last Poland. This result is, in our opinion, given by the fact that the Czech Republic and Slovakia are the former states of one political entity. Austria has developed quite differently - without the influence of the centrally planned economy with all its consequences. Poland is a medium-sized economy, according to the international classification, but compared with other economies of the Visegrad Group Plus, large. Most remarkable are almost the identical results of Hungary and Slovenia, where we find perhaps the only similarity - southern location within the geographic position of V4 +.

Acknowledgements

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Appendix

The Results of the Regression Analysis of the V4+ Countries

The Results of the Czech Republic

Regression statistic					
R-squared		0.8681			
Adjusted R-squared		0.7537			
Set adjusted R-squared		0.7392			
Standard error		1993.8207			
Observations		19			
ANOVA					
	Difference	SS	MS	F	Signif. F
Regression	1	206879676.18	206879676.18	52.0409	1.4485E-06
Residues	17	67580458.92	3975321.11		
Total	18	274460135.104			
Coefficients					
	Coefficients	Std. error	t Stat	P-value	
Limit	-16384.952513	3112.4006	-5.264409734	0.00006	
Average	35675.19167	4945.3098	7.21394	1.44852E-06	

Source: authors' calculations

The Results of Austria

Regression statistic					
R-squared		0.9078			
Adjusted R-squared		0.8241			
Set adjusted R-squared		0.8138			
Standard error		1408.4172			
Observations		19			
ANOVA					
	Difference	SS	MS	F	Signif. F
Regression	1	158063477.86	158063477.86	79.6835	7.9594E-08
Residues	17	33721863.65	1983639.0381		
Total	18	191785341.51			
Coefficients					
	Coefficients	Std. error	t Stat	P-value	
Limit	-9715.277272	2127.1631	-4.5672460934	0.0003	
Average	38525.7997	4315.8587	8.92656	7.9594E-08	

Source: authors' calculations

The Results of Poland

Regression statistic					
R-squared		0.9592			
Adjusted R-squared		0.9202			
Set adjusted R-squared		0.9155			
Standard error		321.5847			
Observations		19			
ANOVA					
	Difference	SS	MS	F	Signif. F
Regression	1	20279457.85	20279457.85	196.0944	9.1701E-11
Residues	17	1758084.97	103416.76		
Total	18	22037542.82			
Coefficients					
	Coefficients	Std. error	t Stat	P-value	
Limit	-2772.82000	317.5346	-8.732340724	1.0857E-07	
Average	12534.0128	895.0709	14.0034	9.1701E-11	

Source: authors' calculations

The Results of Hungary

<i>Regression statistic</i>					
R-squared	0.8943				
Adjusted R-squared	0.7998				
Set adjusted R-squared	0.7880				
Standard error	0.0730				
Observations	19				
ANOVA					
	<i>Difference</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Signif. F</i>
Regression	1	0.3620	0.3621	67.9162	2.4304E-07
Residues	17	0.0906	0.00533		
Total	18	0.4527			
Coefficients					
	<i>Coefficients</i>	<i>Std. error</i>	<i>t Stat</i>	<i>P-value</i>	
Limit	0.4765	0.0328	14.5460	5.0371E-11	
Average	0.00006	6.9314E-06	8.24112	2.4304E-07	

Source: authors' calculations

The Results of Slovakia

<i>Regression statistic</i>					
R-squared	0.8734				
Adjusted R-squared	0.7629				
Set adjusted R-squared	0.7489				
Standard error	0.0684				
Observations	19				
ANOVA					
	<i>Difference</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Signif. F</i>
Regression	1	0.2557	0.2557	54.6906	1.0462E-06
Residues	17	0.0795	0.0047		
Total	18	0.3352			
Coefficients					
	<i>Coefficients</i>	<i>Std. error</i>	<i>t Stat</i>	<i>P-value</i>	
Limit	0.5894	0.0258	22.8472	3.3643E-14	
Average	0.00003	4.5038E-06	7.39530	1.0462E-06	

Source: authors' calculations

The Results of Slovenia

<i>Regression statistic</i>					
R-squared	0.8954				
Adjusted R-squared	0.8018				
Set adjusted R-squared	0.79014				
Standard error	0.0442				
Observations	19				
ANOVA					
	<i>Difference</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Signif. F</i>
Regression	1	0.1347	0.1347	68.7715	2.2295E-07
Residues	17	0.03329	0.0019		
Total	18	0.1679			
Coefficients					
	<i>Coefficients</i>	<i>Std. error</i>	<i>t Stat</i>	<i>P-value</i>	
Limit	0.3875	0.0277	13.9665	9.5579E-11	
Average	3.8953E-05	4.6971E-06	8.29285	2.2295E-07	

Source: authors' calculations

Collapse of European Union and Eurozone: Protecting Financial Stability, Perspective of Competitiveness in Upcoming Globalized World?

Florian Margan

SAFF

Václavské náměstí. 17
Prague, Czech Republic

Ljubljana, Slovenia

e-mail: florian.margan@gmail.com

Abstract

We can not expect in the near future that the EU and the Eurozone came out of the economic - financial crisis. The EU would have to move from pure dependence on outsourcing the autonomy of the more advanced developing sophisticated division of labor and an optimal structure. Therefore, no longer a simple financial stimulus speed, QU - the purchase of government bonds, there is the socialization of debt in the Eurozone. The problem is structural, the euro area is not competitive, invest to trust businesses and households in future economic development remains low and deflation can not solve. Eurozone needs a qualitative transformation. QU (quantitative easing) effectively stimulate economic growth in the US where worked very good capital markets in Europe not working. What about four technology revolution?

Keywords: Macroeconomics, ECB, EU, Competitiveness, Investment, New Technology

JEL Classification: E49, E59, E69, F49

1. Introduction

The financial and banking crisis is a product of a debt-centred financial and interest system. Today's bankers have found out that rather than lending money to individuals and companies it is much more interesting for their businesses to lend it to governments, since in case of the former, there is always some risk involved. However, countries do dispose of tools enabling a government to suck money out of their people so thoroughly as to jeopardize the citizens' very existence. Czech Republic showcases a place where a mafia of distrainers pushes people to suicide. Greece and other southern Eurozone countries are other examples.

We have driven ourselves into a unique moment, as far as historical financial crises are concerned. For the first time in history what we are facing is a global crisis. It is a crisis of a single global empire which has assumed a right of supremacy and the right to rule the whole world. And as we say, dying horses kick a lot. According to the IMF (International Monetary Fund), there were 124 banking crises, 326 monetary crises and 64 country debt crises between 1970 and 2007. Since 2008, the phenomenon has been fully global.

Desperation is what I feel looking at the EU and Eurozone today. The times are not good, we are living in economical, spiritual and moral crisis. The world is far from being perfect and the people are far from being ideal. On the other hand, I think we are living in the best times

possible and I treasure it. Every time there is a problem, we try to see it as an opportunity. As I say, there are no problems, only solutions to them.

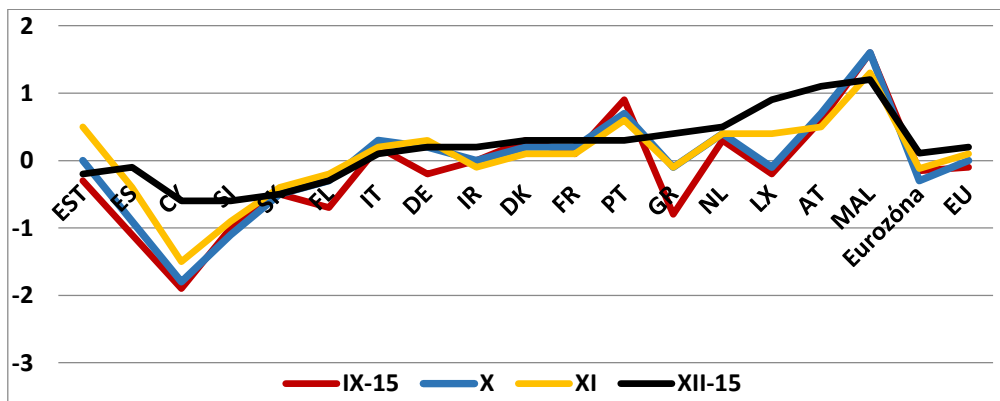
Events of the past months have been dominated by terrorism, IS (Islamic State) war conflicts in Iraq, Syria, Afghanistan and clashes in Ukraine. These all bring about important changes in the geopolitical development, in the status and position of the key players, mainly the USA, China, Russia and the EU. The argument over Ukraine can be perceived as the definitive end to a unipolar historical moment that appeared after collapse of the Berlin Wall and the Soviet Union and its allies. Symptoms of this end had been there before as well. Lehman Brothers' fall in 2008 launched a deep crises of the West. The bloody military conflicts in Afghanistan and Iraq then weakened the western safety, furthermore so with the recent war in Syria.

Economic crisis of the West is not fully extinguished. The US foreign and defence policies are determined by six homeland issues, which have been labelled as "lethal" by Woodrow Wilson Center vice-president, Aaron David Miller: debt, deficit, dysfunctional policy, dependence on fossil fuels, ailing educational system and infrastructure (*Miloš Balabán, 2014*). On the other hand, the fiscal crisis weakened Europe politically, economically, socially and in its safety. People of the EU have lost a lot of trust in the European Project. Further, a quarter of a century past the end of the Cold War we may witness birth of two alliances, this time even more severely profiled and competing: China – Russia vs. the West. It will sure not be a repetition of the bipolar rivalry as seen during the Cold War, but we can still expect a sharpened fight for bigger geopolitical and geo-economical influence than what we have seen so far. And the EU? Can it play an important role? That is a principal question. Because I say it cannot!

2. Present Status of Eurozone and EU Issues

For 2016 the ECB is expecting the inflation rate of 0.7% and 1.4% for 2017. In the course of the further 5 years the inflation is expected to grow to 1.8%. Still, according to Eurostat, the January 2016 inflation rate was 0.4%. We are completely sure this will not happen, thereby forcing the ECB to relax its monetary policy to face off deflation and increase of the public debt in proportion to the GDP in the Eurozone, as seen in this chart:

Figure 1: Intermediary Inflation IX/2015 – X - XI - XII /2015 for Eurozone and EU

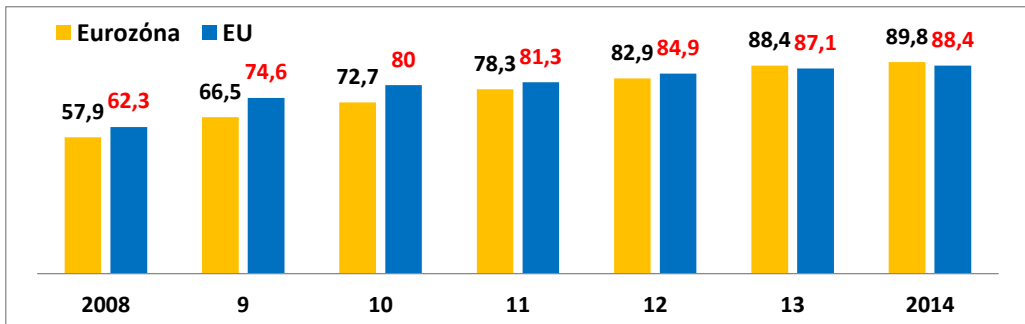


Source: FM, Eurostat, 2016

Eurozone and EU's trouble is rooted in their reaction to the 2008 global financial crisis: the two years of broad fiscal stimulus, which helped little or not to launch the desired growth. It led to crippling public debt. Seven years later now and an EU citizen's productivity is not

higher than when the crisis started. What is more, the public debt has climbed in average to 87% of the GDP, giving little space to political flexibility or innovations (graph 2).

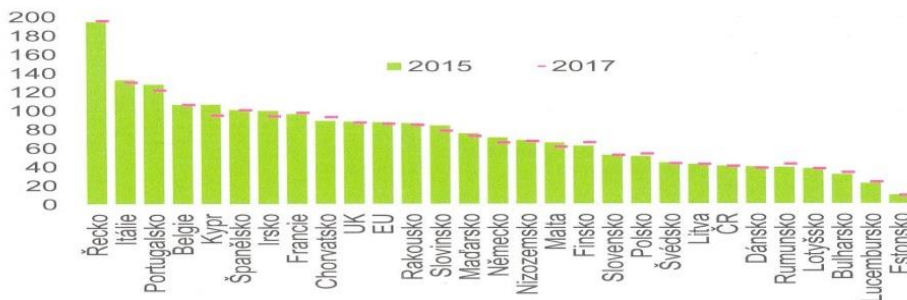
Figure 2: Public Debt to GDP between 2008 until 2014 in Eurozone and EU



Source: Eurostat, EU News - ČS, 2008-2015

In 2015 the public debt in all Eurozone countries was surpassing the time when the debt crisis broke out and when it started to be dealt with. The worst phase of the debt crisis between 2010 and 2012 was overcome by a series of anti-crisis measures, but events from 2013 to 2015 are showing the crisis in the Eurozone is only dormant and that its symptoms keep re-surfacing from time to time. **EU debt to GDP in 2015 was 87,2 % and Eurozone 86,4 %.** We see a small reduction of debt in both the EU and the Eurozone. Is this the result of QE where they replace more expensive loans for cheaper? This is not a solution to the growth competitiveness. This is a fire extinguishing. EU don't enough invests in new jobs, it does not much reduce unemployment but favors large companies in various competitions (various construction works). This practice demonstrates mainly in eastern EU countries. Small firms collect only crumbs.

Figure 3: Public Debt in EU Countries (GDP %) in 2015, Prediction for 2017



Source: EK, EMCO, XII/2015

The measures taken are mere anaesthetics to the crisis' symptoms in the Eurozone, since they do not cure the causes. Therefore, they keep coming back. What is worse, in 6 years of anti-crisis measures application, the public debts in 5 Eurozone countries struck by the debt crisis have risen significantly. In most cases the public debt has not dropped considerably. That means the debt crisis in Eurozone cannot be considered resolved (*Jiří Malý, 2016*).

But causes of Europe's poor performance are notorious: high taxes, too much control, regulations' poor quality and high public spending. Yet there is only one reason to the

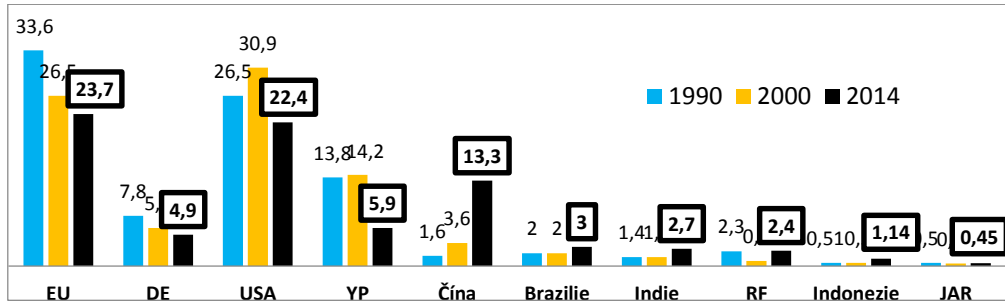
European government's overly expenses: exaggerated social protection. As the World Bank said: "West - European governments spend about 10% of GDP more than the USA, Canada and Japan. Difference in expenses to social protection stand for 9 % of the GDP." (*Anders Aslund, 2015*). In order to be able to finance those expenses, the incomes must grow. And because taxing capital efficiently is difficult, Europe has imposed extreme labour taxes. Across the Continent, but mainly in South Europe, the taxes and strict regulation of labour market are feeding high unemployment rate at 11% and higher, preventing the Europeans from investing in their own education. The consequences are natural: low employment, too low investments into sophisticated education and minimum productivity growth.

I see it as a great weakness in the EU that it has not yet opened its markets in entrepreneurial services and digital trade, whereas this is where the USA are prospering because in most EU countries the services make up for about 70% of the GDP. Absence of services markets and digital markets is damaging to the modern European economy. It is no coincidence that the top technology world is dominated by American giants such as Apple, Amazon and Google.

EU shall remain stagnant unless it realizes its mistakes and undertakes the reforms which its economy needs. To do this, we need good workers, both professionally experienced and trained in theory. But analysing the staff of EU countries being sent to Brussels, you can see those people are not too useful at home because they are not professionally experienced and that is a problem! It is only if the Continent really returns to the path of growth that its leaders will be able to resolve the issues they are facing today. Unless we adopt serious changes, the share of Europe in the global GDP will go down, thus decreasing its influence on international politics. Why? Because the negative trend in the second month of 2016 is persisting. It is mostly caused by fear of further yuan depreciation, fears of deceleration of the China economy and worries of investors in view of slowing global economic growth. There is also the problem of lower oil price, which is not in favour of the market. If oil price rises, the share values rise, and vice-versa. (www.novinky.cz/ekonomika/395424).

The economical balance in the world has changed within the past decades. Whereas the G7 countries produced 62% of the global GDP in the 80s, their share is now 50%. Their rival, the BRICS, have been performing beyond expectations, regardless the crisis. Share of Brazil (*Johan Galtung, 2015*) and China is 58 %.

In order for the EU economies to recover from the crisis as fast as possible, the EU needs to react to the new situation, such as a relative drop in competitiveness within the Eurozone. Otherwise the region may gradually recess among countries of the second grade. Typically for Europe, the taxation is high and social system is generous. These stand in the way of dynamic growth (*Xavier Sala-i-Martin, 2015*). We can read more about this from data on the internet (www.imd.org/wcc/wcy-world-competitiveness-yearbook, 2016). We are not expecting any mind-blowing results from EU growth in 2016/17. I repeat: the Eurozone is supposed to drop by 0.4% in average; the EU as a whole by 0.1%. That is why in 2016/17 we can expect further cuts to public debts, thus losing competitiveness because there will be no funding for further economic growth of southern countries and countries in transition.

Figure 4: Share in Global GDP for 1990, 2000 and 2014 (%)

Source: World Economic Outlook, Data AMECO-EC, World Bank, 2015

The next result are dropping prices, which can induce stagnation of economy in the long run. Markets are also deterred by cheap oil and negative interest rates prospect. Since early 2016, the world's stock exchange institutions have lost 10% in value just because of their fear of dropping stock exchange markets. The global economy would definitely feel better if there was just less bad news at a time. Now the economy will be slowing down and later it will even slip into recession. Further, there will be the problem of the economic cycle.

3. QE “Quantitative Easing of Monetary Policy” going to resolve economic situation and increase Eurozone's growth?

Recently the EU has been trying to create mechanisms aiming to prevent further debt and financial crises from happening and help economy grow. Namely it is for example establishment of the Bank Union, bodies to deal with macroeconomic imbalance in the countries, creation of national councils for competitiveness and so on.

To face the hazard of deflation in the Eurozone, the ECB reacted by releasing funding for purchase of state bonds, launched in March 2015. This is supposed to pump cheap money to membership economies. This is going to be prolonged by minimum half a year, as says ECB President Mario Draghi “Until March 2017 and further, if necessary.” (Václav Lavička, 2015). In my opinion that the following arguments:

- 360 billion € more to support purchase of state bonds; by 2017 it will have been a total of 1.5 trillion €.
- So far, the ECB has been buying bonds for about 60 billion € worth a month and was originally going to end this operation in September 2016. The original budget was 1.1 trillion €. The expected minimum half-year prolongation means this amount shall reach almost 1.5 to 2 trillion €.
- The ECB Board of Governors also decided to use revenue from retained bonds for purchasing, which means they would reinvest. It will also broaden its scope by buying “local and regional bonds”, which covers those issued by regions, cities, communities.
- The ECB has exerted pressure on commercial banks: The money borrowed from the ECB will have a negative 0.3% interest instead of the + 0.2% so far. The goal is to make the banks loan money to companies and households rather than depositing so much excessive cash at the ECB.

I suppose that not only will the ECB prolong and broaden its purchases, it shall also increase their monthly value by 10 to 15 billion €. We cannot expect the further release of monetary policy to bring miracles. However, it is also important to see the clear message of the ECB,

and that is they would do all that is necessary to avoid deflation in the Eurozone. As seen from the data available, further prolongation would be absurd. Why? Because the policy performed by the ECB so far is decreasing the revenue generated from both state and corporate bonds. This means that access to money in the economy is becoming cheaper, it being the case of bank loans or bonds issued by companies themselves. Most importantly we can see that the EU leaders' decisions are delayed. Their reactions are delayed and usually wrong, lacking analysis of a problem and ability to perceive signals before a crisis (that of the Eurozone or migration crisis) fully breaks out. These two indicators already reveal the amateurism of the elites. This lack of professionalism does not put them at risk, since they keep feeling safe. On the other hand, it troubles everyone else. To put it simply, it is much more accurate to talk about a "German Union" than the EU.

- Establishing mechanisms à la Bank Union would be suitable in case the subsidiarity (*respecting authority of lower management/control levels*) was really upheld and if it was generally felt and accepted that the new member countries have got different needs and deal with a little different problem than the "old" EU. For me personally, the EU idea is only alive if it is the Europe of citizens, not Europe of the elites, unable to manage the European financial policy. For example:
- First of all there is the situation in the world economy. All its important actors are either undergoing structural transformation, taking serious risk (*e.g. China*), or are getting ready to do so (*automatization broadening, the so-called Industry 4.0 in the developed countries with the USA in the lead*). All these manoeuvres are highly difficult and some of them reach the very core of the current system, for example regarding the labour market structure.
- Another factor are the really low oil prices that are going to have an impact on the shale gas market in the USA, but also at least on functioning of the Near East. I expect the oil price will have grown by the end of 2016.
- It is also true that international institutions cease to function. On the contrary, developed countries are setting up their own projects that at first sight look as economical projects (*or business and investment endeavours respectively*).
- The economical tools are increasingly being deployed to achieve geopolitical aims, with the hegemon gradually leaving the scene, catastrophic downturn for the EU, bonding of Russia with China...

I do not expect a calm year at all, as I had previously mentioned in other papers of mine (*Florian Margan, 2013, 14, 2015*). This has got positive aspects, too. In a situation like this, the truth in the EU is emerging. And it is only when knowing who is who and what the true state of things is we can take right decisions. Even without the migration crisis and its impacts on Europe the EU would be all the same facing serious challenges. I am sure that EU needs to make progress in the following points:

- Negotiations about Transatlantic Trade and Investment Partnership (TTIP) and unified digital market;
- Effort to implement a planned capital – market Union. If we fail to do so, it will be as soon as in 2020 that the Eurozone and EU will be alone in dealing with the technical problems, having a shared and weak currency, but no more a unified currency;
- Great Britain needs to get rid of its new mantra, that is no permanent friends, no permanent foes, only permanent interests, and will not leave the EU;

- Governments of the Eurozone and EU countries should improve their economies by supporting fiscal policies, such as higher public investments or support to economy through lower taxation. Investments into infrastructure and building new industrial constructions grew the least (10%) in 2015, which is the lowest since 2000.

The Euro, as we know it today, is a failure. It does not meet the basic conditions for functioning of a common currency for differently developed territories. A country struck by a problem needs to decrease prices and wages, which is painful and inefficient and socially unacceptable. Basically it is a repetition in the spirit of gold standard, applied in the 1930y.

Eurozone's problem is structural. The Eurozone is not competitive, there are no investments and trust of companies and households in future economic development is poor. The ECB can therefore again only provide time to the governments' policies. However, it seems that again there will be reluctance to use the time efficiently. For example:

- Since mid-December 2015 the Euro has lost almost 8% of its value to dollar, reaching the past 11 years' low. The IRS (Euro ten-year interest SWAP) is on mere 0.70%, which is the lowest in history.
- The European economy is therefore stagnating and the ECB wants to save the situation by influx of new money (*quantitative easing*). On the other hand, the US economy is growing and FED is getting ready to increase the interest rates. Currencies will start moving and dollar will get stronger.
- Bond market will be massacred because the higher interest rates will depreciate the old bonds with more modest rates. There will be huge investment fluctuations back and forth with massive purchases and sales. You need cash to do that and that is why in situations like this you get rid of unnecessary investments. Besides, the investors fortify themselves in main currencies and flee the peripheries.

Quantitative easing is effective only if the printed money reaches the Eurozone's real economy, which is usually not the case.

There is no doubt we are living in times of global financial and economic changes. If the Eurozone and EU want both the member countries and Eurozone countries to have responsible economies and mutually support each other financially, they have to adopt more consistent measures. They are the only way to assure that the euro, as the common currency, will remain trustworthy and that the member countries can together face the economic challenges of globalization. European Commission and European Parliament have pointed out the importance of coordination of national economic and social policies because unless the mutual economic affairs are somehow managed, the European currency cannot be maintained in the long term (*Pascal Fontaine, 2014*).

Consequently, I think that in 2016/17 we will again see ourselves in imbalanced times. I think we are not well ready for it because of the frustration, the failure and because of how much we are sometimes uselessly stuck in the emotional atmosphere of our time. To me this is vagueness and according to Taleb, vagueness of history has got three causes (*Nassim Nicholas Taleb, 2008*): The first is the illusion we understand what is happening therefore we are able to forecast; the second is a reverse distorted understanding of past events which induces deception of knowing; the third is the exaggerated appreciation of real information and their categorization and classification. In all a reduction of information complexity, thus excluding important aspects, which in turn becomes a strong source of uncertainty, creating the so-called black swan syndrome.

Hence importance of the agenda approved by the European Commission on December 15, 2015 regarding the investment plan for Europe with the legislation measures and the target to activate public and private investments of at least 315 billion EUR in real economy in the next three years. This, combined with wise investments for example into the technological development would definitely partially increase the competitiveness of individual EU states. This would be in opposition to wasting money on communal or non-profit dedicated projects, currently financed by a large group consisting mainly of EU countries in transition (*Slovenia, Romania, etc.*).

Europe is not united, is vulnerable, standing on unsteady legs. National governments are taking different courses. Excentric tendencies can be visibly observed in three leading countries: France, Germany and Great Britain who are looking for new partners with the same interests. I think that in 2016 the transatlantic relations will no longer determine priorities for European and American politicians. Europe has totally lost its grip with reality and is not able to provide a relevant reaction to challenges of the “world outside” led by China and India (*Cliff Kupchan, Ian Bremmer, Judy Dempsey, 2016*).

I repeat again: If you need to find the one largely responsible for decaying relations among European nations, I am telling you it is the Eurozone with its euro currency, maintained at all costs and enforced by further integration, leading as far as to a centralized federal arrangement of the “United States of Europe”, an idea previously dreamt of by a certain Napoleon Bonaparte (*Pavel Páral, 2012*).

4. Conclusion

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*). According to the latest data by Eurostat the economic crisis in the Eurozone and the whole of EU has not improved. The whole deficit will not go down under the required 3% of the GDP and the public debt keeps growing (*WEF, 2016*), (*Bruce Greenwald, 2016*), (*Citigroup, 2016*), (*ČS, 2013*).

Unfortunately, the public debt was growing very rapidly in all countries where the EC, ECB and IMF imposed strict cuts in spending, except for Greece where private creditors pardoned a part of the debt. According to the World Bank, the main dangers of the world economy are dwelling in the Eurozone’s economic situation and sometimes also budget uncertainty in the USA (*PwC, 2013*). We cannot expect the EU and Eurozone to overcome the economic-financial crisis in near future. EU would need to shift from its dependence on outsourcing to the autonomy of advanced development, sophisticated work distribution and optimum structure. That means no simpler rapid financial stimuli, but qualitative transformation. Unfortunately, I am not sure it will happen.

At the conclusion I can say that I cannot see indications of a European community of equal life and work conditions, border-free educational and social systems, a community of large members in a global competition and of a path that would show a perspective to all Eurozone members and EU countries. For future I do not suppose any competitiveness of majority of the EU and Eurozone countries. Take this one sad statement for example: the ECB is killing the euro and the euro is killing the Czech and Polish currencies in order to cover problems of the south countries. To be specific, the ECB wants to hide the fact that countries such as Greece, Portugal, Spain, Slovenia or Italy do not have a chance to survive in a long run in the same currency union with countries like Germany and Netherlands. It is like having wet house

foundations, hence spots on walls. You will not cure this by painting the walls. You will only not see it for a while. But one day, maybe many years later, the house will collapse. Or how says (Tom Bower, 2010), "Play by the rules of the book" – was the corporation's doctrine, or we can be said for EU: „Play by the rules of the ECB and EC“. Where this politic going in EU? Or we can cite (Niall Fergusson, 2009): Bread, cash, dosh, dough, loot, lucre, moolah, readies, the wherewithal: call it what you like, money matters. Something we can to say for ECB, the love of it is the root of all evil in EU. It is really so? Judge yourself.

Quantitative easing efficiently stimulated the economic growth in the USA because it worked through the capital markets. But there is no unified capital market in Europe, i.e. a market that could restore balance in the real estate portfolio. The mechanism works through bank loans, creating a bubble and distorting prices of bonds and stocks, which is no perspective.

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Member States' Sovereignty and Freedom of Movement of Union Citizens

Solange Maslowski

Charles University, Faculty of Law
Center for Comparative Law
Nám. Curieových 901/7
Prague, Czech Republic
e-mail: maslowsk@prf.cuni.cz

Abstract

Freedom of movement of persons in the EU has considerably developed since the recognition of freedom of movement of workers in the EEC treaty. It has been enlarged to all Union citizens, economically active and inactive; it has benefited from the adoption of the Schengen agreement; it has been recognized as a fundamental right and a cornerstone of EU integration. Nevertheless, this freedom is not unconditional as it is submitted to the respect of sovereign national interests such as public policy, public security and public health. Member States are also allowed to restrict freedom of movement of economically inactive Union citizens who would become unreasonable burdens for their social assistance system or would abuse their rights. Despite these existing national safeguards, some Member States are questioning positive assets of this fundamental right, especially after the enlargement to economically poorest Member States and the occurrence of the economic crisis. The paper will address challenges between states' sovereignty and freedom of movement.

Keywords: *Freedom of Movement, Member States, Restrictions, Sovereignty, Union Citizens*

JEL Classification: *I38, J68, K37*

1. Introduction

Freedom of movement of Union citizens is certainly one of the most successful achievements of European integration. Its roots span from the very beginning of the European Communities and it has developed gradually with the deepening of the internal market and Union citizenship. This integration has been possible thanks to the will of the Member States of the European Union and its precursor to share very sensitive parts of their sovereign powers, such as migration policy, police authority and judicial cooperation.

Nevertheless, freedom of movement of Union citizens is still not complete as EU law provides limitations for specific categories of Union citizens and allows Member States to derogate in specific cases. Despite this existing leeway, Member States do not seem satisfied with their current margin of maneuverability, which they would like to enlarge. New economic, political and social challenges that have occurred in recent years have strengthened Member States' resolve to broaden their competence in matters of freedom of movement of persons. The aim of this article is to analyze whether Member States' are justified in claiming further limitations of freedom of movement of Union citizens and whether increasing such limitations would not endanger the very essence of the freedom of movement of persons and Union citizenship.

1.1 The Evolution of the Freedom of Movement of Union Citizens: History and Achievements

The development of the freedom of movement of Union citizens basically revolved around three main axes: the early freedom of movement of workers, the Schengen agreements abolishing internal borders, and the adoption of Union citizenship.

Freedom of movement started its history in 1951, the date of the signature of the Treaty of Paris that established the European Community of Coal and Steel (ECSC). Indeed, the first provisions on freedom of movement of workers, which were later on reproduced in the Treaty of Rome, were inscribed in the ECSC treaty. In 1957, the six founding Member States of the Treaty of Rome foresaw the gradual establishment of a common market based on freedom of movement of goods, persons, services and capital. At the time, workers were the only persons allowed to benefit from this freedom of movement because the removal of borders was targeting an economic objective. Later on, Regulation 1612/68 allowed them to bring their families with them to the host Member State and not to be discriminated against, as far as working conditions were concerned. Likewise, Directive 360/68 even allowed mobile workers to stay in the host Member State after losing their job.

Further integration concerning the physical establishment of the freedom of movement of persons required giving up sovereign power in matters of national borders, which only a small number of Member States were ready to accept at the time. In 1985, six neighbouring Member States of the EEC (France, Germany and Benelux) signed an agreement in Schengen with the aim to remove their internal borders⁶⁵. This agreement, called the Schengen Agreement, was initiated by France and Germany to solve strikes of hauliers who were unhappy being subject to too many controls at the borders between France and Germany. As it was an optional intergovernmental agreement, non-compulsory for the other Member States of the EEC, Great Britain, Ireland and Denmark decided not to take part or to take part only partially in such an undertaking. Later on, with the integration of the Schengen acquis in the Treaty of the European Union by the Treaty of Amsterdam (1997), it became compulsory for all Member States of the EU⁶⁶. All the participating States decided to forward their sovereign competences first to a common framework and then to the competence of the EU after the Amsterdam Treaty. The Schengen Agreement is considered as the first successful reinforced cooperation between Member States.

While the establishment of an internal market based on an area of freedom of movement of goods, persons, services and capital was progressing with the adoption of the European Single Market in 1986 and the Maastricht Treaty in 1992, a new concept emerged: Union citizenship. This additional citizenship, unconditionally granted to all nationals of the Member States, also provided new rights to Union citizens. The first right concerned was the freedom of movement of persons, which is still considered by Union citizens as their favourite and most tangible right, and by the European Commission as the first aspect of European citizenship. Henceforth,

⁶⁵ The short text of the Schengen Agreement (33 articles) quoted short- and long-term objectives and had to be completed by a convention of application signed in 1990. The Schengen Convention not only realized the physical freedom of movement of Union citizens and their family members, but also extended this privilege to third-country nationals who benefit from a common Schengen visa allowing them to travel freely and equally inside the Schengen Area.

⁶⁶ This successful integration of the Member States of the Union has also been offered to some associated States (EEA), non-Member States of the EU willing to join the group, such as Norway, Switzerland and Iceland.

all Union citizens, independently of their economic status (workers or economically inactive), became the beneficiaries of this freedom⁶⁷.

Ten years later, the Citizenship Directive, reassembling in one single document the main provisions on the freedom of movement of Union citizens and their family members, was adopted in 2004. It is today's key reference document which allows every Union citizen to benefit from the right to move and reside freely within the territory of the Member States. The Citizenship Directive refers to three types of residence: short-term stay for up to three months, long-term stay for more than three months, and permanent residence. Meanwhile, the European Court of Justice has recognized the freedom of movement of persons as a fundamental right that should be interpreted widely, while restrictions to this right have to be interpreted strictly (Van Dyun C-41/74). In doing so, the Court was limiting the sovereign power of the Member States to restrict such a fundamental right.

1.2 Legal Restrictions to Freedom of Movement

European Union primary and secondary laws provide Member States with the possibility to temporarily derogate from the respect of fundamental rights in specific cases. There are some general derogations applicable to all Union citizens and to all Member States, as well as specific derogations allowed only in specific cases or reserved to a certain group of Union citizens.

Indeed, the freedom of movement and residence of Union citizens can be limited by the host Member States in cases of threats to public policy, public security and public health, according to Article 27 of Directive 2004/38/EC and Articles 21 and 45 TFEU. In such cases, Member States are allowed to forbid a Union citizen to enter their territory or to expel residents.

Freedom of movement of persons can also be limited according to the economic status of the mobile Union citizen. Indeed, while workers benefit from an unconditional freedom of movement and stay, economically inactive Union citizens are subject to the fulfillment of certain conditions, such as self-sufficiency and the possession of comprehensive health insurance for stays more than three months, according to Article 7 of Directive 2004/38/EC. They are also required to not be an unreasonable burden on the social assistance system of the host Member State, according to Article 14 of Directive 2004/38/EC.

Furthermore, Article 45 TFEU also quotes a specific limit to the freedom of movement of workers. It states that the provisions of this Article shall not apply to employment in the public service that can be reserved only to nationals of the host Member States.

Lastly, Member States are allowed to restrict the freedom of movement of workers coming from new Member States by imposing the so-called restriction periods.

1.3 New Challenges

Over the last few years, the capacity of the EU and its Member States to manage the freedom of movement of persons has been shaken by a range of tests. At the current time, economic, social and political contexts have nothing in common with the first decades of the freedom of movement. Even if some challenges only theoretically concern the capacity of Member States to accept third-country nationals, they nevertheless affect the freedom of movement of Union

⁶⁷ Some authors even compare mobile Union citizens to national minorities inside Member States, such as the Russians in Latvia and Estonia.

citizens by restricting the will of Member States to welcome any foreigner, whether a Union citizen or a third-country citizen.

1.3.1 New Economic, Political and Security Environment

An enlarged European Union: It is interesting to remark that the freedom of movement of workers in its early days was very seldom used by nationals of Member States, the reasons being the lack of economic pressure and the low language ability of potential movers. Things changed in 2004 when the European Union enlarged eastward to economically poorer countries. In a study (McDowell, 2009) states that „one of the most difficult issues raised during the accession negotiations was how to tackle fears of the existing Member States that these new, less privileged citizens would immediately migrate westwards on accession. Once in the West it was assumed that they would either swell the unemployment figures or take jobs of poorly qualified natives, as well as constitute a politically-awkward enclave population. “For these reasons, old Member States were allowed, for the first time, to limit the freedom of movement of workers from new Member States through the restriction periods for a maximum of seven years. These restriction periods were only targeting Central and Eastern European countries, excluding Malta and Cyprus. With the enlargement of the EU to include Bulgaria and Romania in 2007, countries even poorer than the Central and Eastern Member States from 2004 brought much more expeditive reactions, such as expulsions, from older Member States.

Financial crisis and economic disbalance between the 28 Member States: The 28 Member States of the Union have hardly recovered from the last world financial crisis that seriously damaged their economies by decreasing the EU’s GDP and increasing national unemployment rates. This financial crisis also resulted in increasing divergences between Member States, especially between Northern Europe and Eastern and Southern Europe. For example, a Eurostat study (2012) revealed the major differences in labour costs in the EU, ranging from 3.5 euros per hour in Bulgaria to 39.30 euros per hour in Belgium. One should remember that during the early years of the freedom of movement of workers, most of the Member States’ economies and unemployment rates were similar (Italy being the exception). The economic and financial crisis had a considerable impact on the freedom of movement of persons as it induced Member States to be reluctant to accept the arrival of economically inactive Union citizens on their territory.

Migration and the terrorism crisis: The recent migration crisis as well as the recent terrorist attacks in Paris and Brussels are also pushing some Member States to question the Schengen Area and reconsider the utility of the freedom of movement of persons in Europe. Freedom of movement of person is seen as also facilitating the freedom of movement of potential terrorists and of irregular migrants. These States are favourable to the return to national borders that would allow them to better control the entrance of dangerous migrants. It seems that European achievements serve as a scapegoat for national crises. After the Euro, the Schengen Area is now in the hot seat (Labayle, 2015).

1.3.2 New Social Challenges

The EU, through the development of the freedom of movement, has fundamentally changed the Member State’s ability to control immigration and has created new challenges regarding questions of social cohesion (Johns, 2013). Westward migration of economically poor Union citizens from Central and Eastern Europe is questioning the capacity of older Member States to support disadvantaged categories of mobile Union citizens. Generally speaking, most of the economically inactive Union citizens are not welcome in host Member States that fear

unreasonable burdens on their social assistance system. But two specific categories of economically inactive Union citizens are really *persona non grata* in host Member States. The first category consists of Union citizens from Roma origin, coming generally from Central and Eastern Europe that have used their right to the freedom of movement to move westward. Unfortunately, „the extreme poverty which characterizes many of Europe’s Roma communities is now being used against them to justify measures of expulsions (O’Nions, 2011). “They are indeed expelled by the host Member State either on the ground of threat to public policy or on the ground of abuse of rights or even on the surprising ground of non-self-sufficiency. The second category consists of non-self-sufficient Union citizens, not capable of fulfilling their own needs, such as beggars and homeless people. These persons are not benefiting from a right of residence for stays in excess of three months according to Directive 2004/38/EC. National approaches towards this last category of economically inactive Union citizens vary from one State to another, ranging from passive tolerance to expulsion on the ground of threat to public policy or of unreasonable burden on the social assistance system of the host Member State for the use of shelters.

2. Tensions Between Member States’ Sovereignty and the Freedom of Movement Acquis

New challenges on the freedom of movement of persons have changed the perception of this freedom by Member States. Certain Member States would like backtrack to recapture parts of their sovereign power, despite their existing leeway.

2.1 Member States’ Leeway

The flexibility of the Member States in matters of freedom of movement is visible at different levels from the national transposition of EU law to its implementation by national authorities. Member States are authorized to restrict the freedom of movement of Union citizens in cases of threats to public policy, public security and public health, abuses of rights and fraud, as well as unreasonable burden on the national assistance system of the host Member State. They have sovereignty to define in their own national legislation legal grounds leading to restrictions (Rutili C-36/75). This leads to multiplicity and diversity of national definitions that is endangering the following:

- Legal security, because there is a clear risk of abuse of expulsions powers by the Member States.
- The uniformity of application of the law of the Union, because it is not realized in practice.
- The principle of equality of treatment of Union citizens on the move, because for example, a Union citizen can be expelled in France on the ground of renewing stays of three months while he would not be expelled, based on the same facts, in the Czech Republic.

For these reasons, it would be desirable to unify national definitions of legal grounds leading to expulsion orders. And if States ‘sovereignty does not allow such a step, it would at least be desirable to establish limits on national discretion.

Member States also benefit from a large leeway in implementing national transpositions of Directive 2004/38/EC. The most worrying practice is certainly the large-scale use of the most severe sanction, the expulsion of Union citizens, based on national grounds contradictory to Union law, which violates the fundamental freedom of movement of persons. Expulsion of a Union citizen is allowed by the Citizenship Directive, in cases of threats to public policy,

public security and public health. Yet Recitals 23 and 24 of Directive 2004/38/EC state that expulsions can seriously harm migrants and, for this reason, should be used only exceptionally against mobile Union citizens. Nevertheless, it is not completely clear from the wording of the Directive whether Member States are allowed to use the most severe sanction, expulsion, in cases of abuses of rights and unreasonable burden on the social assistance system. For this reason, “Member States rely on a grey area to justify expulsions without formally demonstrating a specific threat.” (O’Nions, 2011, p. 371).

2.2 Coaching of Member States’ Leeway

The flexibility enjoyed by Member States concerning the freedom of movement of persons is not absolute. It is limited by the requisite respect of EU law and control by European institutions.

Although Member States are benefiting from an important margin of maneuverability in their implementation of Directive 2004/38/EC, and especially in defining the legal grounds for expulsion, they must nevertheless respect EU law and standards. In the *Chakroun* case (point 34), the Commission submits that the discretion left to the Member States in implementing the Directive must not adversely affect its objectives or effectiveness. Expulsion can only be used within the allowed scope of EU law and under the conditions provided for by Article 28 (protection against expulsion), Article 30 (written notification requirements), Article 31 (procedural safeguards and Preamble 23 (respect of the principle of proportionality). Unfortunately, national practices show that national implementations are often affecting the Directive’s objective and effectiveness.

To facilitate the task of Member States, EU institutions provide them with non-binding guidance. Indeed, regarding the improper implementation of the Citizenship Directive by Member States, the Commission, at the initiative of the European Parliament, adopted in 2009 a non-binding communication aiming to clarify some key provisions of the Directive. The so-called Communication on guidance for better transposition and application of Directive 2004/38/EC is still valid today (European Commission, 2009). Similarly, in 2014 the Commission adopted a Handbook on addressing the issue of alleged marriages of convenience between EU citizens and non-EU nationals in the context of EU law on the free movement of EU citizens (European Commission, 2014). By drafting non-binding documents, in the form of guidelines, the Commission contributes to the clarification of certain concepts of Directive 2004/38/EC.

The guidance coaching of Member States’ leeway is mainly the work of European institutions such as the European Commission and the Court of Justice of the European Union. The Commission, as the guardian of the treaties, is responsible for controlling the quality of implementation of Directive 2004/38/EC in national legal orders. For example, in 2010, when France was massively expelling Union citizens of Roma origin, the European Commission intervened to ask France to review its national implementation of the Citizenship Directive. When no consensus is found between the Member State and the Commission, the case can be sent to the Court of Justice of the European Union. National courts also have the possibility to proffer a question to the Court about the interpretation of EU provisions through preliminary questions. Decisions of the Court have played a key role in the development of the conditions of integration of mobile Union citizens. Let us nevertheless recall that after a very generous attitude towards economically inactive Union citizens, the Court has recently hardened its approach, at least concerning the access of economically inactive Union citizens to social assistance in the host Member States. This approach complies with the stricter derogations to

the principle of equality of treatment provided in Article 24 of Directive 2004/38/EC.⁶⁸ Indeed, it acknowledged that Member States are allowed to exclude from certain social benefits economically inactive Union citizens who go to another Member State solely in order to obtain social assistance (Dano 2014). Similarly, they may exclude Union citizens who go to another Member State to find work from certain ‘special non-contributory cash benefits’ although those benefits are granted to nationals of the Member State concerned who are in the same situation (Alimanovic 2015).

2.3 Member States’ Requirements

Some Member States are of the opinion that the current provisions of freedom of movement are too liberal and endanger their national interests. For this reason, they have proposed reforms in three main directions: the fight against abuses of rights, the limitation of access to social assistance, and the preservation of national public policy.

In 2013, the Federal Minister of the Interior of Austria, the Federal Minister of the Interior of Germany, the Minister for Immigration of the Netherlands, and the Secretary of State for the Home Department of United Kingdom wrote a common letter to Commissioners Redding, Malmstrom and Andor denouncing the fraudulent and abusive use of the freedom of movement by Union citizens. The reasons argued by these states were the considerable strain put upon their vital local services, their social assistance systems and their national citizens. They were requiring from the Commission legal and financial measures allowing more effective sanctions, such as a ban on re-entry after an expulsion order.

Moreover, some Member States would like to prevent access to social assistance to economically inactive Union citizens staying longer than three months, even though it is offered by Directive 2004/38/EC to legal residents. Generally speaking, the Citizenship Directive does not provide equality of treatment of Union citizens with nationals of the host Member States as far as access to social assistance is concerned. Member States are allowed to not grant social assistance to mobile Union citizens during the first three months of their stay. Economically inactive Union citizens have access to social assistance only if they fulfil the conditions of Article 7 (self-sufficiency and comprehensive health insurance) for stays longer than three months. However, this limitation does not seem strict enough to some Member States. The negotiations surrounding Brexit even showed that Great Britain is in favor of restrictions on social assistance for workers as well (Seeleib, 2016). It could limit the access of newly arriving EU workers to on-contributory in-work benefits for a total period of up to four years from the commencement of employment (No 2B Annex I of the Conclusions) and index such child benefits to the conditions of the Member State where the child resides (Annex V) (Seeleib-Kaiser, 2016).

Member States are also very attached to the respect of their national public policy. As the concept of public policy may vary from one State to another, and from one period to another, one can observe a diversity of behaviours that have been considered by some Member States as threatening their national public policy. Thus, the freedom of movement of economically non-self-sufficient Union citizens has already been considered a threat to French, Belgian, Italian and Dutch public policy.

⁶⁸ See the Dano case (C-309/13) and the Alimanovic case (C-67/14).

3. Problem Solution

The tension between Member States' requirements and the respect of the fundamental freedom of movement of persons is more and more intense. It is highly visible, especially in regards to the growing number of expelled Union citizens from their host Member States.

For this reason, the European Commission is taking the claims of Member States seriously, especially regarding an abusive use of the freedom of movement. It answered the common letter from 2013 by stating that, according to figures communicated by Member States and a study published in October 2013, in most EU countries (DG Employment, Social affairs and Inclusion, 2013; Dustmann, 2013). EU citizens from other Member States use welfare benefits no more extensively than the host country's nationals (European Commission, 2014). Moreover, access to social assistance remains, in most Member States, far from being unconditional and so accessible to only a few (Minderhoud, 2009). It is clear that Member States' claims were exaggerated. Nevertheless, they have to be taken into consideration as they represent national feelings and approaches.

With the exception of the Brexit negotiations⁶⁹, it seems that no Member State tends to question the *acquis* of freedom of movement of workers. All the claims of Member States are directed to economically inactive Union citizens mainly coming from Central Eastern European Member States (but not only)⁷⁰ and to Union citizens of Roma origin who are a specific category of economically inactive Union citizens.⁷¹ Indeed, in the context of economic crisis and migration pressure, Member States tend to be more nationalistic and more individualistic, leaving less space for solidarity.

The requirement of self-sufficiency for lawful residence of economically inactive Union citizens is one of the most controversial features of citizenship law (Shaw, 2014, p. 89). It aims to preserve the stability of public finance of the host Member State against an abusive use of social assistance by mobile Union citizens. The question is whether this criterion is compatible with the limitation of Article 27 stating that expulsion should not serve economic ends.

Moreover, this requirement is also dependent on national rates (eligibility for social assistance), which vary from one Member State to another. The right of freedom of movement of economically inactive Union citizens is therefore not uniform in the 28 Member States. This differentiation also questions the equality of treatment of mobile Union citizens on the territory of Member States.

Recent events in Europe seem to freeze, at least for a while, any evolution towards a social Union citizenship. Obviously, Member States are not ready to further develop the content and scope of the citizenship of the Union in a more favorable way for the less favoured mobile Union citizens. The Court of Justice of the European Union itself is increasingly reluctant to grant social rights to economically inactive Union citizens, even though in the past it has

⁶⁹ According to Martin Seeleib-Kaiser, the compromise with regard to social rights of EU migrant citizens has high political and potentially legal significance as it aims to discriminate EU migrant citizens from Central and Eastern Europe.

⁷⁰ Belgium is a typical example of a Member State massively expelling Union Citizen, including western Union citizens like French and Spanish.

⁷¹ Indeed, numerous studies have proved that Union citizens from Roma origin are not only suffering from their economic status but also from their Roma status. See, for example, Commission Nationale Consultative Des Droits De L'Homme, 2012.

strongly encouraged their integration in the host Member State.⁷² However, such a big step would advance the realization of one of the objectives of the European Union: combating social exclusion.

4. Conclusion

Freedom of movement of Union citizens in the EU has to be protected. First, because it is a long-term objective of the EU that has not yet reached its full achievement, and secondly, because it is a key part of the European *acquis communautaire*.

Freedom of movement of persons in the EU has always been one of the main objectives of the EU and of its precursor, the EEC. For this reason, it is strongly protected by different legal instruments. As a fundamental right, it is protected by the EU treaties, EU secondary law and the Charter of Fundamental Rights of the EU⁷³. Likewise, the freedom of movement of Union citizens is also protected by the provisions of the European Convention for the Protection of Human Rights and Fundamental Freedoms, which constitute general principles of the Union's law, and by other international law instruments.⁷⁴

It also belongs to the values that the European Union is defending inside its territory and tries to promote to the wider world. We should not forget that however we will classify the freedom of movement of persons (as a fundamental right, a value or a general principal of Union law), Member States intensively participated in its construction. Indeed, EU values derive from the common values of Member States and the rights protected by the European Convention arise out of the constitutional traditions common to the Member States. For this reason, it is in the interest of the Member States themselves to preserve the *acquis* that they have worked together to build over the last several decades.

Moreover, freedom of movement of persons is part of the internal market whose *acquis* Member States have the obligation to respect. They are allowed to make derogations, but they have to be of a temporary nature and must cause the least possible disturbance to the functioning of the internal market. It is not available for structural reforms because it is one of the four founding freedoms of the EU (Guild, 2014). A Member State that no longer wishes to comply with the right of citizens of the Union to move, reside, and exercise economic activities anywhere in the Union, beyond the very limited scope which is permitted by the Directive, has no option but to consider withdrawal from the EU (unless all the Member States were able to agree on an amendment to the Treaties regarding the free movement of persons) (Guild, 2014, p. 11). In the present challenging circumstances of the Brexit controversy, Member States nevertheless adopted a much softer approach by recognizing Great Britain's right to limit social assistance access to mobile workers (European Council, 2016).

Member States should be aware that any serious limitation on the freedom of movement of persons would have a serious impact on the existence of the EU itself, as well as its integrative approach. It would also endanger the EU economy and the rights of Union citizens.

⁷² In the *Grzeckyck* case, for example, the Court recalled that a certain degree of financial solidarity between nationals of a host member State and nationals of other Member States should prevail, particularly if the difficulties encountered are temporary.

⁷³ According to Article 6 TEU, the rights, freedoms and principles set out in the Charter of Fundamental Rights of the European Union shall have the same legal value as the Treaties.

⁷⁴ For example, the International Convention on the Elimination of All Forms of Racial Discrimination.

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Changing of EU Project and Grant Management Approach in Response to New Trends of Programming Period 2014–2020

Lukáš Melecký

VŠB - Technical University of Ostrava
Faculty of Economics, Department of European Integration
Sokolská třída 33
Ostrava, Czech Republic
e-mail: lukas.melecky@vsb.cz

Abstract

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.

Keywords: EU Funds, Project Cycle Management, Project Management, PMBOK, PMI

JEL Classification: O10, O22, O52, R58

1. Introduction

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; see e.g. Šotkovský (2011). 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 (Vahalík, 2014). 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 as mentioned e.g. Fojtíková (2011). 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 – especially in the case of countries within the Eurozone (Dvoroková et al., 2011).

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). 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 (Minarčíková, 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.

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. The widening gap between the supply and demand for skilled project managers in the EU is projected to reach crisis proportions. Thousands of schools and universities rise to the challenge by offering courses in PM; hundreds of them build project management degree programmes in disciplines as varied as economics, business, engineering, information and communication technologies etc. Universities facing increasing competition for the best faculty and students identify global accreditation in PM as providing a decisive advantage. And it's not just a private sphere or academic institutions. The global need for skilled PM is being raised by many institutions and organizations working within European institutional structures.

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 (Skokan, Staníčková, 2011).

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 work place are different than what was needed several years ago. As reaction on these changes and development, organizations continue to fundamentally re-order themselves around the PM paradigm, academic institutions around the world are beginning to capitalize on the unprecedented opportunity to advance the knowledge of this vital discipline. The need for project managers is only going to increase and project environments is gaining recognition in academic research. The knowledge of a project structure, acquired by project managers during their studies in specialized courses or at universities, is vital for future initiatives and PM as Bartoska et al. (2013) mentioned. Bartoska, Flegl and Jarkovska (2012) focused on finding out the key competences in International Project Management Association (IPMA) standards for educational approaches in PM. Ríos Carmenado, Díaz-Puente and Yagüe Blanco (2011) described long-term integration of IPMA standards into project-based learning in Spain. Byrne, Snyder and Seward (2008) examine the education system quality and examine the methods and objectives of PM teaching in the United States. Thomas and Mengel (2008) try to develop the abilities necessary to confidently navigate the dynamic organizational environments and complex projects facing project managers today. Learnable aspects of PM in academic programmes were explored by Shen and Scott (2001). Study programmes or courses of PM at universities are thus the topic of many papers and orientation of research for finding new effective methods of PM teaching.

VŠB-Technical University of Ostrava, Faculty of Economics, European Administration field of study aware these current developments and labour market requirements. From this point of view, the aim of the paper is to describe new approach of project management training in tertiary education through developed courses of 'EU Project and Grant Management A and B' as well as to present training innovations in the context of international standards of project management within the rules of EU Project Cycle Management (PCM) and possibilities of drawing ESIF in the Czech Republic. New orientation of training courses helps students, future project managers, to orientate in ESIF programme and project funding procedures and to professionally and effectively manage EU funded projects in the period 2014–2020.

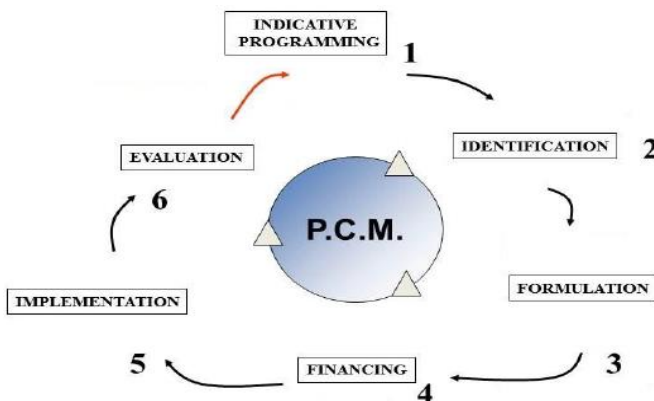
2. EU Approach to Project and Grant Management

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, 2004) 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.

Also the EU developed its own approach to PM and implemented projects supported from EU 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. 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, which indicates that the project’s benefits will exceed its costs’.

Figure 1: EU Project Cycle Management



Source: author’s elaboration, 2016

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

conditionalities, 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 5th edition of the PMBOK Guide (2014), 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, 2004).

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. The increasing unpredictability and complexity of unforeseen consequences of actions means that new methods of managing, planning and executing strategy are needed. But, as mentioned Thomas and Mengel (2008), many of the rules around planning and control that are currently taught in business schools or PM programmes are inappropriate and thus ineffective. New and different approaches to PM begin to emerge. This is why we combine approach of PMBOK and PCM. We try to prepare our students to deal with increasing complexity that they face in today's working environment nor does it make full use of existing innovative learning environments and techniques.

3. New Trends in Programming Period 2014–2020 and Response of EU Project and Grant Management

Based on re-accreditation, subject change is focused on innovation and the development of teaching project and grant management in European context at bachelor and master level of the fields of study European Administration and Regional Development. In these fields of study, the newly introduced courses of EU Project and Grant Management A and B are taught from the academic year 2013/2014. The global objective of subject change is to maintain the quality and innovation content of the current concept of accredited European Administration field of study in courses focused on practical implications of the European integration process in the form of use the EU funds in the Czech Republic. The specific objective of subject change is to upgrade content of teaching for adaptation to EU requirements in the programming period 2014–2020. The subject change will enhance knowledge and skills in these innovative courses, the introduction of case studies, efforts to improve students' abilities to interpret the results and greater engagement of interactive elements to teaching software such as MS Project or project user interface for communicating applicant (recipient) with the administrator subsidies. All aspects of EU project preparation and implementation are simulated based on real conditions, requirements and rules valid in the Czech Republic. The programming period 2014–2020 is in line with the EU financial framework or perspectives for seven-year period. Funds amounting to EUR 24.319 billion were totally allocated for the Czech Republic.

As a result, it is used the following concerns regarding educational needs of project managers in complex environments. Using the structure of apprentice, journeyman and master model originating in the medieval guild structure elaborated in the adult education literature, and

incorporating the insights from the work on types of knowledge presented above into management knowledge Thomas, Mengel and Andres (2004) suggested a comprehensive model of project manager development as described in the following Tab. 1. This model indicates that the PMBOK Guide and training based on linear, rational and analytical knowledge only moves practitioners to the competent or proficient performer level. Given that projects in a real time environment tend to unfold as complex adaptive systems, effective project managers need to be the masters and leaders who can act and react in a timely manner without having to resort to time consuming analytical application of context dependent or independent techniques (Thomas and Mengel, 2008). Advanced project managers need to be capable of staying with the ambivalence and ambiguity of the not-yet-known; recognizing that how a situation emerges crucially shapes its meaning, interpretation and social significance. Thus, development of the master project manager requires going beyond the inculcation of standards of best practice. In order to have enough adaptive capacity to handle the level of environmental complexity and change found on many projects today the following skills are needed by master level project managers: a high degree of self-reference, the ability to thrive on change, a solid foundation in traditional methods and techniques, and the ability to adapt to change and develop new approaches on the fly – this has been called the resilience factor by Reivich and Shatté (2002).

Table 1: Comprehensive Model of Project Manager Development

Characteristics	Project Manager – Level of Development		
	Apprentice	Journeyman	Master
Knowledge level	Novices and advanced beginners	Competent and proficient performers	Emotionally and spiritually intelligent expert
Nature of knowledge	Context independent rules, Situational elements	Categorizations of context dependent and independent rules based on experience and education	Intuitive, holistic, synchronic, synthetic
Nature of intelligence employed	Cognitive intelligence	Emotional intelligence	Spiritual intelligence
Development of	Know what	Know how, know where, when, who	Know why
Relation to external environment	Reactive to context environment	Relational and responsive to context environment	Orientalional, interpreting and transforming context
Role and types of projects	Team leader	Manager of systems type projects	Leaders of complex adaptive projects in uncertain environments
Method of application	Analytical deliberation	Analytical interpretation	Intuitive leaps
Method of movement from one level to another	Significant levels of project experience under an experienced practitioner; formal education in PM fundamentals	Significant levels of PM experience; additional formal training in advanced topics of PM	Maintaining a position in this level requires “giving back” to the occupation through mentoring, training, researching practise

Source: author's elaboration, 2016

Courses of EU Project and Grant Management have developed new approach for teaching PM based on EU conditions to bring up students – new project managers which are able to prepare and manage EU projects funded by ESIF. The new conception of both courses is presented in Tab. 2. This approach allows students to a deeper understanding of EU project problematic and improve their preparation for the practical role of project manager. Content of the courses is focused on EU legislative, programming and project framework of the period 2014–2020 and after graduating these courses students will be equipped with the newest knowledge of theory and practice of PM the context of the implementation of EU Cohesion Policy in the Czech Republic.

Table 2: Overview of EU Project and Grant Management Practical Training

EU Project and Grant Management A (Bachelor degree)	EU Project and Grant Management B (Master degree)
Course completion: <ul style="list-style-type: none"> • Lectures – exam of theoretical PM knowledge • Seminars – presentation and written treatment of certain European project proposal 	Course completion: <ul style="list-style-type: none"> • Lectures – exam of theoretical PM knowledge and essay about PM under EU conditions • Seminars – presentation about EU structural framework; presentation and certain EU project proposal application form based on beneficiary online application according to valid call for proposals
Selected lectures	Selected lectures
<ul style="list-style-type: none"> • Basic terminology of PM • Project Life Cycle • Logical Framework approach • People and organizations in PM • Preparation of grant application for projects co-financed by EU Funds • Project initialization • Project planning and implementation 	<ul style="list-style-type: none"> • World approach to project management • Initialization of the project plan and analysis of grant opportunities • Triple Constraint Project Scheduling • Software environment for processing project applications in terms of EU Funds • Feasibility study and Cost-benefit analysis of EU funded projects • Investment decision-making and projects efficiency • The absorption capacity of EU funded projects
Selected seminars	Selected seminars
<ul style="list-style-type: none"> • The life cycle of the grant and the road of project co-financed by EU Funds • General aspects of project proposals co-financed by EU Funds • Examples of case studies - project proposals • Student's corresponding task – summary of real project proposal • Student's corresponding task - project proposal summary 	<ul style="list-style-type: none"> • Preparation of the project - project plan • Preparation of the project - analysis and selection of appropriate grant program • Preparation of the project - documentation for project proposal • Specific aspects of project proposals co-financed by EU Funds – case studies of real EU funded projects • Student's corresponding task – presentation of certain EU funded project proposals • Student's corresponding task - e-proposals of selected EU funded project in MS2014+

Source: author's elaboration, 2016

Recent research has explored successful PM and raised interesting assertions about the competencies of successful project managers that need to be incorporated into any discussion of how to develop project managers. Shared leadership; social competence and emotional intelligence; communication; skills in organizational politics; and the importance of visions, values and beliefs have emerged as competencies that are required from project managers in complex environments. The main role of management education within courses of EU Project and Grant Management is to develop students with the ability to synthesize and embed management theory within their own experience and theories of practice, and apply this information when appropriate circumstances present themselves. Based on this approach, it is possible to demonstrate the main benefits of practical-active teaching method, see Tab. 3.

Table 3: Practical Teaching Approach in EU Project and Grant Management

Goals	Benefits of Practical Teaching Approach
EU Project and Grant Management Courses	<ul style="list-style-type: none"> • To ensure the success of EU funded project • To benefit from many practical examples and exercises of group work sessions • To become familiar with PCM and LFA • To design, create and strengthen project management skills • To increase the efficiency of project management work • To implement the projects with more certainty • To learn how to avoid the threat of financial penalties • To receive practical advice on individual questions • To share theoretical knowledge and practical experiences

Source: author's elaboration, 2016

4. Conclusion

The main feature of described training approach presented by EU Project and Grant Management courses is to get Bachelor and Master degree students ready for 2014–2020 EU funding period by providing a combination of two selected PM approaches (PMBOK and PCM) under the structure of EU Programmes for 2014–2020 period and by drawing on the lessons learned from 2007–2013 period and concrete project case studies. Based on development and efforts of the various PM approaches to define a common ground for the standards to be applied in the field of professional competencies, we can consider that PMI and PMBOK standards are moving towards becoming the quasi-standard of project management in many EU countries. In fact, there is only few empirical evidence that trained and certified project managers are any more successful than 'accidental' project managers in today's complex world, however we believe that combination of theoretical part (lectures) and practical part (seminars) including specific EU aspects of PM will be a prerequisite of not only an academic qualification but also a period of practical experience in real world of PM.

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The Reasons of Possible “Brexit” From the European Union

Matúš Meluš

University of Ss. Cyril and Methodius in Trnava
Faculty of Social Sciences
Bučianska 4/A, 917 01
Trnava, Slovakia
e-mail: matus.melus@gmail.com

Abstract

The aim of this paper is to analyze the reasons of possible “Brexit” from the European Union. Great Britain has a specific position in this supranational organization. I try to compare the conditions when UK joined the EU and actual causes of negative attitudes. Important part of my article will be an in-out referendum on the UK’s membership. The Conservatives' election manifesto promised to hold a referendum (a nationwide vote) on whether or not the UK should stay in or leave the European Union by the end of 2017. When David Cameron announced in January 2013 his pledge to hold a referendum, a key element was that he would seek to make changes to the way the European Union works. I would like to define the main British restrictions and their ways how to solve them. A layout already exists - Cameron’s letter to European Council president Donald Tusk which he sent in November 2015.

Keywords: European Union, Great Britain, Membership, Improvements

Jel Classification: F02, F50, F62

1. Introduction

In my opinion, the relationship between the UK and the European Union is really complicated. One of the most discussed topics in this problem is certainly the sovereignty. “Sovereignty as traditionally conceived has commonly been associated with State power. The State has both power and authority to enact laws and it was felt that this was the optimal way to serve and protect the national interest. The conjunction between exclusive state authority and optimal preservation of the national interest was always subject to exceptions, and these have become more pronounced over time.” (Craig, 2013) In these days, situation reached a critical point – politicians and citizens in Great Britain analyze the whole membership of their country in EU. In June will come the most important British referendum in the history. David Cameron - UK Prime Minister, has announced it on Thursday, 23 June. Voters have to decide if Great Britain should remain in the EU or not. In common, most of Britons support the abidance within the EU. On the other hand, the number of its opponents is gradually growing. One of the newest political polls made the Institute ComRes for the Daily Mail. “54% of respondents said that they would vote for remaining in the EU if the referendum about this issue will be tomorrow. This is a decrease of two percent compared to the same poll in December. For withdrawal from the Union would vote 36% of respondents. It is one percentage point more than a month ago. The number of undecided respondents has increased by two percentage points to ten percent.” (Cockroft, 2016) These results come at a hectic time when Cameron is trying to reach agreement with the leaders of other member states on the reform of Britain's relationship with the EU. Senior European officials – Jean-Claude Juncker (The President of European Commission), Donald Tusk (The President of the European Council) and Martin Schulz (The

President of the European Parliament) are convinced that UK remains in the European Community and will continue in the position of a constructive EU member. Current negotiations with London are the most delicate that EU ever carried on. The European Union has never been in such a dramatic situation as these days.

David Cameron's cabinet agreed a package of changes to the UK's membership of the EU after two days of intensive talks with other member states' leaders in Brussels on Thursday and Friday, 18-19 February. The agreement, which will take effect immediately if the UK votes to remain in the EU, includes changes to:

- Child benefit - Child benefit payments to migrant workers for children living overseas to be recalculated to reflect the cost of living in their home countries
- Migrant welfare payments - The UK can decide to limit in-work benefits for EU migrants during their first four years in the UK. This so-called "emergency brake" can be applied in the event of "exceptional" levels of migration, but must be released within seven years - without exception.
- Eurozone - Britain can keep the pound while being in Europe, and its business trade with the bloc, without fear of discrimination. Any British money spent on bailing out eurozone nations will be reimbursed.
- Protection for the City of London - Safeguards for Britain's large financial services industry to prevent eurozone regulations being imposed on it.
- Sovereignty - There is an explicit commitment that the UK will not be part of an "ever closer union" with other EU member states. This will be incorporated in an EU treaty change.
- 'Red card' for national parliaments - It will be easier for governments to band together to block unwanted legislation. If 55% of national EU parliaments object to a piece of EU legislation it may be rethought.
- Competitiveness - The settlement calls on all EU institutions and member states to "make all efforts to fully implement and strengthen the internal market" and to take "concrete steps towards better regulation", including by cutting red tape.
- Some limits on free movement - Denying automatic free movement rights to nationals of a country outside the EU who marry an EU national, as part of measures to tackle "sham" marriages. There are also new powers to exclude people believed to be a security risk - even if they have no previous convictions. (Wheeler - Hunt, 2016).

2. Political Situation in Recent Years and Scottish Question

I think that political situation in the United Kingdom has become more turbulent recently. Growing separatist efforts of Scotland, unstable circumstances in Northern Ireland, process of devolution and especially the rise of euroscepticism – these are facts with cardinal importance. Great Britain has undergone many changes in history. In spite of this, it retains integrity and managed to divide the powers to individual regions – Scotland, Wales and Northern Ireland. England has a specific position because in the capital city – London - is the seat of central Parliament. The migration is another topic which is discussed among citizens and experts. Thousands of people from Eastern and Central Europe, Middle East, Northern Africa etc. come into the country each year. If I can mention only my homeland – Slovakia – there are almost 100 000 Slovaks in the UK. Views on this issue are not uniform. Some of Britons consider incomers as positive element in their society. They say that foreign people can enrich British culture and help to social and employment system. Opponents of migration promote the different attitude. Foreigners in their understanding pose a threat. They can bring civil and religious disputes, violence, terrorism etc. It concerns mainly about Africans and Asians. East

and Central Europeans often abuse the welfare system and want to receive money from state without any work. As a result, these groups of incomers are not so popular in part of the British population. But the problem is also the migration of citizens within the UK. They must travel for work to larger cities and leave their families for a long time. Because of this rise the transport complications and environment become worse. However, it is a different debate. I would like to focus on other events.

In the following lines, I will deal with Scottish independence referendum. It is described as a harbinger of UK's EU referendum. Whether the Scotland became an independent country decided voters on Thursday, 18 September 2014. The referendum was allowed by The Edinburgh agreement between the Scottish Government and the UK Government in 2012. The referendum involved a single question: "Should Scotland be an independent country?" Scotland is considered to be the greatest fighter for autonomy. Similarity of today's Scotland ensued from territorial development in the Middle Ages. Scots had formerly their own monarchy. Scots and the English were united under one government by Oliver Cromwell in the 17th century. Since then, the Scots bid for a separation permanently. As we know, Scots rejected the independence and the UK remained unchanged. „According to final official results were against Scottish independence 55.3% of voters. For Scottish independence declared 44.7% of voters. Participation in the popular vote reached 84.59%. In the most populous Scottish town of Glasgow voters supported independence, but in the capital city of Edinburgh was the situation completely reversed.” (SITA, 2014) For the independence citizens voted not only in Glasgow, but also in the administrative districts of West Dunbartonshire, North Lanarkshire and Dundee. In an important city of Aberdeen were 41% of voters for independence and 59 percent against. Another case was Falkirk – 53% for and 47% against independence. Scottish Premier Alex Salmond admitted the defeat and had to accept the verdict of the people. The oil-rich Scotland is part of the United Kingdom for more than three centuries and now has the status of a semi-autonomous territory. It administers separately the departments of education, health, environment or justice. However, London warns Edinburgh that in the case of secession will not be able to use the British pound. It is a clear sign of negative attitude in this issue. The European Union also sent its warnings to Scotland. The political elite from Brussels explained that any new country separated from existing state will have to apply for membership in the EU. Subsequently, all member states have to agree with this process. And it is always difficult to make a compromise among 28 countries. Refusal of Scottish independence does not mean that everything remained the same. Scotland gets more powers. According to commitment of British politicians can we expect extended powers in the social and fiscal areas, but it will not be a full fiscal autonomy, including the control of oil revenues. “The debate about the deepening of Scottish devolution will also affect the devolutional arrangement in the rest of the UK. It will be necessary to take into account Wales, Northern Ireland and especially England which does not have its own parliament. Its internal issues are resolved in the British Parliament with the participation of MPs from Scotland, Wales or Northern Ireland.” (Kasáková, 2014) In the context of the debate about rising powers for Scotland become stronger the voices that the English should decide their issues by themselves. The general consensus on a possible solution does not exist yet. Process of devolution was started by Tony Blair's government in the 90s. This cabinet has already its own suggestions that in the eight English regions will be created regional parliaments as in the rest of the UK. Unfortunately, these plans failed. Another option is to limit the vote of representatives who were not elected in England. It concerns specifically about English issues. We can expect the pressure of English MPs during the negotiations for the new legislation. They will require an adequate solution from the Government. These factors may complicate

the time frame for preparation of the revised legal order for Scotland. If the British government will not be able to keep its promises, political opponents can get the chance again - especially the Scottish National Party (SNP).

Results of the referendum forced to the abdication of Prime Minister Alex Salmond. He was replaced by a new character – Nicola Sturgeon. Politics of party did not change after her beginning. On the contrary, she continues to struggle for independence. She supports an idea that Scotland can quit the United Kingdom if the vote in June goes against remaining in the EU. “Leader of SNP came close to promising a second independence vote if Britain votes to leave. The shift in Scottish opinion would be inescapable and there would almost certainly be a second vote, she said. The next day the party’s Westminster leader, Angus Robertson, said Scots will demand a referendum if they are forced out of the EU.” (Kettle, 2016) It is clear that there are still many troubles facing any renewed bid for Scottish independence if Great Britain leaves the EU. We can give one simple example. In 1975, when the UK last voted on Europe, Scots were pro-EU by 58% to 42%; but the English actually voted pro-EU by a much larger margin of 69% to 31%, and the only two of the 68 UK counties that voted no were Shetland and the Western Isles. That’s all 40 years ago and much has changed radically, of course. Today Scotland is solidly in favour of remaining in the EU while UK-wide opinion is much more divided. But the evidence for saying that a UK vote to leave the EU would boost support for independence is according to experts quite fragile. I have to mention the fact that Euroscepticism is also widespread in Scotland on both sides of the political spectrum and it is not just because of United Kingdom Independence Party (UKIP). This party I am going to discuss later in my article. In recent days, Euroscepticism in the country soars to record high. NatCen Social Research carried out a survey in the last week of February. “In an apparent contradiction of SNP claims that the forthcoming referendum could take Scotland out of the EU against its will, the study also found that 60% of Scots can be classed as Eurosceptic, with only one-fifth happy to leave things as they are. 43% of respondents want the EU’s powers reduced and 17% want to leave, more than at any time since 1999. This compares with 43% favouring reduced powers and 22% wanting to leave the UK as a whole.” (Brooks, 2016) The survey shows that almost two thirds of Scots can be classified as Eurosceptics while in the whole UK is this number very similar. It moves around 65%. Among voters is not a huge divide and it appears that the depressed mood in relation to the European Union is pervasive throughout Britain. It is also worth remembering that the only thing on the SNP’s agenda at the moment is the Scottish parliament election on 5 May, not the referendum six weeks afterwards. Sturgeon and her colleagues need to mobilize its members. It is possible that the UK votes to leave. Then the next day the EU and London would set in train the process of negotiating the whole of the UK out of all the EU treaties. Officials within the Scottish Government would have to start work on leaving the EU. “Underlying all this is the big problem Sturgeon faces. She will only call a second referendum when she thinks she can win it, or when she is forced by party to do so. Right now, not enough Scots support independence – 45% in 2014 and 47% in the most recent poll. Failure to win a second referendum would close the independence issue for decades – just as did in Quebec – and could mark a point of decline for the SNP.” (Kettle, 2016) The First Minister will back a “Remain vote” in June’s EU referendum, but she distanced herself from David Cameron’s own campaign for an “In vote”. Generally, the SNP politicians must be careful in their statements. They cannot clearly say when exactly will be held another referendum on the independence of the country. And certainly it cannot be related to the British vote. I think that nationalists will be quietly campaigning for a UK vote to remain in the EU. Otherwise, Nicola Sturgeon confirmed that

Brexit will almost certainly trigger a second referendum on Scottish independence, but they are aware of the vote to leave would be a bad decision for the SNP.

3. United Kingdom Independence Party (UKIP) and the Rise of Euroscepticism

What exactly mean Brexit? Grammatically, “Brexit is an abbreviation of "British exit" that mirrors the term Grexit, refers to the possibility of Britain's withdrawal from the European Union.” (Investopedia.com, 2016) Each European officer hopes that this process will not be successful. The British prime minister will need to engage in some serious diplomatic arm-twisting to convince all 28 EU capitals that the UK should get the reforms that the government is looking for. That means tinkering with existing EU legislation. It would require all 28 EU leaders to agree, but wouldn't throw up the prospect of other countries having to hold a referendum; Ireland's constitution says the government cannot ratify a new EU treaty without consulting the public first. They will meet stiff resistance from other member states. Central European governments have declared their opposition to any limitation on the free movement of workers. German chancellor Angela Merkel and French president François Hollande share some of Cameron's reform goals on immigration, the single market, and labor law but will not pay any price to keep Britain inside the EU. (Leigh – Emerson, 2015) Eurosceptics in Britain has recently got well ahead of supporters of EU membership. According to surveys, the main reasons are the recent riots in Cologne, terrorist attacks in Paris and refugee crisis in general. Even if there are more Eurosceptics, their support is relatively brittle. It is therefore quite possible that many of them change their minds just before the vote in a referendum. Victory of Eurosceptics is actually far from certain for now. The crucial point will be the situation to the June. The European Union has to solve refugee crisis, ensure security of the continent, prevent further terrorist attacks etc. If it fails, the number of Eurosceptics is guaranteed to grow. The opposite effect can have the success of the British Prime Minister in talks with the European Union about concessions for the UK. In this case is possible that many Eurosceptics can change their decision and Britain would remain a member of the EU.

But now, let us go back to the roots of this chapter. In recent years, UKIP has become a popular political party in Great Britain. It is located on the right side of the political spectrum. Primary politics is the withdrawal of the United Kingdom from the European Union. Its leader Nigel Farage criticized the European Union for an undemocratic procedure at the approval of the Lisbon treaty, economic interventionism and the ambition to create a federal state and suppress the role of nation states and their parliaments. The rising popularity of UKIP and citizens' identification with the rejection of the European Union as a political union is a result of the complicated relationship between the UK and European officials. A lot of people in Britain believe that their country is losing the sovereignty. These opinions were expressed in the European Parliament elections in 2009. UKIP gained 16,5% and finished in second place just behind the Conservatives. It won 13 of the 74 British seats in EP. Voters gave them more support than the ruling Labourists and Liberal Democrats. Even better result was entered in 2014. The party managed to win EP-elections. They also received nearly four million votes - 13% of those cast - in May's general election and started a huge campaign for Britain's exit from the EU. About half of Conservative MPs, including five cabinet ministers, several Labour MPs and the DUP are also in favour of leaving. “They believe Britain is being held back by the EU, which they say imposes too many rules on business and charges billions of pounds a year in membership fees for little in return. They also want Britain to take back full control of its borders and reduce the number of people coming here to work. One of the main principles of EU membership is "free movement", which means you don't need to get a visa to go and

live in another EU country. They also object to the idea of "ever closer union" and any ultimate goal to create a "United States of Europe". (Wheeler - Hunt, 2016) However, on the side of Brexit supporters are not only UKIP members. As I mentioned above, it includes also the other politicians. One of the well-known is the London Mayor Boris Johnson. He argued that the UK would be able to negotiate a better trading deal with the EU from outside. He wants to campaign for free trade with the EU. According to him, the Union threatens British sovereignty and can get out of democratic control. Politician is considered to be a possible future leader of Britain's Conservatives and he opposed to the current party leader and Prime Minister David Cameron. Johnson declared that it was a difficult decision and it is not a step directed against the Prime Minister. On the contrary, it must be expressed the gratitude to him for the good work which he did in negotiating between Great Britain and the EU. Why Boris Johnson said this statement? One reason can be that "candidates in election of mayors are trapped in ambiguous position somewhere between status of being independent and party candidates. Even party candidates are not strictly and pure party candidates, because they are supported by coalition of political parties, usually by very broad coalition. On the one hand they try to disallow party connections, on the other hand, they realize mainly due to financial reasons the importance of political support. Party identification increases in cities with long-term stable party support." (Horváth – Šebík, 2016) Johnson's decision was already commented by several politicians from different parts of the political spectrum. The head of the Liberal Democrats Nick Clegg designated it as a part of the internal struggle in Conservative Party. Clegg's party wants to remain in the Union clearly. On the other hand, chairman of UKIP Nigel Farage was pleased. He hopes that Johnson will participate fully in the campaign. Cameron sent a word to Johnson just before his announcement. He considers it wrong to join with Farage's political group.

4. Conclusion

Opinions of politicians across Europe are clearly. They wish that Britain will remain a strong part of the European Union. I can give two recent examples for all. Two important European figures have warned of dire political and economic consequences for the European Union and therefore the UK if June's referendum leads to Britain leaving the EU. The Italian finance minister, Piercarlo Padoan, said that Britain's departure could cause a domino effect in which Eurosceptic parties and electorates feel emboldened, while the German finance minister, Wolfgang Schäuble, claimed an out vote would be "poison" to the British, EU and world economies. Padoan predicted a British departure might even lead to pressure for France to leave the EU in the presidential elections in 2017. He explains that we are already seeing a domino effect with anti-European parties gaining a lot of support, starting in France. If there was a Front National victory in France for instance next year, given what the Front National programme is, he is not sure where France would stand in the event of a Brexit vote in the UK. It makes everything more complicated. Schäuble told that politicians would have years of the most difficult negotiations, which would be very difficult for the EU as well. And for years they would have such insecurity that would be a poison to the economy in the UK, the European continent and for the global economy as well. (Wintour – Syal, 2016)

If we want objectively assess the impact of the possible withdrawal of Britain from the EU, we need a comprehensive economic analysis. There are two possible scenarios. Britain can end up like Switzerland or Norway. It will have isolated position, but with prosperous economy. However, this process is not very likely. These countries have their economy based on one output (Switzerland – banking sector, Norway – oil), but the UK has its economy based on trading and business. If Great Britain really leave the Union, these two sectors will suffer

the most. Britain would also become the target of a smaller number of economic migrants. They mostly create more workplaces than they take, especially with their activities in the business (this fact was valid until migration crisis and today is the situation more complicated). Of course, Britain would get by with its strong currency and growing economy. However, it is difficult to assess whether there will be a slight increase or decrease of its economy. An agreement that reportedly concluded David Cameron with representatives of the European Union should the citizens of the UK to incline the possibility of remaining in the EU. Cameron struggled at a latest EU summit for the acquirement of special British status within the EU. The aim was to minimize the disadvantages that British membership of the Union brings and keep only the benefits. Cameron concluded the agreement with representatives of the major European powers and he presents it as a great success. He believes that the British people will be inclined over time to remain in the European Community. However, agreements are always in the history presented as a success and only time will show their true contents. It is therefore questionable what benefits Prime Minister negotiated for Britain. On the other hand, it is necessary to consider whether it is correct to prefer one state over the other member states and give it such sovereign rights. Anyway, the details of the agreement and its impact will be learned in schools in twenty or thirty years. Despite all the scepticism is about 60% of Britons still inclined pro-European UK. It seems that ever complaining Britain in the EU will remain for the next few years. In these days is also extremely important that the British decided correctly and support the values on which was the old continent constituted. We will learn that on June 23.

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Directions of Changes in the Sustainable Development of Transport in Poland in the Context of European Integration

Agata Mesjasz-Lech

Czestochowa University of Technology

Faculty of Management

Al. Armii Krajowej 19b

Czestochowa, Poland

e-mail: agata.mesjasz@poczta.fm

Abstract

The concept of sustainable development is earning recognition in the economic practice as well as in theoretical research. The monitoring process of sustainability implementation will be possible if the actions undertaken are measurable. Sustainable development indexes are regarded as a practical tool usable in the assessment and estimation of trends effectiveness. The European integration has stimulated the globalization of economic processes which has influenced the development of transport. Transport supports the processes of distribution and delivery, and due to its universal role, it is subordinated to the purposes and principles of the socio-economic policy of a given country. Therefore, the author has conducted an in-depth study of the sustainability of transport in Poland but in the context of European integration. The purpose of this article is to identify the variables which specify the level of the transport sustainability in the field of economic order and to evaluate the directions of changes in this area.

Keywords: *Transport, Sustainable Development, Sustainable Transport, Factors of Sustainable Transport, European Integration*

JEL Classification: *F60, F64, R40*

1. Introduction

The concept of sustainable development is a response to the destabilization of socio-economic and environmental systems. One of the European documents delineating activities for the implementation of the sustainable development concept is "Europe 2020. A strategy for an intelligent and sustainable development conducive to social inclusion. The main priorities of the strategy are (Europa 2020 [online], 2010, p. 5):

- Intelligent development through economy based on knowledge and innovation.
- Sustainable development based on a more efficient use of resources and through supporting a more competitive economy harmless to the environment.
- Development conducive to social inclusion through supporting an economy with a high employment level, which ensures territorial and social cohesion.

The strategy specifies individual challenges for sustainable development, especially: the improvement of the competitiveness of EU economy, climate change prevention, production of clean and efficient energy. All these priorities are visible in the activities connected with transportation in individual countries, including Poland. Opening up the European Union towards the East have brought new challenges for the European transport (Marin and Olaru, 2015, p. 659). A competitive and efficient transport plays a significant role in the development of a country (Kadłubek, 2015b, p. 66), because it is connected with virtually every human

activity and helps to satisfy most social and economic needs (Skibińska, 2013, p. 291). Transport belongs to the services sector whose development, also in the context of sustainable development, is mainly determined by such factors as: incommensurately lower functioning costs in comparison to the production sector and technical and technological advancement (Szajt, 2014, p. 47). By the year 2020, the following problems concerning sustainable development should be solved (Jacyna, 2011, p. 42):

- congestion, which is particularly visible on main roads and in bigger cities,
- increased impact on the environment and society,
- threat to the health and life of people and animals, especially through road transport,
- poor condition of technical infrastructure,
- poor efficiency and competitiveness of transport modes alternative to road transport,
- risk connected with opening up of markets.

The mentioned problems are connected with five groups of so-called external effects of transport: (1) environment, (2) safety and security, (3) public health, (4) land use, (5) congestion (Himanen, Perrels and Lee-Gosselin, 2006, p. 78).

A sustainable transport is characterized by the achievement of such an arrangement of individual transportation system elements - infrastructure, modes, and stakeholders (Feng and Hsieh, 2009, p. 961) - that it is possible to increase its economic, social and environmental efficiency.

According to the European Commission of Ministers of Transport, sustainable transport:

- “Allows the basic access and development needs of individuals, companies and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations.
- Is affordable, operates fairly and efficiently, offers a choice of transport mode, and supports a competitive economy, as well as balanced regional development.
- Limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimizing the impact on the use of land and the generation of noise” (Hyard, 2013, p. 1376).

According to another definition, “an environmentally sustainable transport system is one where transportation does not endanger public health or ecosystems and meets needs for access consistent with (a) use of renewable resources below their rates of regeneration, and (b) use of non-renewable resources below the rates of development of renewable substitutes” (Wiederkehr et al, 2004, p. 14).

Sustainable development then, with reference to transport, is understood as „the process of evolution in the transport sector, which has the properties of increasing sustainability” (Kadłubek, 2015a, p. 496). Sustainable transport is quoted among the basic challenges for the European Union Strategy for Sustainable Development (Wskaźniki zrównoważonego rozwoju [online], 2015, p. 138), which underlines the magnitude of transport problems in maintaining economic and social well-being.

2. Problem Formulation and Solution

The evaluation of the sustainability of transport is possible through a system of measures. Hence the goal of the article is to identify the indexes allowing for a assessment and comparison of change directions in the sustainable transport in selected countries of the EU. To this end the comparative analysis methods, especially the ranking methods, are used. The

years 2006 and 2013 are analyzed in order to see the changes over this period. Increased consideration of challenges in the pursuit of sustainable development, also when it comes to transport, stems from globalization which speeds up the tempo at which activities in this area are generated and realized. The European integration shifted many activities to the European Union level. This is especially true for environmental requirements, which is why tackling the issue of sustainable transport in the context of the European integration is legitimate.

Sustainable development deals with a combination of three factors: economic, environmental and social. Accordingly, the basis for grouping the indexes of sustainable development is defined as an integrated order which assumes a cohesive and simultaneous creation of the three orders: social, economic and environmental. Unfortunately, transnational comparisons are hard to carry out due to the scope of the recorded data on the level of individual countries.

Hence, the assessment of the sustainability of transport uses three indexes:

1. Social order:
 - Persons killed in road accidents per 1000000 citizens (I_{S1}).
 - Rail accidents victims per 1000000 citizens (I_{S2}).
 - share of cars not older than 2 years in the total number of cars (I_{S3}).
 - share of cars older than 10 years in the total number of cars (I_{S4}).
2. Economic order:
 - Modal split of freight transport - railways in percentage (IECO1).
 - Modal split of freight transport - inland waterways in percentage (IECO2).
 - Final energy consumption by transport in final energy consumption of all sectors (IECO3)
 - Volume of freight transport relative to GDP – index 2000=100 (IECO4).
 - Volume of passenger transport relative to GDP – index 2000=100 (IECO5).
3. Environmental order:
 - Greenhouse gases emission from the transport sector per 1000000 citizens (IENV1).
 - Sulphur dioxide emission from the transport sector per 1000000 citizens (IENV2).
 - Nitrogen oxides emission from the transport sector per 1000000 citizens (IENV3).
 - Ammonia emission from the transport sector per 1000000 citizens (IENV4).
 - Non-methane volatile organic compounds emission from the transport sector per 1000000 citizens (IENV5).
 - Share of renewable energy in transport (IENV6),
 - Particulates < 10 μ m emission from the transport sector per 1000000 citizens (IENV7).

Most of the above indexes go along the recommendations of Eurostat brought in to monitor the European Union Strategy for Sustainable Development. The selected European countries (Belgium, Czech Republic, Germany, France, Italy, Latvia, Lithuania, Hungary, Netherlands, Austria, Poland, Romania, Finland, United Kingdom) were arranged according to the presented indexes with the help of the method of development pattern. The arrangement was done for the years 2006, 2012 and 2013. In the case of the year 2013, the I_{S3} and I_{S4} variables were not considered. The variables include stimulants: I_{S3} , I_{ECO1} , I_{ECO2} , I_{ENV6} , and de-stimulants: I_{S1} , I_{S2} , I_{S4} , I_{ECO3} , I_{ECO4} , I_{ECO5} , I_{ENV1} , I_{ENV2} , I_{ENV3} , I_{ENV4} , I_{ENV5} , I_{ENV7} . The analyzed data come from the European Statistical Office (Baza danych Europejskiego Urzędu Statystycznego [online]).

The selection of indexes, countries and years was dictated by the accessibility and completeness of data.

Because of the fact that between the discussed indexes of different groups there are correlation relationships, the ranking was done in individual groups - for no statistically significant relationship between indexes belonging to the same group was found, except for the I_{S1} i I_{S2} variables. The variables refer to the safety level during transportation, they determine the number of fatalities in road accidents and the number of fatalities in railway accidents per one million people. A positive relationship between these variables seems to be only apparent as it is hard to correlate the increase in the number of railway accident casualties with the number of road accident fatalities.

Table 1 shows the results of the ranking of countries in individual groups.

Table 1: The Ranking of Countries in Individual Groups of Integrated Order

Countries	2006			2012			2013		
	I_S	I_{ECO}	I_{ENV}	I_S	I_{ECO}	I_{ENV}	I_S	I_{ECO}	I_{ENV}
Austria	2	9	1	2	5	1	1	5	2
Belgium	1	2	12	1	7	8	6	6	10
Czech Republic	10	6	6	6	3	4	7	3	5
Finland	9	4	10	8	6	13	2	7	1
France	8	10	3	4	12	2	4	12	3
Germany	6	3	2	3	8	3	3	4	4
Hungary	5	7	7	9	9	6	11	9	7
Italy	7	12	13	7	11	12	5	11	13
Latvia	11	1	5	11	2	10	10	1	12
Lithuania	13	14	4	12	13	7	8	14	8
Netherlands	14	8	14	14	4	14	14	8	14
Poland	12	5	11	13	10	5	13	10	6
Romania	4	11	9	10	1	11	12	2	11
United Kingdom	3	13	8	5	14	9	9	13	9

I_{ES} – social order, I_{ECO} – economic order, I_{ENV} – environmental order

Source: Own calculation.

The ranking of countries in terms of discussed indexes differs much both in groups and in years. The top positions in the area of social order in 2006 were occupied by: Belgium, Austria, United Kingdom and Romania. Although Belgium held its second place in terms of the economic order, it was ranked 12 for the environmental order. Austria was ranked high in terms of the environmental order, but they occupied far positions when it comes to the economic order. In the area of the economic and environmental order The United Kingdom took the 13th and 8th place respectively. In the consecutive years the following tendencies were followed only by Austria. Belgium and United Kingdom were ranked considerably lower in the rankings for the years 2012 and 2013. But Romania's situation in terms of the economic order improved much.

In the year 2013 Austria, Finland, Germany and France took high positions in the ranking for the social order. The countries ranked high in the area of economic order were: Latvia, Romania, Czech Republic and Germany. And in terms of environmental order: Finland, Austria, France and Germany. Unfortunately, Poland is ranked on far positions in terms of

every area of integrated order in all analyzed years, except for the years 2006 and 2012 when we saw it on position 5 when it comes to economic order in 2006 and environmental order in 2012.

The analysis of development measures whose value falls within the range of [0; 1], and which determine the similarity of individual objects to the object the best in terms of a given set of features (the higher the development measure value, the better) brings us to the following conclusion:

- In the field of social and environmental order, the development measures were close to unity in the case of the countries ranked on top places.
- The values of the development measure in the economic order area were far from unity - with the highest value of 0.38 in the years 2006 and 2012 and 3.9 in 2013.
- The social order development measure values varied much more than the ones of the environmental order, except for the year 2013.

This tells us that the development of the countries in terms of environmental order was high and that the situation concerning social order was good too. Yet all analyzed countries could do more to improve the results in the economic order area.

3. Challenges for Sustainable Transport in Poland

A look at the sustainable transport ranking of the countries in terms of all orders reveals negative tendencies in Poland. The development measure values for individual groups of indexes and years are far from unity and from the development measure values of the countries ranked highest.

In order to determine the direction of activities for sustainable development in transport, its individual modes were assessed. Table 2 compares the structure of transport of cargo and passengers according to the types of transportation in UE-27 and in Poland in the years 2011-2013.

The biggest share of cargo transport in transport total, across all analyzed years, is visible in road transport, for both UE-27 and Poland. In 2013 the share dropped slightly in the EU in comparison to the year 2011 (by 0.1 percentage point), and increased by 3.5 percentage point in Poland. The second biggest transport mode, when it comes to the volume of cargo transport, is railway mode. In 2013 its share in the UE and Poland decreased respectively by 0.6 percentage point and 3.5 percentage point. The other modes' share in the cargo transport is fractional. As for passenger transport, transportation in private cars is the most popular with the share in the passenger transport in general on the level higher than 80% for UE-27 and Poland, although in 2013 in Poland it was slightly lower.

Table 2: Modal Split of Inland Freight and Passenger Transport in Poland and European Union in Years 2011-2013

Specification		EU-27			Poland		
		2011	2012	2013	2011	2012	2013
Freight transport (% of total inland tonne-km)	Rail	18.4	18.2	17.8	20.5	18	17.0
	Road	75.5	75.1	75.4	79.4	81.9	82.9
	Inland waterways	6.2	6.7	6.7	0.1	0.0	0.0
Passenger transport (% of total inland passenger-km)	Trains	7.0	7.4	7.6	5.1	4.8	6.2
	Passenger cars	82.7	83.3	83.2	87.9	84.6	79.6
	Coaches and buses	8.8	9.2	9.2	5.8	10.7	14.1

Source: Transport [online], 2013; Transport [online], 2014; Transport [online], 2015.

Sustainable transport emphasizes the use of rail and river modes of transport as well as combined types. Here the situation in both EU and in Poland is not good. Excessive burden on road transport compromises its flow and leads to accidents and the pollution of the environment. Therefore, the increased popularity of road passenger and cargo transport is not conducive to any of the goals of sustainable development.

A sustainable transport policy should promote the modes of transport friendly to the environment in the first place. The predominant road transport should be replaced by rail and water transport. Unfortunately, the volume of rail and water transport of goods is smaller, and it is the type which negatively impacts the environment and worsens the level of safety on roads. Positive tendencies are observed in the utilization of rail transport for passengers. But the increase of this transport mode in passenger transport is little. And so the Polish strategy of sustainable transport should see the levelling of asymmetry of demand for road transport as its priority. It can be done through investments into modern railway infrastructure, especially the high speed rail.

Air pollution impacts not only the environment, but also human health. Poland deals with a serious problem connected with a high annual average weighted concentration of PM10 dust at urban-background stations localized in agglomerations. The PM10 dust contains particles of a diameter smaller than 10 micrometers which have a capacity to penetrate lungs which results in a deterioration of health of those suffering from lungs and heart diseases. The particles come mainly from municipal and transport sources. It seems then, that the goal of the Polish strategy of sustainable transport should be to reduce the PM10 dust from transport emission.

Poland is also among countries with the highest fatalities rate in road accidents per 1 million people. This measure reflects the level of safety in road transport. It also allows to speak of the quality of road infrastructure, vehicles safety standards, drivers' behaviour, road regulations and execution hereof. Poland, in terms of sustainable transport, should take steps to reduce the fatality rates in road accidents.

Another problem observed in Poland is the age structure of passenger cars. Vehicles between 10 and 15 years of age are the most numerous group in cars in general. Next come cars in the age frame of 16-20 years old. Cars produce air pollution and noise, consume a lot of energy

and their age is interrelated with their technical condition which influences safety. On the other hand, though, the possession of cars increases the mobility of people which is positive. It is advisable, therefore, to aim at the increase in the number of new cars and the reduction in the number of end-of-life cars.

Poland also shows an increase in the index of transport consumption with respect to cargo transport which points to an unwelcome phenomenon of a correlation between cargo transport and GDP. The Polish transport consumption index is also much higher than in the European Union. But it has been going down since 2011 which means there is at least some separation of the economic development from the energy consumption in transport.

4. Conclusion

The implementation of activities for the reduction of environmental impact is indispensable. Unfortunately, although there exist common guidelines in this respect, European countries, especially the ones belonging to the European Union, realize the concept of sustainable transport to varying degrees. This makes the analysis of the effects of the undertaken initiatives for sustainable transport arguable. An assessment on the basis of a multidimensional data analysis does not allow to point out regularities in the results of the countries in individual areas of the integrated order for individual years. Austria is among the countries which lead in the realization of the concept of sustainable transport. It consequently fulfils its tasks and is ranked highest when it comes to the individual areas of integrated order in all years. What is more, the development measure value for Austria grew in the year 2012 and 2013 compared to the year 2006. A significant growth in the value of the social order development in 2013 compared to 2006 and 2012 was observed for all analyzed countries. This brings us to the conclusion that the countries were able to improve transport safety expressed by the number of accidents as well as the age structure of cars. High values of the development measure for social order in 2013 could have resulted from not considering the data concerning the age structure of cars.

Environmental order is the area where the analyzed indexes show the most favourable situation in the discussed countries. This should not come as a surprise as pro-environmental activities have become a priority in national development strategies due to global warming and environmental degradation. Unfortunately, the economies of the analyzed countries show some negative trends concerning transport. It seems then, that it is the area of the economic order where to encourage activities for sustainable transport.

In Poland the negative tendencies in terms of sustainable transport are observed especially in the area of social order. It means the need to improve road infrastructure, vehicle safety standards, driver's behaviour, road regulation and execution hereof. Poland should take steps in direction to change the age structure of cars – it is too much cars in the age 10 and more years old. Therefore, further investments in the solutions in the field of sustainable transport to be necessary.

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Solidarity – A Forgotten European Value or Panacea to the EU Crises?

Renata Mieńkowska-Norkiené

University of Warsaw

Institute of Political Science, Faculty of Journalism and Political Science

26/28 Krakowskie Przedmieście str., 00-927

Warsaw, Poland

e-mail: r.mienkowska@uw.edu.pl

Abstract

The European Union has been facing a cyclus of serious crises for about 8 years already. All of them have weakened not only the EU as a whole but also each of the Member States separately. This has caused two serious consequences being a subject of this analysis, namely 1. it has challenged the value of solidarity lying upon the European integration concept, 2. it has also undermined the EU's pursuit of achieving the competitive advantage, stated in the strategy Europe 2020. The lack of solidarity is particularly visible in the EU Member States' differentiated attitudes towards the migration crisis while reduction of determination in achieving competitive advantage is strongly related to consequences of the EU's economic crisis, threats for the single market (i. a. limitations within the Schengen zone), finally possible Brexit. The paper will focus on analysis of solidarity in the light of intergovernmental approach in the EU crisis management. The above-mentioned emanations of the crisis will serve as case studies in this regard.

Keywords: *Crisis Management, EU Competitive Advantage, European Values, Intergovernmentalism, Solidarity*

JEL Classification: *F500, F550, H110*

1. Introduction

It is hard to deny that the European Union has been facing a set of serious crises since 2008. Beginning with financial and economic crisis having resulted in deep Eurozone difficulties, through imigrants' crisis undermining the Schengen cooperation and challenging the EU's external relations until losening integration ties among the Member States (further in the text: MS) having lead to the British referendum on possible Brexit, the EU and the MS have undertaken numerous activities pointed towards defeating the crises. Each of these crises has shifted the EU towards intergovernmentalism - forcing even the strongest proponents of federalism as a finalité politique of the EU revise their approach towards this concept (Faiola, Birnbaum, 2012). The above mentioned shift has been both a result of weakening position of the EU non-intergovernmental institutions (having been strengthened constantly until 2008) (Marks, Hooge, Blank, 1996) as well as a consequence of a necessity for prompt actions of richer EU MS to support poorer MS – particularly endangered by all above mentioned types of crises (Moravcsik, 2012). Solidarity as a value lying upon the EU construction has served as an ethical explanation for the “rescue measures” applied in the framework of this specific “crisis management” (even the financial support dedicated to Greece and other MS in troubles was called “solidarity mechanism”), however, it has been also instrumentally used for political

purposes in almost every MS. For example, in financial and economic crisis, solidarity was used by Greece to require support from other Eurozone states (particularly Germany) while in migration crisis it is Germany (but also Greece) that expect solidarity from other EU Member States in accepting refugees and migrants having flooded in extreme numbers to these countries (ekathimerini.com [online], 2016). Each type of the crises recently faced by the EU has required different types of supporting actions, each of them has also challenged the value of solidarity in the EU to a different extent (Raspotnik, Jacob, Ventura, 2012). Furthermore, devoting energy of the EU institutions and MS to managing ad-hoc crises has lead to a lack of actions strengthening the EU competitive advantage foreseen in the Europe 2020 strategy. This, together with growing intergovernmental approach supported by stronger and stronger position of Germany in taking most important decisions regarding fighting the EU crises, has resulted in a deep crisis of the EU values, in questioning of the EU legitimacy, finally, in decreasing citizens' support for the EU in the MS.

1.1 Solidarity in the EU

“Everybody speaks about solidarity. But they all have their own dictionary.” (The Economist, 2015)

Reference to solidarity is expressed already in the Preamble of the Lisbon Treaty (both of Treaty on European Union and Treaty on Functioning of the European Union), however, it is pointed out as one of the basic EU values in the art. 2, art. 3 of the Treaty on European Union (European Union [online], 2007). Furthermore, solidarity among the MS is mentioned in the Treaty also in the context of external EU relations, area of freedom, security and justice, asylum and migrations, economic policy and energy, finally in Title VII devoted to solidarity clause as well as in the Charter of Fundamental Rights. (European Union [online], 2007). Already in 2007, before the financial and economic crisis but still in the process of ratification of the Treaty of Lisbon, solidarity as one of the most important European values was underlined in speeches of the most important European officials. J. M. D Barroso, President of the European Commission, in his speech in Warsaw, placed a lot of impact on solidarity as a condition of tackling main challenges of the 21st century, he also named this value a core of the European project (Barroso [online], 2007). Not all scientists agree on solidarity being one of the main values of the EU and even if, it is described as a horizontal rule complementary towards peace, human rights, democracy, liberty (Williams, 2010). This approach gives even more theoretical ground for solidarity to be instrumentally used by the MS for it is subordinate towards peace and security dominating national political debates in the context of the recent crises (Lahav, Guiraudon, 2010). Solidarity as a value naturally refers to community, strong cooperation, mutual understanding, therefore it may seem far from intuitive to put it in the context of an intergovernmental approach towards European integration. However, one should take here into consideration a very specific situation of examining the solidarity value – a situation of the largest and longest-lasting set of crises challenging the EU. Despite the fact that this value could be efficiently used by non-intergovernmental EU institutions as lying upon mechanisms of tackling tough crises in the MS, it has capitulated to the pressure of the MS regarding providing security and quick solutions to their citizens' fears.

1.2 Intergovernmental Approach

Intergovernmental theory which is also identified as realism and its more modern version - neorealism, has defined European integration in terms of international cooperation as well as of collaboration which may at any time be interrupted and in which the most important reasons

for staying within the common entity are related to separate interests of the MS (while others are secondary) (Rosamond, 2002).

The crises have challenged the trust of citizens in the EU, particularly taking into consideration the fact that a part of responsibility for the crises has been put directly on the EU institutions. This has created conditions for MS' governments to regain influence on tackling the crises and has encouraged radical political parties to use this "wave of renationalization" in the European integration process to raise nationalistic and anti-European postulates. As a result of this process intergovernmental perspective on European integration has got strengthened, which has negatively influenced belief of the EU citizens in such European values as: solidarity, community, peace. In times of crises, in particular in perspective of the internal differentiation of interests among the MS within the EU, political concerns grow to ensure the efficiency of measures of dealing with the crises perceived from national perspective, particularly in the non-Eurozone countries (able to use their currencies' value to fight the financial and economic crises). Therefore such approaches - hitherto dominating in the debated on the European integration - as neofunctionalism (Haas, 1958; Risse, 2005), institutionalism (particularly rational choice institutionalism and constructivism) (Checkel, 2001; Moravcsik, 2001), Multi-Level Governance (Marks, Hooge 2001) or community method have lost their explanatory power of the integration processes.

1.3 Importance of the EU Competitive Advantage

Despite the fact that the whole concept of the European Communities has been based on pursuit of economic and social welfare, only at the end of the 20th and at the beginning of the 21st century the EU has realized a necessity of achievement of competitive advantage on global arena. In March 2000, for the first time in the history of the European Communities, a socio-economic strategy of achieving EU's competitive advantage was signed by the MS. The strategy consisted of such elements as: innovation, market liberalization, enhancing entrepreneurship and social cohesion (The Lisbon Strategy [online] 2010). The strategy didn't fulfill hope put in it (due to its problematically broad scope and far from fully-efficient method of implementation through the so called "Open Method of Coordination"). Financial and economic EU crises ultimately ended dreams about achieving the Lisbon strategy indicators and it was replaced by the new strategy Europe 2020 oriented much less towards competitive advantage in its strictly market-related aspects and much more towards achieving sustainable development, social inclusion and welfare as conditions to win the global economic battle. In this regard, taking into consideration the fact that the EU hasn't passed the Lisbon strategy exam, Europe 2020 has been instrumentally used by the MS to explain some reforms to their citizens while the EU institutions have controlled fulfilling the indicators (Stan, Bujor [online], 2012).

Despite the fact that numerous analysts point out rather little chance that the EU will gain competitive advantage globally soon, the process of implementation of the Europe 2020 strategy gives some incentives to the MS to contribute to the European growth – not only to get oriented towards national economic interests. This may strengthen solidarity among the MS particularly since "welfare", "sustainable development", "inclusive social and economic policy" sound much more citizen-friendly than "market competitive advantage". So, in plain words, implementation of the Europe 2020 strategy is a field in which the EU MS act intergovernmentally, however, with a constant awareness of a necessity for solidarity and cooperation in order to have any chance to grow globally and not to fall into a trap of economic isolation and lack of mechanisms of economic crisis management.

2. Problem Formulation, Methodology and the Context

The crises EU has been facing for over 8 years have undermined the value of solidarity of the MS in its both political as well as economic dimensions. The rule has lost its power as a lighthouse of the European integration and has begun to serve as an instrument of pressure in intergovernmental bargaining.

Community method with its finalité politique being a federal European state has lost its meaning and potential, various types of institutionalisms, particularly constructivism have been treated as suitable for the academics only while intergovernmentalism, particularly in its liberal version, has become a proper lens for observing efforts of the EU MS to defeat the crises. Solidarity does not seem to be the strongest value in the intergovernmental approach, however, each of the EU crises has challenged it to a different extent. All this has led to a meaningful shift from pursuit of achieving competitive advantage in global economy, based on positive incentives from the EU towards the MS to contribute to enhancement of innovation and economic development, towards fight for regaining full control over political decisions regarding economic development and fighting financial and economic crises. This, obviously, means stepping back in the European integration and puts into question an issue of stronger and more efficient economic and political cooperation within the EU as well as challenges the future of the Eurozone as a political project. So, despite the fact that those three issues, namely: solidarity value, intergovernmentalism as an approach towards the EU integration, finally pursuit of European competitive advantage on global economic stage seem not to have that much in common, this paper is designed to examine an importance of all of them for finding a proper way of modernizing the EU towards its more efficient and more democratic functioning as well as quicker and more effective managing future crises. Shortly speaking, intergovernmentalism appeared as a result of weakening of the EU non-intergovernmental institutions in tackling the main EU crises and it has dethroned other approaches not only regarding scientific analysis of the EU but also perception of the MS.

The paper has been designed to shortly answer a few main research questions, namely: 1. To what extent have the EU crises strengthened the shift towards intergovernmental approach in the EU integration? 2. How has the meaning and scope of the solidarity as the main EU value changed over time in the EU's citizens' perception due to the EU crises? 3. To what extent have strong intergovernmental approach and instrumentalization of the solidarity value influenced pursuit for competitive advantage in the EU? 4. Does solidarity as an important European value have a potential to contribute to efficient reform of the European Union leading to strengthening its mechanisms of dealing with potential crises in the future? The answers will be elaborated on the basis of an in-depth analysis of the solidarity value as both legal and axiological basis of the European integration in difficult times of crises as well as on the basis of examination of stronger and stronger intergovernmental approach towards the EU integration as well as impact of this process on the EU efforts to gain competitive advantage on global economic stage. The analyses will be conducted on the basis of the three crises having challenged the EU as a whole and the MS, they will also embrace three main levels of examination: a level of the EU and its institutions, a level of the EU MS, finally a level of the EU citizens.

2.1 Economic Crisis

Financial and then economic crisis in the EU has undermined the EU's dream of becoming the most competitive economy in the world. Despite the fact that other large world economies have also faced major difficulties, the EU as a set of individual MS couldn't quickly and

efficiently undertake measures suitable for all the MS and resulting in strengthening the whole EU. An important aspect of the crises was the division within the EU resulting from the fact of existence of the Eurozone and a group of MS staying outside of the Eurozone. The latter, among them Poland, have used natural devaluation of their currencies to tackle the crises more efficiently, however, now they show much less motivation to adopt euro in the near future and risk the two-speed Europe.

Instruments of fight against the economic crisis affected the entire EU and the Eurozone, but the effects of their application needed to be clearly visible for each country separately in order to satisfy citizens' expectations. This strengthened intergovernmental perspective, resulting in a number of eurozone countries (i.a. Estonia and Slovakia) opposing to the instruments of solidarity towards the most vulnerable countries (Greece, Portugal, Spain). The opposition was based on a sense of being used in the name of actual implementation of particular interests of Germany, France and the Benelux countries (interested in constant trade with the countries in difficulty being their important export markets). Not only solidarity as a value was put to the test in the context of the economic crisis but also less attention was paid to the neighborhood policy and security of the EU external surroundings. This led to less awareness in the context of the Russian-Ukrainian crisis as well as in the context of changes in North Africa and the emerging migration crisis. It is, however, worth mentioning that the EU non-intergovernmental institutions haven't used great examples of solidarity in the Eurozone crisis to strengthen this value in other areas of other types of crisis. A lack of efficient communication strategy has resulted in decrease in meaning of solidarity.

2.2 Migration Crisis

Eastern European EU Member States are reluctant towards the migrants' quota system and show hardly any solidarity with those Member States that have been affected by the migrants' influx the most. The main reasons for that are strongly rooted in both already pointed out shift towards nationalization of anti-crisis measures, strengthening intergovernmental approach towards the EU as well as instrumentalization of the solidarity as a European value perceived by the Eastern European citizens as a tool of rich western countries' pressure on them leading to deepening inequalities among the Member States. So, despite increase of negative attitudes towards immigrants from the outside of the EU in majority of the Member States, roots of this process seem to be different in Western and in Eastern EU Member States. Taking into consideration political discourse regarding migration crisis in Eastern European countries, it is necessary to mention that the EU strategy on that matter has been perceived as dictated by Germany (BBC [online], 2016). For example, Estonian government has faced the biggest debate in the history of this country's integration with the EU regarding solidarity and importance of protecting national interests in the face of the migration crisis. A seriousness of the migration crisis can be seen on the basis of the two charts below pointing out attitudes of the citizens of the EU Member States towards immigration of people from outside of the European Union. Fairly or very negative attitude towards immigration grew meaningfully over a year (since 2014) in the whole EU, particularly in Eastern European countries perceiving debated over European solidarity in the context of this particular crisis as instrumentalization of this important European value for the sake of Germany and those EU Member States which might benefit or at least lose the least if they accept the immigrants. It is also worth mentioning that the discourse in the EU Member States about political meaning of the problem of migration for Chancellor Merkel or Scandinavian politics only confirms suspicions of the Eastern European countries that solidarity may not be absolute and universal if they need support and it is not politically meaningful for any of these MS.

Table 1: Attitude of the EU and Selected Member States' Citizens towards Immigration of People from Outside of the EU (11/2014-05/2015-11/2015)

Date	Very positive	Fairly positive	Fairly negative	Very negative	Don't know
EU					
11/2014	6.81 %	28.08 %	35.90 %	20.78 %	8.43 %
05/2015	6.47 %	27.81 %	37.45 %	18.67 %	9.60 %
11/2015	6.23 %	27.58 %	35.15 %	24.02 %	7.02 %
Finland					
11/2014	6.99 %	36.73 %	37.62 %	13.97 %	4.69 %
05/2015	3.75 %	33.66 %	41.46 %	15.79 %	5.33 %
11/2015	2.69 %	28.02 %	40.08 %	24.03 %	5.18 %
Sweden					
11/2014	22.87 %	48.97 %	16.81 %	8.11 %	3.23 %
05/2015	18.13 %	47.54 %	25.07 %	6.17 %	3.09 %
11/2015	20.83 %	48.92 %	18.86 %	8.35 %	3.05 %
Germany					
11/2014	5.40 %	24.35 %	40.50 %	19.88 %	9.88 %
05/2015	7.46 %	31.21 %	38.48 %	14.74 %	8.11 %
11/2015	5.55 %	29.31 %	38.41 %	20.21 %	6.52 %
Hungary					
11/2014	6.31 %	21.56 %	39.08 %	27.68 %	5.37 %
05/2015	4.74 %	18.39 %	41.99 %	27.96 %	6.92 %
11/2015	4.12 %	11.88 %	30.46 %	51.44 %	2.11 %
Poland					
11/2014	6.58 %	32.24 %	32.91 %	11.42 %	16.84 %
05/2015	4.01 %	28.66 %	41.58 %	11.52 %	14.23 %
11/2015	3.06 %	23.32 %	37.75 %	24.41 %	11.46 %
Latvia					
11/2014	2.39 %	13.55 %	46.22 %	32.47 %	5.38 %
05/2015	1.29 %	13.32 %	44.73 %	32.50 %	8.15 %
11/2015	2.40 %	8.08 %	36.43 %	49.10 %	3.99 %

Source: Eurobarometer 2015

The question of possible Brexit has resulted from the previous EU crises, however, it was strengthened by instrumental use of solidarity rule by Germany (mainly) to solve its economic and political problem. The United Kingdom has always challenged the EU in a situation of growing meaning of Germany and weakening sense of community among the MS. It seems that this crisis just completes the other two and it cannot be sufficiently analyzed before the referendum is held.

3. Problem Solution and Conclusion

The EU requires deep modernization and full redefinition of its main goals, values and strategies both internally and taking into consideration its position in global political and economic relations. The EU needs to modernize its Europe 2020 strategy towards more incentives for the MS to implement it as an indispensable element of national economic strategies, oriented not only towards solidarity instrumentally used by stronger and richer countries to require more contribution from the more vulnerable ones but also towards solidarity as political argument for citizens of every EU MS convincing them about grounding for rational and common goals-driven cooperation of all EU MS where there is no impression

of domination of any of them. Paradoxically, weakening position of Germany in tackling the EU migration crisis may strengthen cooperation of the EU MS to efficiently tackle the crisis without a threat to the Schengen zone. This means that in modernizing the EU solidarity needs to gain new, common meaning for all the MS and this meaning (maybe pointed out expressis verbis in a new treaty) needs to embrace responsibility of stronger and richer MS for the poorer without impression that this responsibility works only if these states may obviously benefit from it. Overwhelming impression in the EU that there is a specific dictate of Germany (or German-French-Belgian triangle) in the EU decision-making process (whether within the European Council or solely on bilateral or multilateral basis) will always put solidarity into question and will undermine any dreams about modernized and solidary EU able to manage any crisis. Furthermore, intergovernmental approach towards the EU needs to be reduced in favour of a constructivist or community approach by self-strengthening the role of non-intergovernmental EU institutions. This should be achieved by better communication of the EU values, priority and goals to the EU citizens and by more dialogue with citizens of those EU MS that have the most nationally-oriented approach towards tackling the crises. Efficient communication of the non-intergovernmental EU institutions with citizens of the EU MS on the question of immigrants from outside the EU, including solidarity into the discourse about different types of crises that the EU has faced, country-oriented approach of the EU non-intergovernmental institutions regarding the most widespread fears of the EU MS citizens' could become efficient in reducing scepticism towards the EU anti-crises measures. Furthermore, the EU needs modernization towards more efficiency in developing complex strategy of managing multiple-crises. Such strategy could be based on solidarity as the main basis for tackling different type of crises – by this the weaker and more nationalistically oriented MS could get more political arguments for supporting the EU anti-crises measures and less reluctance in explaining them to their citizens (for solidarity would also mean supporting them by richer and stronger MS within mechanisms based on solidarity). It is also extremely necessary to strengthen the discourse both on the EU and the MS level on the EU's position on global market, however, with necessary impact placed on EUROPE 2020 priorities. More incentives are also needed for the most vulnerable and economically weakest MS to enhance their innovativeness. Now it seems that these aspects are abandoned in the context of more serious aspects of the EU crises. This should change and the EU non-intergovernmental institutions should be the main actors here. To sum the article up, it seems that solidarity has been recently neither a forgotten value in the EU nor is it panacea to the EU crises, particularly bearing in mind its broad meaning and tendencies of the Member States to its instrumental use. However, when newly defined and used as a basis for a complex EU crisis-management strategy, it has a large potential of becoming a cornerstone for the reformed European Union.

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25th Anniversary of the Visegrad Group Formation in the Context of the EU Cohesion

Eva Minarčíková

VŠB - Technical University of Ostrava
Faculty of Economics, Department of European Integration
Sokolská třída 33
Ostrava, Czech Republic
e-mail: eva.minarcikova@vsb.cz

Abstract

The Visegrad Group was established in February 1991 as a political project and consists of four countries (Czech Republic, Slovakia, Hungary and Poland). The original intention was to promote and to deepen cooperation among the Central European countries. Over the past 25 years, Visegrad states have achieved a deep political and economic transformation. After the entry to the EU, the socioeconomic development of the Group has been strongly linked to European funding. Although the disparities have been reduced in the Group at the national and regional level with contribution of the EU Cohesion policy, differences have still persisted, especially among regions. The aspects of an internal cohesion and solidarity have a special importance in the continuing current cooperation, practice and coordination of the Visegrad countries positions at the EU meetings.

Keywords: EU Cohesion Policy, Disparities, Regions, Visegrad Group

JEL Classification: O18, R11, Y10

1. Introduction

In the year 2016, the Visegrad Group (Visegrad Four, V4) celebrates the 25th anniversary of its foundation. The V4 countries share the same geographic location, common history and also some development problems. A support of cohesion and competitiveness of the V4 countries has become an important goal of the EU and Visegrad governments in the preparing of countries for the accession to the EU. After the entry of the Visegrad countries to the EU, European structural funds have played a key role in public investments which have boosted the socioeconomic development and have helped to decrease the regional diversity. The level of regional disparities had also a significant impact on the V4 eligibility for EU funding in the current period of the EU Cohesion policy 2014–2020. The EU Cohesion policy is one of the main areas of V4 coordination talks at the European level and it is also the goal of the Czech Presidency of the Visegrad Group from the July 2015 till the June 2016.

On the occasion of the 25th anniversary of the Visegrad Group foundation the *first goal of this paper* is to describe the evolution of the Visegrad Group and its priorities in the area of internal cohesion. *The second goal of the paper* is to evaluate the trend in economic disparities at national and regional level of V4 countries in the context of the EU cohesion in the period 2004–2014.

2. Evolution of the Visegrad Group

The Visegrad countries and their economies have made significant progress and since accession to the EU have gained the opportunity to become important players in European affairs.

2.1 History of the Visegrad Group

The *Visegrad Agreement*⁷⁵ was signed in the year 1991 between the three Central European states – Hungary, Poland and Czechoslovakia (after the split of Czechoslovakia the Slovak Republic became a new member in the year 1993). The general aim that fostered the cooperation was the need to get rid of the remnants of the Communist Bloc, overcoming the historical animosities and fulfilling the common goals as transformation and integration into European Union. In the first years of Visegrad Group existence, mainly security issues were discussed. After that, the intensity of the cooperation has weakened only to be re-established again in the year 1998. In May 1999, the *Contents of Visegrad Cooperation* was approved in Bratislava and the areas of further cooperation were closer specified. At that time, the topics of security were at the core of attention. In the year 1999 three out of four countries joined the NATO. Slovakia entered the NATO later, in the year 2004 (Brazova, Matczak, Takacs, 2013). In the year 2000, the *International Visegrad Fund* (IVF) was established with the objective to support closer collaboration between the V4 countries and between people in the region (Government of Czech Republic, 2016). It was also stated that Visegrad cooperation is based on the existence of *informal institutions*. The Visegrad Group's operations are based solely on the principle of periodical meetings of the member states' representatives (prime ministers, heads of states, ministers etc). Official prime ministerial summits take place on the annual basis. Between these official summits one of V4 countries holds presidency over the Group (Visegrad Group, 2015). An important milestone for all the V4 countries was their common accession to the EU in the year 2004. After joining the EU, the *Kroměříž Declaration* was signed in May 2004. It was stated that the key objectives set in the 1991 have been achieved and the determination to continue developing the cooperation of the Visegrad countries within the EU and NATO was stressed. Subsequently, foreign policy activities of the V4 grew significantly. The cooperation with other European countries and also non-European countries takes place in the *V4+ format*. The principles of cooperation within the V4+ are provided in the *Annex to the Contents of Visegrad Cooperation* from the year 2002 (Brazova, Matczak, Takacs, 2013, p. 8). Besides the V4+ also a model of narrow cooperation exists in the form of *Regional Partnership*. The Regional Partnership (V4+2) includes exclusively cooperation with Austria and Slovenia. This cooperation includes especially internal security issues, including border-related matters or questions of asylum. Other areas of common interest are cultural cooperation and the creation of common infrastructure project (Brazova, Matczak, Takacs, 2013; Strážay, 2015). In February 2011, the *Bratislava Declaration* was signed on occasion of the 20th anniversary of the V4 cooperation. Regarding the aims of further cooperation, the impact of the global financial and the regional gas energy crises was apparent. Also the need to combat terrorism, trafficking of drugs and human beings, illegal migration and extremism was stressed (Brazova, Matczak, Takacs, 2013, p.10).

⁷⁵ Declaration on Cooperation between the Czech and Slovak Federal Republic, the Republic of Poland and the Republic of Hungary in Striving for European Integration.

2.2 Achievements and current priorities of the Visegrad Group

During the 25 years, Visegrad Group has made significant achievements in the field of the political, sectoral and external cooperation. *Political cooperation* includes bilateral and multilateral cooperation within the V4 and cooperation at the EU level. A prerequisite for any Visegrad initiative is the participation of all four countries, as decisions at the V4 level are taken only if the representatives of all countries reach a consensus. The successful coordination of positions on the EU-related issues has also enhanced the reputation of the V4 countries among the other EU members. The EU itself is perceived by V4 countries not only as a modernization project or source of funds, but as an opportunity to shape various policies and pursue regional interests. In general, the V4 has become a well-recognized trademark and part of the overall “European architecture.” The significance of the V4 was demonstrated during the debate over the EU budget 2014–2020 and the EU Cohesion policy, and in the case of the climate and energy package. A coordinated position towards illegal migration also shows the ability of the V4 to respond jointly to common challenges. In the *sectoral cooperation* certain progress has been achieved in the fields of energy, infrastructure, security and defence. In the *cooperation with other countries* the achievements are represented by the EU neighbourhood policy and enlargement policy (Strážay, 2015, p. 2).

In July 2015, the *Czech Republic* took over the Presidency of the Visegrad Group from Slovakia⁷⁶. The motto of the Czech Presidency is “V4 Trust” and the priorities of the programme are framed by the need to increase the V4’s *togetherness* and *internal cohesion* (Think Visegrad, 2016, p. 3). The main thematic priorities of the Czech Presidency include: 1. Togetherness, 2. Energy, 3. European Neighbourhood Policy, Enlargement Policy, Transition Support and Development Aid, 4. Security and Defence Cooperation, 5. Active Practising of the Solidarity Principle in the EU, 6. Digital Agenda and Development of Infrastructure, 7. Combating Tax Fraud and Evasion (Visegrad Group, 2015). Within thematic priority 5. *Active Practising of the Solidarity Principle in the EU*, it is stated that the Czech Republic will continue in the close cooperation and coordination of positions of the V4 countries both before important EU meetings, as well as during regular meetings. The main areas of coordination include economic policy (e.g. the internal market and digital agenda), transport, energy, climate protection, asylum and migration. The special importance for the Czech Presidency has the aspect of *solidarity* in the European integration. It comprises the *social dimension of integration* and the *EU Cohesion policy*. Because of the importance of the EU Cohesion policy for the V4, the goal of the Presidency is to thoroughly discuss the future of the Cohesion policy and the *European Structural and Investment Funds* (ESIF). It is stated to coordinating the positions of the V4 countries, it is necessary to share the sustainable and measurable results of the Cohesion policy in the EU countries and contribute to a unified Commission approach towards all Member States. The Czech Presidency also wants to help simplify the administration of the Cohesion Policy’s implementation at the EU level, maximise the use of funding, complete and close the 2007–2013 period. Furthermore, the Czech Republic will endeavour to make use of the possibilities of joint cross-border projects funded under the *Investment Plan for Europe*. (Visegrad Group, 2015)

⁷⁶ Since the start of Presidency, the Czech Republic has already organised three Prime Minister summits. The last extraordinary summit on migration crisis took place on 15th February 2016. On that date *Joint Statement of the Prime Ministers of the Visegrad Group Countries on the 25th V4 Anniversary* was announced.

3. The Role of the EU Cohesion Policy in the Visegrad Group

The Funds of the EU Cohesion policy cover a wide spectrum of activities that help to increase economic and social growth of the EU Member States, especially in the Visegrad countries.

3.1 The EU Cohesion Policy

The EU Cohesion policy plays the critical role in the task of delivering smart, sustainable and inclusive growth of the European countries and regions. The idea of the EU Cohesion policy is to enhance socioeconomic cohesion among regions by supporting development of the poorest areas of the EU. An implementation level of the EU Cohesion policy represents NUTS 2 regions. The implementation of the Policy is realised by multiannual programmes co-financed by ESIF. In the year 2011, the European Commission (EC) decided that the Cohesion policy should remain an essential element of the next financial package and underlined its pivotal role in delivering the Europe 2020 Strategy. The total budget of the EU Cohesion policy is 325.1 billion Eur for the period 2014–2020. The Cohesion policy 2014–2020 pursues two objectives: *Investment for growth and jobs* and *European territorial cooperation*. According to the EC, every European region may benefit from the support of the ESIF and thus three categories of regions have been newly proposed (less developed, transitional and more developed regions).

3.2 Implementation of the EU Cohesion policy in the Visegrad Group

On preparing the applicant countries for the EU membership, Visegrad countries had the possibility to use three main pre-accession instruments – PHARE, ISPA and SAPARD. The functioning of regional policy in line with EU principles and practices was an important aspect of evaluation by the EC of progress made by candidate countries. After accession to the EU, countries have had a responsibility for the implementation of the structural funds in the amount of 20.3 billion Eur for the period 2004–2006. It represented the vast majority of funds for newly admitted Member States. As it can be derived from the table 1, in the period 2007–2013 the Cohesion policy funding in Visegrad Group amounted to 130.9 billion Eur. Till the end of the year 2015, the EC has paid out 87.4% of the available funds in the Czech Republic, 89.4% of the available funds of Hungary, 94.9% of the available funds of Poland and 85.3% of the available funds of Slovakia (European Commission, 2016).

Table 1: Financial Allocations of the Cohesion Policy for V4 Countries (in Billion Eur)

Programming period	2004–2006	2007–2013	2014–2020
Czech R.	2.6	26.7	24.2
Hungary	3.2	25.3	25.0
Poland	12.8	67.3	86.0
Slovakia	1.7	11.6	15.3

Source: European Commission, 2016; author's processing, 2016

Since the beginning of the period 2007–2013 till the year 2014, amongst other achievements, the Cohesion policy investments have helped the Czech Republic to create more than 15000 jobs, provide direct investment aid to almost 6000 SMEs or invested in 190 renewable energy projects. In Hungary was created more than 75000 jobs, supported more than 3500 research and technical development projects and 1700 km of road has been reconstructed. In Poland the EU funding has resulted for example in training for 6.7 million people, also more than 3.2 million citizen benefit from improved urban transport. Thanks to the EU investments, Slovakia provided e.g. direct investment aid to almost 1000 SMEs and served 3300 more people with waste water and water projects (European Commission, 2016). The EU Cohesion policy is

largely funded by EU-15 countries (almost all of which are net contributors to the EU budget), while V4 states are the main beneficiaries among the new Member States. The effects of the EU Cohesion policy funding have been distributed not only among V4 countries but the implementation of the Cohesion policy in V4 countries has also brought the benefits to EU-15 countries, see Ministry of Regional Development (2011). For the period 2014–2020, Visegrad Group has been allocated from ESIF 150.5 billion Eur. Of the four V4 countries, Poland is the main beneficiary of the EU financial support.

4. Evaluation of Disparities in the Visegrad Group in Terms of Cohesion

The economic and social disparities in the level of regional performance are a major obstacle to the balanced and harmonious development of the EU as well as Visegrad Group. From this reason, the attention has been focused on the assessment and subsequent elimination of the regional disparities to strengthen the cohesion and competitiveness of the Member states and their regions and thus the EU as whole.

4.1 Approach to Regional Disparities and Cohesion Evaluation in the EU

In the European concept, the level of disparities can be regarded as a measure of cohesion. According to Molle (2007) the cohesion can be expressed by a level of disparities between states, regions or groups that are politically and socially tolerable. The lower of these differences, the higher the level of cohesion and vice versa. Evaluation of European cohesion thus results from the progress of economic, social and territorial disparities between states that reflect the level of convergence of EU countries. The regional disparities are evaluated by the selected regional indicators used in the *Reports on Economic, Social and Territorial Cohesion* published by the EC. Several indicators of regional disparities are processed by researchers by different quantitative methods or approaches. Suitable *univariate methods* that describe the variation of the individual regional indicators represent traffic light method, standard deviation, range or coefficient of variation. In the process of regional disparities evaluation *multivariate statistical methods* are more useful, e.g. cluster analysis and factor analysis, see e.g. Campo, Monteiro, Soares (2008), Poledníková, Lelková (2012). Integrated approach consists in the calculation of a synthetic index of disparities use e.g. Melecký (2012). An alternative approach represents *multicriteria decision-making methods* (MCDM) that enable to rank the regions according to their level of economic, social and territorial development based on the distance to ideal solution, see Poledníková (2014), Melecký, Staničková (2011).

In this paper the regional disparities are measured by indicator *gross domestic product per capita* (GDP) in purchasing power standard (PPS) of the EU-28 average (EU28=100). The indicator of GDP represents main way how to measure the performance of the economy but in terms of evaluation of regional development has some limitation. In the context of the EU Cohesion policy, the level of GDP per capita remains the main criteria for eligibility of funding from the ESIF. Regional disparities in V4 countries are measured by the *coefficient of variation* (CV, in %). Coefficient of variation as “relative variability” represents the ratio of the *standard deviation* to the *mean*. Because of the data availability, the disparities among 4 states and 35 NUTS 2 regions of the Visegrad Group are analyzed in the period from the year 2004 (the year of the V4 entry to the EU) and till 2014 (the last available data at regional level).

4.2 Evaluation of Economic Disparities in the Visegrad Group at National Level

The EU Cohesion policy has helped to accelerate and facilitate the process of real convergence between countries and regions. In the year of the entry the V4 to the EU, the Czech Republic had the best starting position in the level of national as well as regional development (GDP per

capita in PPS of Czech Republic achieved 79% of the EU-28 average). On the other hand, Poland and Polish regions showed the worst economic performance (GDP per capita in PPS of Poland was 49% of the EU-28 average). In comparison with the Czech Republic or Hungary, Polish economy steady converged to the EU average in the period 2004–2014, even in the time of economic crisis. After ten years, GDP per capita of Poland was higher about 19 percentage points. Highest changes can be noticed in Slovakia, where GDP per capita was higher about 21 percentage points in the year 2014 compared to the year 2004. The Slovak economy grew with exception of the years 2009–2011. The convergence trends are seen also in Czech Republic and Hungary, although their GDP per capita was higher only about 6 percentage points at the end of period than at the beginning of the examined period. Hungarian economy struggled with stagnation in the years 2010–2012 while the Czech GDP per capita dropped in the years 2008, 2010 and 2012. Despite of a visible progress in the convergence of the V4 countries to the EU average and strengthening the economic cohesion, there are still substantial differences, especially between “old” EU-15 and “new” EU-13 Member States⁷⁷. In the year 2014, the value of GDP per capita in the richest country Luxembourg was almost 4 higher than in Poland and Hungary, 3.5 times higher than in Slovakia and 3 times higher than in the Czech Republic. In terms of the EU Cohesion Policy, in the programming period 2004–2014, the V4 countries has been considered as “cohesion countries” and they have been eligible for the financial assistance of the Cohesion Fund⁷⁸.

4.3 Evaluation of Economic Disparities in the Visegrad Group at Regional Level

Compared to the national convergence, the process of the convergence of V4 NUTS 2 regions is not so clear. Table 2 shows the values of coefficient of variation (CV, %) of the indicator GDP per capita (in PPS of the EU-28 average) in the period 2004–2014 that represents the regional disparities in given country and in the whole Group.

Table 2: Regional Disparities in GDP Per Capita in V4 Countries

State	Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Number of region	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)
CR	8	44	45	46	47	47	47	47	44	44	44	43
HU	7	38	39	41	42	42	43	43	42	41	41	40
PO	16	21	22	23	23	22	24	25	25	25	25	25
SL	4	60	67	64	65	63	68	68	69	67	69	67
V4	35	46	49	49	51	49	49	48	46	45	46	45

Source: Eurostat, 2016; author’s calculation, 2016

According to values of the CV, Visegrad countries can be rather seen as heterogeneous Group. Although in ten years, regional disparities in the economic performance of the V4 countries were reduced (the CV fell from 46% in the year 2004 to 45% in the year 2014), there are internal differences in the particular countries. Slovakia can be considered as the most

⁷⁷ There are also the differences in the competitiveness of the V4 countries. According to Staníčková (2013), in the period 2000-2011 Poland was highly efficient and achieved high level of competitive potential. On the contrary, Czech Republic, Hungary and Slovakia are considered as countries with lower competitive potential.

⁷⁸ The Cohesion Fund is aimed at Member States whose Gross National Income per capita is less than 90 % of the EU average.

heterogeneous country. Although there was noticed the convergence of GDP per capita to EU average in the period 2004–2014, value of CV over 60% indicated the high differences among NUTS 2 regions. As a result of economic crisis, regional disparities increased in the years 2009 and 2011 when GDP per capita dropped in all regions with exception of region Bratislavský kraj. As it can be derived from the table 2, the Czech Republic is the second country with highest internal disparities. Czech regions recorded the economic convergence during the period and reducing of regional disparities (in the year 2014 the CV achieved lower value compared to the year 2004), however Czech regions (including the most developed region Praha) had to face the impact of crisis the most from all V4 countries and regional differences increased (especially in the years 2008, 2010 and 2012). Also some of Hungarian regions struggled with the decline of GDP per capita in the years 2009, 2010 and 2012. The CV implied the regional disparities although the internal cohesion of Hungary is higher than in the Czech Republic. Poland can be seen as country with the lowest regional diversity. Although the CV was higher in the year 2014 compared to 2004, its value is the lowest from V4 (over 20%) that showed the small differences among NUTS 2 regions. Moreover, GDP per capita stably converged to the EU average for all examined period including the time of economic crisis.

The high value of CV in the Czech Republic and Slovakia is caused by dominant positions of regions with capital cities – Praha and Bratislavský kraj. Differences among regions with capital cities and the other regions have persisted in the V4 countries since the year 2004. In the year 2014, the highest range in the indicator of GDP per capita was between Slovak regions Bratislavský kraj (GDP per capita achieved 186%) and Východné Slovensko (GDP per capita achieved 53%). In terms of the GDP per capita, Bratislavský kraj represented the most developed regions in V4 countries, on the contrary Hungarian region Észak-Magyarország is considered the less developed region in Visegrad Group (GDP per capita was 42%). In the Czech Republic the highest disparities existed between regions Praha (GDP per capita amounted to 173%) and Severozápad (GDP per capita amounted to 63%). The lowest dominance of region with capital city is noticed in Poland, where the GDP per capita of the most developed region with capital city Mazowieckie achieved 108% and GDP per capita of the less developed region Lubelskie was 47%. It can be also confirmed by the coefficient of variation presented in the table 3 that shows the value of CV in particular V4 country after elimination of regions with capital cities (Praha, Közép-Magyarország, Mazowieckie and Bratislavský kraj) as outliers and decreasing the number of NUTS 2 regions.

Table 3: Regional Disparities in GDP Per Capita in V4 Countries (without Regions with Capital Cities)

State	Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Number of region	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)	CV (%)
CR	7	8	7	8	8	7	6	6	6	7	8	8
HU	6	21	20	21	21	21	17	21	22	21	21	23
PO	15	13	14	14	14	13	15	15	16	16	16	16
SL	3	12	15	18	18	15	16	15	17	17	16	15
V4	31	24	24	24	24	21	20	19	19	19	18	19

Source: Eurostat, 2016; author's calculation, 2016

As it can be seen from the table 3, during the period 2004–2014 regional disparities were reduced in V4 and 31 NUTS 2 regions represented more homogeneous group. It can be observed that the disparities among the rest of regions in the Czech Republic and Slovakia are

substantially lower after removing of regions with capital cities Praha and Bratislavský kraj. Small decrease in value of CV in Poland confirmed the lowest dominant position of region with capital city Mazowieckie. In the context of the EU Cohesion policy 2014–2020, all V4 regions with capital cities Praha, Közép-Magyarország, Mazowieckie and Bratislavský kraj have been classified as more developed regions (GDP per capita above 90% of the average GDP of the EU-27). Polish region Mazowieckie as only V4 region showed the increase in economic output in the period 2007–2009 and has been moved from the category less developed region (GDP per capita less than 75% of the average GDP of the EU-27) in the period 2007–2013 to the category more developed in the period 2014–2020. In the period 2014–2020 the rest of V4 regions have been claimed as less developed as in the period 2007–2013.

5. Conclusion

Despite the fact that the Visegrad Group has had to face many challenges over the past quarter-century, it has proved to be the most successful and viable model of regional cooperation within the broader region of Central Europe. The importance of the V4 cooperation was recognized to be especially in implementing the EU key priorities and programmes and in the contribution to the political and economic integration in Europe, including the EU and NATO enlargement. After the entry V4 countries to the EU, the European structural funds have been represented the key investment instruments for boosting growth of economy both at national and regional level. According the GDP per capita in PPS, the progress in the convergence of the V4 countries to the EU average and strengthening the economic cohesion was observed in the period 2004–2014. Based on the relative variability of GDP per capita, the process of convergence and strengthening of cohesion of V4 NUTS 2 regions is not so clear as at the national level. After ten years, regional disparities in the economic performance of V4 countries have been decreased, however there are internal differences in the particular V4 countries. The coefficient of variation showed and confirmed the fact that in the V4 countries regional disparities have persisted between regions with capital cities and the other regions since the year 2004 till now. The dominance of regions with capital cities results from its specific character as the main administrative, financial and cultural centres and also from statistical effect of NUTS 2 unit. The highest disparity between region with capital city and the other regions together with low internal cohesion are typical for Slovakia. The lowest dominance of region with capital city together with the highest level of cohesion is recorded in Poland. The issues of the dominance of regions with capital cities and impact of the EU regional classification on disparities evaluation, offer to conduct further analysis aiming to compare the results with those from other different EU countries and/or different territorial units (NUTS 3) using other quantitative methods.

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Ever-Closer or Multi-Speed Union

Boris Navrátil

VŠB - Technical University of Ostrava
Faculty of Economics, Department of European Integration
Sokolská třída 33
Ostrava, Czech Republic
e-mail: boris.navratil@vsb.cz

Abstract

*The current stagnation or crisis of the European integration process is a threat to Europe's future, since so far achieved *acquis* can be gradually dismantled. This period should be overcome by a joint effort of EU member states, since no country in the continent should be deprived of the possibility of equal participation on the degree of progress and peaceful coexistence. Just as with previous enlargements also the future ones will be mainly determined by political decisions of EU member states. Economic decisions will play a secondary role, even though the entire European integration process will slow down its pace in terms of the full economic union. Europe's future must lie in a pluralistic institutional arrangement, in which the different ideas about the future of European integration found its specific form.*

Keywords: *Economic Governance, Economic Policy, European Semester, European Union*

JEL Classification: *F02, F15, F36*

1. Introduction

The current stagnation or crisis of the European integration process is a threat to Europe's future, since so far achieved *acquis* can be gradually dismantled (Bitzenis, 2015). The European Union has harboured more than only one union in its legal and institutional order.

Let us start from the definition of the union. The *union* concept is derived from well-established theoretical base. According to the classic definition by Forsyth (1981) a union of states might be considered a genus to which belong or belonged different species or relationships that states establish or established among themselves, e.g. as federal union. Federal political system can be conceptualized by two basic species: the first which is formed through of aggregation of formerly independent states and the second formed through disaggregation of a previously unitary state. The former started as *federal unions* (e.g. the European Union) and the latter as *federal states*. If federal states have a government as a single institution monopolizing the ultimate decision-making power, federal unions do not have a government as a single institution, but take decisions through separate institutions sharing power, each one having a voice in the decision-making process. The latter's very complex system is the outcome of a systemic need unknown to the federal states that emerge from the disaggregation of previously unitary nation states, namely to keep on board or to aggregate states of different sizes, with different cultural identities and distinct democratic expectations (Fabbrini, 2015).

The very concept of *union* was formally used firstly in the preamble of the Rome Treaty (1957) establishing the European Economic Community, when the signatory states expressed their determination "to lay the foundations of an ever-closer union among the peoples of Europe".

This conception was strengthened thirty-five years later in the Maastricht Treaty on European Union (1992). The twelve signatory states affirmed their solution “to continue the process of creating an ever closer union”. Since then, *union* is the term used to conceptualize the organizational form assumed by the changing outcome of the European integration process. The concept of union of states and citizens seems appropriate for the EU because, being the outcome of aggregation of previously separated states, it is closer to a federal union than to a federal state. The EU is a union because it has a basic properties of federation formed through the aggregation of previously independent states, but at the same time it differs from the other federal unions because it operates according to a plurality of different decision-making regimes.

The European Union is now created by twenty-eight member states that can be regarded in many respects as different. Some of them pursue different aims, rather than simply moving in the same direction, albeit at different speeds. The founding members (Germany, France, Italy, Belgium, Luxembourg and The Netherlands) are advancing towards a genuine economic and monetary union and also prefer the establishment of a political union. Other countries (e.g. the United Kingdom, Sweden or Denmark) are likely interested only in market cooperation. Countries that have changed to liberal market economies as the last (Visegrad Group and Balkan countries) are not prepared to relinquish some of its recently acquired powers in favor of the Union. The aim of the candidate and potential candidate countries is primarily to stabilize their economies and participate in the benefits of the EU cohesion policy. For a number of other countries in which membership in the European Union initially was not anticipated, the situation has changed. Ukraine, Moldova and Georgia see their future in the anchorage in Western security and economic structures, despite of it disrupts Russia's hegemonic role in the Eastern Europe.

The enlargement process has not led the member states to share a common sense of the finality of the Union. It is obvious that different groups of countries assume different perspective of development, which should the European Union take in the future. Therefore, it will be necessary to create a political ever-closer union around the euro-area countries but keeping the internal market as the exclusive framework for all the other European countries.

2. A Different Situation of Member States Results in Different Needs

In the last crisis destabilizing role of financial markets has been accompanied by heavy indebtedness that spreads across the member countries of the euro-area. This situation has forced the leaders of the European Union to adopt a range of new measures at the supranational level.

Profound differences in the economic situation of member countries can now be monitored due to new mechanisms that have been introduced under the new economic governance. Since 2012 the implementation of the EU's economic governance is organized annually in a cycle, known as the European Semester, as part of which:

- the European Commission analyses the fiscal and structural reform policies of every member state, provides recommendations, and monitors their implementation;
- the member states implement the commonly agreed policies.

The following section will discuss the differences between the member states of the European Union in terms of the extent of macroeconomic imbalances that threaten them.

The Macroeconomic Imbalance Procedure (MIP) is a surveillance mechanism to detect and address economic trends that may adversely affect the proper functioning of a member state,

the euro area, or the EU. It aims to identify potential risks early on, prevent the emergence of harmful macroeconomic imbalances and correct the imbalances that are already in place. The annual starting point of this procedure is the Alert Mechanism Report (AMR) based on a scoreboard of indicators. It identifies countries for which a closer analysis (in-depth review, IDR) is deemed necessary. The outcome of these in-depth reviews forms the basis for further steps under the procedure whereby a graduated approach is followed reflecting the gravity of imbalances. Countries for which imbalances are considered excessive would be subject to an enhanced process of specific monitoring or could enter so called the Excessive Imbalance Procedure, which can eventually lead to sanctions for euro-area member states in case of reiterated lack of compliance with obligations.

2.1 Macroeconomic Imbalances in 2016

Based on the results, countries are selected for in-depth reviews, where European Commission services examine the existence or persistence of imbalances in member states. In light of the results of the 2015 Alert Mechanism Report, eighteen countries were analysed in in-depth reviews. Austria and Estonia were analysed for the first time, while sixteen countries were subject to IDRs to assess the evolution of the imbalances that were identified in the IDRs of February 2015.

Of the 18 countries identified for an in-depth review (IDR) in the Alert Mechanism Report (AMR) of 26 November 2015, twelve are deemed to experience imbalances. The main findings can be summarised as follows:

- Bulgaria, Croatia, France and Italy and Portugal are found to be experiencing excessive imbalances without triggering the Excessive Imbalances Procedure.
- Finland, Germany, Ireland, the Netherlands, Spain, Sweden and Slovenia are found to be experiencing imbalances.
- Austria and Estonia, which had in-depth reviews for the first time this year, are deemed not to be experiencing imbalances.
- Belgium, Hungary, Romania and the United Kingdom are found not to be experiencing imbalances. The procedure has been closed as the risks from imbalances have been reduced.

Table 1 Changes in MIP Categories and Member States Categorization (2015 – 2016)

2015	2016
Excessive imbalances with corrective action plan (Excessive Imbalance Procedure, EIP)	Excessive imbalances with corrective action plan (Excessive Imbalance Procedure, EIP)
Excessive imbalances, which require decisive policy action and specific monitoring - BG, FR, HR, IT, PT	Excessive imbalances - BG, FR, HR, IT, PT
Imbalances, which require decisive policy action and specific monitoring - IE, SI, ES	Imbalances - IE, SI, ES, FI, DE, NL, SE
Imbalances, which require decisive policy action and monitoring - DE, HU	
Imbalances, which require policy action and monitoring - BE, FI, NL, RO, SE, UK	
No imbalances	No imbalances - AT, BE, EE, HU, RO, UK

Source: http://ec.europa.eu/economy_finance/economic_governance/macroeconomic_imbalance_procedure/mip_reports/index_en.htm#reviews

The results of the in-depth reviews will be taken into account in the next steps of the European Semester. All member states that are found to have imbalances or excessive imbalances (without an excessive imbalance procedure) will be subject to specific monitoring, adapted to the degree and nature of the imbalances. This will enhance the surveillance of their policy response through an intensified dialogue with the national authorities, missions and progress reports. Countries undergoing macroeconomic adjustment programmes are not mentioned in the above table. It concerns Greece and Cyprus in 2016 and also Ireland, Portugal and Romania in previous years.

The adjustment of the existing imbalances is taking place in a challenging environment. In particular, subdued nominal growth related to the very low level of inflation hampers the deleveraging process, and the weakening of world demand reduces the prospects for an export-led recovery. Still, the correction of imbalances is progressing.

In countries with high external liabilities, the large current account deficits of the pre-crisis period have been considerably reduced or even turned into surpluses. In some Member States, surpluses persist and remain very large. Cost competitiveness has generally improved and there is evidence of structural adjustment in terms of resources shifting to the tradable sector.

Unemployment is declining, albeit to different degrees across the Member States. The external balance of the euro area is currently posting one of the world's largest current account surpluses. The surpluses of a few countries stand out in terms of their size and reflect subdued aggregate demand. This may indicate an excess of domestic savings over investment.

In most countries, the process of balance-sheet repairs is progressing, with deleveraging ongoing in the household and corporate sector, and bank capitalisation improving. In most countries, deleveraging is mainly linked to reduced spending, while in some countries, the relative level of debt has gone down due to robust growth. In this context, vulnerabilities associated with elevated levels of debt remain a source of concern.

All member states found to have imbalances or excessive imbalances (without an Excessive Imbalances Procedure) will be subject to specific monitoring adapted to the degree and nature of the imbalances. An intensified dialogue with the national authorities, missions and progress reports will enhance the surveillance of the member states policy response.

2.2 The EU Members Faced with New Risks and Challenges

The focus of IDRs reflects the specific risks and challenges countries are facing. The IDR structure generally consists of three or four sections dealing with the main external or internal imbalances and, where deemed appropriate, the adjustment process. As macroeconomic imbalances take time to resolve, the focus of the IDR analysis tends to remain stable over the years.

For a number of countries, however, recent developments have led to the emergence of new risks, which are for the first time assessed in the context of the MIP. The IDRs cover a wide range of topics, including external rebalancing, cost and non-cost competitiveness, indebtedness, financial sector developments and labour market adjustment. For large countries, a section is devoted to the analysis of potential spillovers.

Based on the full set of information available, for each member states, the European Commission services have identified, economic areas where imbalances are present (see Table 2) and have reached conclusions on the degree of severity of the associated risks and the remaining policy challenges.

Table 2 Areas in which Macroeconomic Imbalances Have Been Found (2016)

Topics	Countries
External rebalancing	HR, DE, HU, IE, PT, RO, ES
Cost/non-cost competitiveness	BE, FI, FR, IE, IT, PT, SI, RO
Household debt/housing markets	IE, NL, ES, SE, UK
Corporate indebtedness	BG, HR, IE, PT
Public debt risks	BE, HR, FR, HU, IE, IT, PT, ES
Financial sector, banks	BG, HU, IE, IT, RO, SI, SE
Adjustment (labour)	BG, HR, HU, IE, PT, ES
Other	RO, HR

Source: European Commission (2015)

3. Assessment of Macroeconomic Risks for the EU Member States

This chapter summarises the findings concerning the origin, persistence, aggravation or unwinding of imbalances and risks, as well as the adjustment process that is necessary for their correction:

- External rebalancing is ongoing, but progress has not yet translated into significant reduction in the stocks of external debt, while large current account surpluses have not adjusted. Most of the debtor countries, which used to run sizeable current account deficits before the crisis, are now recording positions close to balance or in surplus. Conversely, current account surpluses in net creditor countries remain persistently large, implying a progressive growth of the stock of their external assets. From this aspect, the EU trade strategy, which was approved for the period 2006-2010, might also have contributed to the improvement of the trade balance of these countries (Fojtíková, 2011).
- Private deleveraging is underway but the outstanding amounts of debt are in general still too elevated and not compatible with a firm recovery. In the stocks of external debt, while large current account surpluses have not adjusted. Despite some overall progress in terms of debt deleveraging, debt overhang and bad debt risk compromising the prospects for a recovery of credit in some countries.
- Large net external liabilities remain a major vulnerability in some countries and the ongoing process of rebalancing is only partly structural. These stocks of external liabilities constitute a vulnerability and need to be brought back to more prudent levels to prevent risks of capital outflows amid re-appraisal of risks by investors. The current account improvements recorded in previous years were to a large extent non-cyclical, since imports were reduced on a permanent basis as a result of reduced potential output in the non-tradable sector: as the recovery brings back output close to potential, current account balances move to a deficit position, which will however not be as large as before the crisis. Nevertheless, higher growth rates will be compatible with successful rebalancing only if structural reforms and supportive policies are effective in boosting export potential and in accelerating the transition from tradables to non-tradables. The structure of economy and economic size as well as the trade competitiveness of the individual countries will also play an important role in increasing the export potential and achieving trade balance. (Fojtíková, 2014).
- Persistently high current account surpluses reflect weak investment dynamics in some cases, especially it deals with Germany and the Netherlands. A net financial position in surplus recorded for the whole economy may reflect a different distribution of the

surplus across the various sectors of the economy depending on the country considered. Although risks linked to positive stocks of net foreign assets cannot be compared with those arising from negative stocks, the continuous accumulation of net foreign assets may imply growing exposure to exchange rate risk and reduced room for national authorities to reduce risk (e.g., via prudential or regulatory measures) as the share of assets in domestic portfolios originating in foreign countries grow larger.

- Competitiveness remains an issue in a number of member states. Cost competitiveness gains were recorded especially in terms of relative reductions in unit labour costs, partly as a result of job shedding, partly in light of wage moderation.
- Concerns about the high level of private and public debt persist in a number of member states. Although the adjustment of private sector balance-sheets is advancing, the high level of private debt represents a source of risk whose severity varies across countries and sectors. In most countries, deleveraging is still ongoing and bringing back the stock of household debt to more prudent levels. High corporate indebtedness is not only a source of risks for the financial sector which, in some cases, is still struggling with high ratios of Non-Performing Loans but it is also a drag on the flow of new credit, investment and employment growth. Public debt remains at very high levels, above 90 % of GDP, in Belgium, Ireland, Spain, France, Italy, and Portugal. Although substantial consolidation efforts have been carried out over the past few years in the majority of countries, the pace of adjustment has slowed down, reflecting both cyclical conditions and reduced fiscal effort.
- The quality of the adjustment to imbalances linked to external deficits and heavy indebtedness has implications for growth and employment. Debt deleveraging necessarily implies reduced credit supply and demand, and subdued consumption and investment demand for some time. A part of the adjustment of outstanding debt stocks is also taking place through write-offs of non-performing loans and insolvency proceedings. Supportive frameworks in this respect would help such a process looking forward. The contribution of nominal GDP growth to the reduction of the debt burden is low and is expected to start kicking in only gradually.

4. Conclusion

Cross-country differentials in economic growth, inflation, persistent current account or financial account imbalances, real effective rate appreciation, and the setting up of a leveraged and highly integrated banking system and many others were the most striking developments.

Under the shadow of the process of objective constitutionalization, deep macroeconomic divisions between member states have continued to emerge. These divisions express in terms of alternative perspectives on the European Union. Each one is based on reading what the EU is and reflecting a view of what the EU should become.

A “one-size-fits-all” mentality treats society as the mere sum total of its individuals rather than understanding that the whole of each society is greater than the sum of its parts. The process of integration should be based on more than one union or on more than one speed conducting it to the aim. Thus the European Union should be an open system based institutionally on multiple separations of powers and politically by interstate rivalry.

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The Migration and the Search for European Identity

Lubomír Nenička

Silesian University in Opava

School of Business Administration, Department of Economy and Public
Administration

Univerzitní náměstí 1934/3

Karviná, Czech Republic

e-mail : nenicka@opf.slu.cz

Abstract

The ever increasing rate of immigration was one of the most important change for European society in the second half of the 20th century and beginning of the 21th century. The paper focuses on impacts of mass immigration and its consequences for perceptions of European and national identity. While Europe is aware of its inner diversity and, moreover, marks diversity as one of its characteristics, current refugee crisis seems to endanger it. The influx of refugees and immigrants inspires to the search for a roots national and cultural identity which is often defined in an opposition to the distinct world of the „others“. The paper analyses how immigration influences discussions about the substance of the European and national identity in the connection with further perspectives of European integration.

Keywords: Migration, Refugees, European and national identity, European integration

JEL Classification: F59, J15, K37, N34, N44

1. Introduction

After Second World War openness towards foreigners characterised attitude of European governments. The growing problems with integration of immigrants questioned original tolerance. Immigration policy began more intensively influenced discussions about European integration and its relation to national identities. In the traditional definition, a nation is constituted by inhabitants of the same state or country, who have been joined by a common ancestry, sharing in the same culture and speaking the same language. However, there are multiple other definitions of a nation. In addition to objective (ethnic) definitions a different approach has emerged, emphasizing a conscious affiliation with a society and its values, whereby the category of national identity is understood as subjective.

The first part of the paper will be dedicated to the changes in perceptions of Europeanness in the past and the present. The final part will discuss the interconnections between international relations and national identities in a specific part of Europe – Czechoslovakia and the Czech Republic. The term refugee is used here according to the definition from United Nations Conventions Relating to the Status of Refugees.

2. Changes of European and National Identity

Success of European integration after the Second World War was possible due to many factors. Tony Judt (2005) reminded that key politics of the main member's states (Konrad Adenauer, Robert Schumann and Alcide di Gasperi) came from peripheral regions of their countries. These regions were characterised by various ethnic identities and by changes of boundaries. For politics as Schumann or Adenauer the project of European integration had not only political and economic dimensions, but also cultural importance. International cooperation has been presented as a new opportunity for Europe. In the first half of the 20th century, European culture faced a decline in power, sealed at the end of the Second World War by the USA taking over the position of world dominance. After centuries of unsuccessful plans and proposals, Europe's only hope was in a new common space.

Eurobarometer usually provides the most complex and recent information about the attitudes of inhabitants of the EU member states towards European identity. Individual reports on public opinion inform us about the attitudes of „common“ Europeans. According to the surveys from spring 2009 democratic values were considered the most important element of European identity (41 %). While welfare state has a higher preference in the Czech Republic than in the average of the EU, the rest of the answers are more or less similar. Among other important elements of European identity were common history and culture, even though it is not entirely clear how respondents understood the latter of the two. It is typical for current understanding of Europeanness that only few people labelled common religious heritage as important. Finally, it is only 5% of respondents who do not think that European identity even exists – a good news for its proponents. (See Table 1)

Table 1: The importance of Aspects of European Identity

Selected aspects of Europeanness	EU 27 (in %)
Democratic values	41
High quality of social protection	24
Common history	24
Common culture	23
Geography	25
Private enterprises	11
Common religious heritage	8
European identity does not exist	5

Source: Eurobarometr 2009. National report – Czech Republic

Results from recent years shows increasing emphasis on identification with democratic principles, common culture and history. (See Table 2)

Table 2: Main Elements of European Identity

Selected aspects of European identity	June 2013 EU in %	Nov.-Dec. 2014 EU in %	Sept.-2015 EU in %
The values of democracy and freedom	40	47	49
The single currency, euro	42	40	39
Culture	26	28	30
History	27	24	27
Geography	23	18	19
The success of European economy	21	20	19
The EU motto (Unity in diversity)	10	13	13
The European flag	15	13	13
The European anthem	5	5	5

Source: European Parliament Eurobarometer. Parlemeter 2015 – Part II.

What can be concluded from the surveys is that even though European identity is not clearly defined, it is not altogether non-existent as well. However, the surveys do not make entirely clear what the respondents understood under various terms, such as „common cultural traditions.“ That they brought to the front the role of democratic values and marginalized religion may suggest the legacy of the Enlightenment (democratic values, civic liberties, etc.). It should be noted, however, that some of the characteristics are in conflict: for example, the respondents listed a very subjective „feeling as a European“ as the main European characteristics. In another part of the survey, however, they put much more objective categories of common history and (non-specified) common culture high on the list. Overall, the vagueness of the criteria offered to respondents challenges their objectivity and scientific as well as political usefulness, and moreover flattens the very specific history of individual European countries.

The results of public opinion polls, including those mentioned above, suggest that presuppositions for the development of a European identity do exist. According to the 2004 survey, 72.3% respondents from across the EU were proud of being European, which Dieter Fuchs and Andrea Schlenker (2006) interpret as proving the existence of emotional ties to Europeanness. They further argue that an inhabitant of the EU can have a double identity – national as well as European. Europeanness, however, can hardly compete with the longstanding national identities, unimaginable without the existence of a nation-state. While further integration of the EU would enhance European identity, it could weaken the autonomy of nation-states. Both authors argue that to shield away potential conflicts, Europe needs further democratization, drawing on the consensus of its inhabitants, which, at the same time, would not threaten the autonomy of individual nation-states. The national past, seemingly overcome, has not been as overcome as we may want to think. The growth of nationalism in Europe has been influenced by the increasing influx of immigrants and refugees.

3. Immigration and its Consequences

An awareness of a common identity first appeared already in Ancient Greece, during the wars with the Persian Empire. Europeanness was once again defined in opposition to others. Now

across Europe, there have been voices presenting current immigrations as a threat to national identities and European civilisation. Analysis of various historical experiences with the migration can understand different approaches in the immigration policies.

3.1 Europeanness, National Identity and Immigration

After Second World War policies regulating immigration were very liberal. In 1960s and 1970s, Germany and Switzerland especially attracted immigrants from European as well as non-European countries as a welcome labour force. Western Germany, for example, hired its labour force from Italy, Spain, Greece and Yugoslavia as well as a few countries in northern Africa (Morocco, Tunisia). An agreement with Turkey from 1961 occupied a special place, as it was responsible for a sharp increase in Turkish immigrant population in Western Germany: between 1968-1973 the percentage of the Turkish labour population grew from 10.7 to almost 23 % of all labour immigrants. Expressed in real numbers, the mining industry and other key industries were employing over a million Turkish labourers in the 1970s. (Bade, 2004). As these workers, both Turkish and others, were welcomed as „gastarbeiters“ („guest workers“), their stay in Germany was meant to be only temporary. Therefore, official politics of Western Germany in 1960s and 1970s gave only minimum opportunities for these immigrants to integrate, and in addition, a government programme in 1970s framed the already low integration of the Turkish and other workers as a „temporary integration“ („Integration auf Zeit“) (Barša, 1999). The consequences of the economic crisis in 1970s contributed to the shift in the labour immigration policy. Immigrants have since been considered a threat to the „welfare state“, a problem, and the welcoming immigration policy has been openly criticized. More and more sounded critical voices against integration policy based on multiculturalism.

In its traditional sense, multiculturalism puts an emphasis on cultural diversity and makes it a value on its own. Multiculturalism thus promoted the cultural specificities of immigrant communities. Among the more vocal critics of traditional multiculturalism is famous Italian political scientist Giovanni Sartori who claims that one of the basic elements of a successful integration is reciprocity. This means that an entry into a country should bring about both „gain and compromise“. In his opinion, the immigration policy should aim at creating a plural society as opposed to a multicultural one which deems diversity a priority. The truly plural society does not demand assimilation from immigrants but presupposes a mutual respect to each other's difference, including a respect for the majority's traditions and principles. According to Sartori (2005), the project of multiculturalism stands in opposition to pluralism because multiculturalism not simply highlights differences but „produces“ them, and tries to make them visible. It comes as a no surprise then that Sartori's main focus are problems with the integration of Muslims. He considers naive the belief that the Muslim immigrants would integrate into the majority because of the Western „attractions“ such as freedom (as expressed in the voting system) and welfare. According to him, the Muslim immigrant in fact cannot reach prosperity, and Western values are alien to him/her. As a consequence, many Muslim immigrants feel alienated in Europe and find their consolation „in a belief and a mosque“.

Changing approach to multiculturalism can be presented on the example of the Netherlands. Liberal immigration policy has been overshadowed by misunderstandings and mutual attacks, peaking with the murder of a controversial journalist and filmmaker Theo van Gogh. Problems with immigration raised questions about the substance of the Dutch national identity. Paul Scheffer's essay „Multicultural Drama,“ debated even in the Dutch Parliament, sparked off new debates about old issues. In this essay, Scheffer argued that multiculturalism had not prevented the rise of ethnic segregation. He further claimed that in order to more effectively integrate immigrants, the Dutch identity would have to become more solid. Scheffer appealed

to the government to make a proactive step which he thought would motivate immigrants to integrate into the national culture. The following debates however, as Baukje Prins (2005) argue, were times and again centred on what actually constituted „Dutchness.“ By defining national identity, the Dutch would lay basic principles of what it meant to be a member of a Dutch society, and define rules that were to be binding for everyone.

Valeria Bello (2016) proves, that importance of own traditions and customs could be supporting for positive approach towards culture of “other”. According to Bello the inclusiveness to immigrants depending on constructions of open identity (COP) which including access to citizenships, access to labour markets, access to political systems, solidarity and frequency of social contacts. According to criteria of COP index the highest rate of inclusive identity is typical for Nordic countries and the lowest rate for East European states. Different levels and perceptions of national identity are connected with various historical development and experiences. According to Hroch (1997) construction of national identity in Eastern Europe in 19th century was influenced by different conditions in the comparison with Western countries (foreign rule, missing statehood). This differences deepened the rise of Communist regimes in following century.

3.2 Historical Specifics of Immigration Policy – Case of Czechoslovakia

In comparison with Western countries, immigration policy in Central and Eastern Europe has been influenced by different historical experience and political factors which had a stronger impact on it. Influences of local specifics will be analyzed by example of Czechoslovakia.

Czechoslovakia created itself as a democratic state along Western lines and presented itself as a member of the European West. Further, by international relations with Western European powers, the new state strove to promote its international legitimacy. Czech politicians liked to remind everyone of their membership in the Western part of the world, too. Typically, Czechoslovakia was considered the „most Western“ of all states standing „in line“ for self-determination during the peace negotiations after the first World War. American historian Andrea Orzoff, (2009, p. 9) quotes the memories the British diplomats had of the negotiations: „Almost everyone in Paris liked and admired the Czechs and their leaders. The Poles were dashing and brave, but quite unreasonable, the Yugoslavs, well, rather Balkan. The Czechs, however, were refreshingly Western...“ Another typical feature of Czech national identity is "ethnicisation". It means that members of national community came to be defined on an ethnic basis (Hroch, Matějčková, 2000). The conflicts between the ethnic and civil conception of national identity influenced the different approaches to the immigrants and refugees.

In 1930's Czechoslovakia had become a target for thousands of German and Austrian political refugees. The exact numbers of refugees is unknown but it is estimated that more than 22 000 Germans, Austrians and Jews found their temporary home in Czechoslovakia. The interwar period is characterized by a higher number of emigrants. However, for many of them was typical the primary economic motivation. Liberal tendencies in the immigration policy were significantly limited by social consequences of Great Depression warned that the social situation would get worse and a crime rate would increase as a supposedly natural response to increasing numbers of „foreign emigrants“ and settlers. Headlines of their biased articles speak for themselves – „1400 emigrants found a job to the detriment of our unemployed“ or „Emigrants, eating up bread of our almost starving intelligentsia“ (Večer 1934). These debates had paved a way to future attempts to balance generosity of Czechoslovak foreign policy of 1930's with the situation after Munich agreement. In comparison with the period of the second republic, voices of those who sympathised with and provided a helping hand to the refugees

were many. The restrictive approach was fully enforced at the time of so-called Second Republic. Facing huge pressure brought about by the Agreement, proclaimed tolerance towards „foreign emigrants” was replaced by a belief that it is necessary to promote national interests. The country's character and its foreign policies were about to be changed. The Munich Agreement had marked the beginning of a decade of dramatic shifts and changes in Central European space and decreased its previous national and cultural diversity. Historian Karel Bartošek (2003, p. 84) reminds us that it was precisely this decade that witnessed the disappearance of Jewish and German minorities which had previously shaped the cultural and social uniqueness of this geographical area. *„It was an end to a Central Europe whose history lasted several centuries. The period of mutual „contact and conflict“ of cultures and societies of Western Slavs, Germans and Jews was over once and for all“*

Post-war Czechoslovakia was being reconstructed as a nation of Czechs and Slovaks. Expulsion of Germans was one of the important step in homogenization of country, which was typical trend of Czechoslovak post-war development (Uherek, 2011) Typical trend was ethnically selective immigration policy reflected the state's political orientation. The state controlled immigration was presented as an act of solidarity as well as an expression of a political opinion and international orientation. Inland and depopulated area of the Sudetenland in 1947 and 1950 were settled by about 202 526 returnees from Ukraine, Romania, Bulgaria and also from non-European countries. (Drbohlav, 2010). Czechoslovakia became a refuge for about 13 000 Greeks who left their war-torn country. Greek community in Czechoslovakia was one of the largest in the Soviet bloc - more Greek emigrants (14 000) lived only in USSR. (Králová- Tsivos, 2011).

Acceptance of Greek refugees was connected with settlement of Czech borderlands, from where the majority German inhabitants were displaced after World War II. The main Greek communities formed in northern Bohemia and particularly in northern Moravia and in Silesia. Quite new national situation in these regions influenced the way of care for Greek refugees and their integration. Greek refugees had to face various prejudices and xenophobia. The approaches of authorities in this question show the form of integration policy in communist Czechoslovakia. The report of the Czechoslovak Communist Party organization in Třinec presented the rumour on theft and assaults committed by Greek refugees as a work of “reaction” – the political forces connected with previous regimes. Thus, aversion to the particular group of foreigners was interpreted at the official level as politically hostile. (National Archive). Options for the social and political integration of Greek refugees at the turn of the 40s and 50s were affected by the conviction of the temporary nature of emigration. The Greek refugees have managed to integrate into the mainstream society without any major problems in the following period. It can be said that even more successfully than other national and ethnic groups in post-war Czechoslovakia. The main reason was political affinity. The anticipated temporary emigration and the mandatory way of integration policies played a significant role as well.

Experiences from the past determinate changes of Czech immigration policy after fall of Communist regime. The Czech Republic has gradually become a target country for increasing numbers of refugees and immigrants whose presence is often considered as threatening. Prevailing approaches confirm the trends towards the consolidation of individual integration. The main tendencies of Czech immigration policy in the present time are influenced by specific historical development including postwar national homogenization of the country and emphasizing of potential negative social and security impacts of migration

4. Conclusion

The viability of a European identity, however, remains an open question. The Europeans apparently do not have unequivocal definitions of the principles of European identity as recent discussions about the results of various surveys have demonstrated. There is a consensus however in the sense that to among the main principles belong pluralism and tolerance to otherness. Despite this consensus, there are voices against „foreign elements“ and against the threat coming from outside Europe. Moreover, publically endorsed Europeanness obviously does not prevent the existence of calls for the protection of national interests.

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. Typically, the Czechs consider their historical experience as well as international situation exceptional. 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.

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Polish Hospital Treatment Considering the Social Development of the Country Compared to the European Union Reality

Sylwia Nieszporska
Politechnika Częstochowska
Department of Management
ul. Armii Krajowej 19b
Częstochowa, Poland
e-mail: sylvniesz@poczta.onet.pl

Abstract

For many years the Polish health system has been in the process of finding the most optimal system, financial and legal solutions. The most popular aims of systems like equality and accessibility of services seem to not have been achieved in Poland, which is a cause for concern and a lack of trust among citizens, especially in a time of an increased demand for medical services. A varied degree of meeting the society health needs in different regions of the country is a particularly sensitive topic.

The presented paper is a proposition of the territorial disproportions estimation using features like: the number of hospitals, physicians, nurses, the number of treated in hospitals, beds and the public payer's expenditure for hospital services and their compatibility of distribution with respect to the Local Human Development Index. The Florence's Location Ratio and the data from 2010 for 16 Polish voivodships are used for this goal.

Keywords: Health Systems, the Human Development Index, the Florence's Location Ratio

JEL Classification: C10, I15, O15

1. Introduction

The right to health protection is one of the fundamental and undisputed patient rights in all EU health systems and in almost all other World States. Like in Poland, it is often governed by constitution (*The Constitution of the Republic of Poland, 1997*), the realization of which is possible with the coexistence of the principle of equal access to medical services.

The idea of the equal access to medical services seems to guide the efforts of all countries becoming the thrust of numerous international institutions, including the World Health Organization. Therefore, it is sought to ensure a uniform survivability of children all over the world, particularly in their infant years, to control and support the equal access to medical services for pregnant women, and, where it is limited, enable access to safe drinking-water (Millennium Development Goals). The nature of these issues tells us that inequalities in the access to such broadly understood health care are only recognized in a limited number of regions with a low level of socio-economic development. But as research shows, they are also present in a group of EU countries (Wörz, Foubister, Busse, 2006). They primarily stem from: the proportion of the population covered by health care, benefits covered by health care systems, cost-sharing arrangements, geographical barriers to access, organizational barriers to access, and possibly from a diversified level of the general social development of the countries.

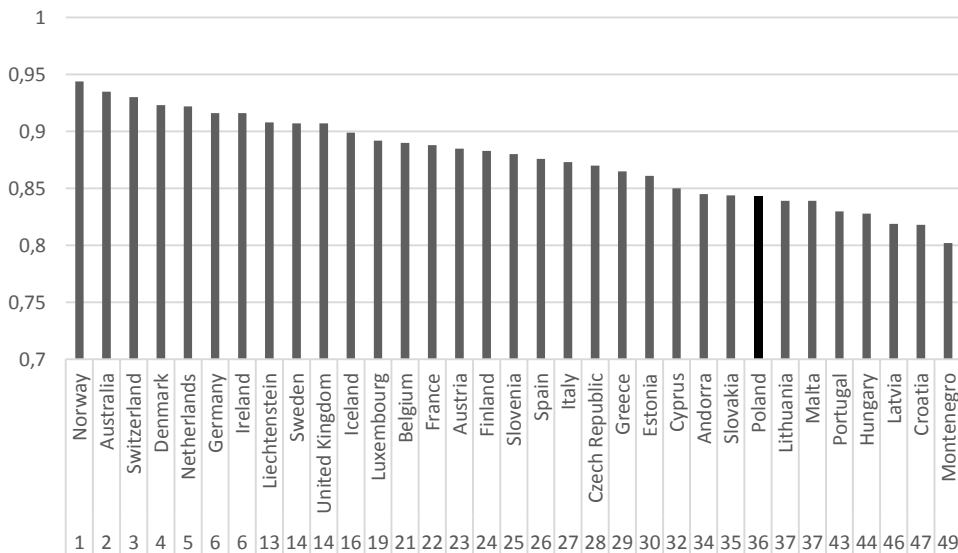
The interrelation of the social development level and the access to medical services is the subject of the present elaboration. A particular focus is placed on examining the influence of the local social development index on variables characterizing the operation of Polish hospitals in different regions of the country, which effectively is an analysis of potential territorial disproportions in the access to hospital services as dependable on the development of individual regions.

2. The Human Development Index

The human development index (*HDI*) is one of the most common and synthetic measures of the socio-economic state, not only at an international level. It is also used for regional-oriented debates (within a country or a different territory).

The index refers to a long life in good health, life on a proper educational level and to the access to resources necessary for maintaining a life standard and participating in a community. The first area of the discussed problems is represented by an average life expectancy. The educational sphere is connected with the average number of years of education of people above 25 and more years of age and the expected number of years of education for children starting it. The life standard is measured by per capita GDP at purchasing power parities.

Figure 1: HDI for Very High Developed European Countries in 2014



Source: Human Development Report 2015: Work for Human Development, United Nations Development Programme and Human Development Reports.

The index is a versatile measure not only from the standpoint of the synthetic formulation of the question of the social development of the analyzed regions. Due to its structure, it allows to determine social inequalities, sustainable development, welfare, prosperity, as well as asses the development level also outside the economic dimension.

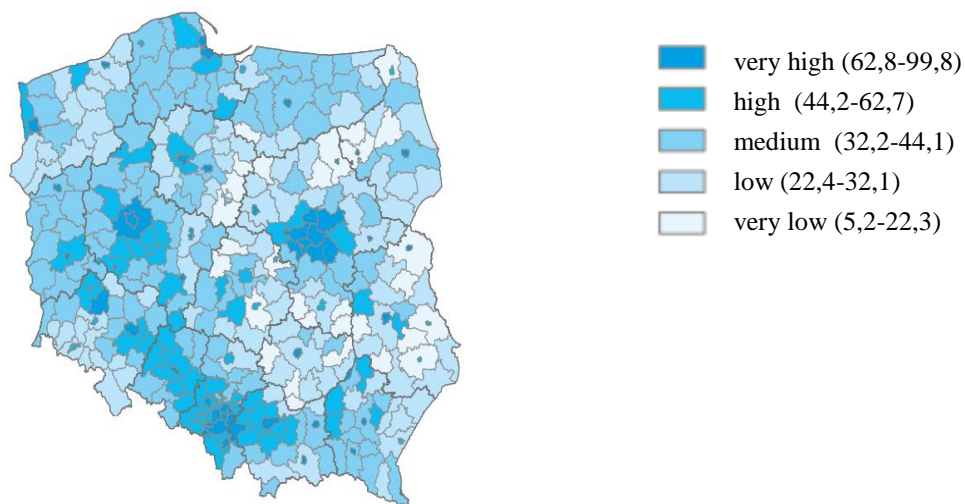
According to the data from United Nations Development Programme and Human Development Reports (*Human Development Report 2015*) in the group of 49 countries with a

very high Human Development Index in 2014 there were as many as 33 European countries (Fig.1). Poland was ranked only 36.

The *HDI* measure is the basis for the local social development indexes, which are values allowing to assess the variety of territorial entities (e.g. within a country) and see their strengths and weaknesses, thus becoming a significant help in determining long-term developmental policy goals and priorities for both local and central administrative units.

Since 1999 Poland has comprised of 16 provinces which are further divided into districts. They have not been measured for their social development for long as the earliest statistics for determining the Local Human Development Index (*LHDI*) date back to 2007 (*National Human Development Report Poland 2012, 2013*).

Figure 2: Local Human Development Index in Poland in 2010



Source: National Human Development Report Poland 2012, 2013.

As we see with the latest data (for the year 2010), the average LHDI for all Polish provinces hovered around 45,68% with a variation of 5,71% (which is about 12,5% of the average).

The province leading in 2010, was, as expected, the Mazovia Province (with the center in Warsaw), the Małopolska Province and the Pomerania Province. The provinces with the lowest social development level were: the Lublin Province, the Łódź Province, and the Świętokrzyskie Province (tab. 1).

With the LHDI construction, health was presented by the variables - later length of an infant's life, aggregated coefficient of deaths caused by cancer and heart diseases. The field of education was represented by the percentage of children in nursery education and the average score from the junior high school exam. The third sphere was represented by the affluence of citizens. Like in the case of HDI, LHDI was also decomposed into three indexes: health (HI), education (EI) and affluence (WI).

Table 1: LHDI and HI in 2010 the Polish Provinces

Province	LHDI	HI	Province	LHDI	HI
Lower Silesia	46.34	47.61	Podkarpacie	43.77	72.28
Kujawy-Pomerania	41.22	49.17	Podlaskie	44.4	66.08
Lubelskie	39.55	48.61	Pomorskie	51.14	71.28
Lubuskie	44.36	54.72	Śląskie	49.54	48.39
Łódzkie	39.28	31.48	Świętokrzyskie	36.78	45.95
Małopolskie	51.93	69.1	Warmia-Masuria	42.33	58.61
Mazovia	60.21	58.18	Wielkopolska	50.22	63.32
Opole	46.95	59.76	West Pomerania	42.89	52.31

Source: National Human Development Report Poland 2012. 2013.

3. Health and Hospital Services in Poland

As it is explicit in the information above, health today, apart from being an important element of the quality of life, is a matter of consideration in the context of the broadly understood social development. It should be the primary goal of a state to ensure conditions contributive to a long life of every citizen in good health, regardless of their affluence, worship, sex, or place of residence.

Determining primary issues concerning health in a given country lies within the power and goals of health systems (Toth, 2016), whose role is to cater to social needs, among others connected with hospital services.

The task of a Polish hospital is to ensure a long or short-term care consisting of observation, diagnostics, treatment and rehabilitation of people after injuries, the ill or possibly ill, women who are pregnant or in labour. A hospital can also provide out-patient care.

The biggest portion of the NHF's outlays in Poland is allocated to hospital care (e.g. in 2010 they constituted 35% of total outlays, *Health and Health Care in 2011*, 2012). As reports show, the diversification of the average NHF outlays on hospital services in individual Polish provinces seems low, whereas the concentration of the feature's value around the average is significant (Tab. 2). The coefficient of the average outlays variability for the years 2007-2010 is about 7,9% which is why we can describe these outlays as uniform in different provinces of the country. In that period, the Mazovia Province was the region with the highest NHF's output on hospital services (754,275 PLN/1 person). The value of these outlays differed strongly from the national average which for that period was on the level of 617 PLN per one person. The smallest outlays on hospital services in the 2007-2010 period, on the level of 544,12 PLN/person, was observed in the Podkarpacie Province.

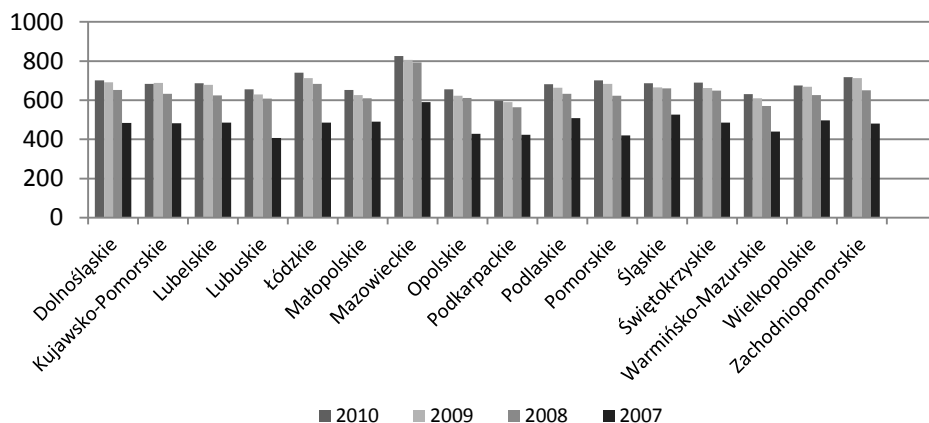
In as many as 7 Polish provinces the NHF outlays on hospital treatment are on the level below average. These provinces in the discussed period were: Lubuskie Province, Małopolska Province, Opole Province, the above mentioned Podkarpacie Province, Warmia-Masuria Province, and Wielkopolska Province.

Table 2: Basic Figures on Outlays on Hospital Treatment (zł/1 person) in the Years 2007-2010

Parameter	Value
Mean	616,65 PLN/1 person.
Median	619,33 PLN/1 person.
Standard deviation	48,75 PLN/1 person.
Variation coefficient	7.9%
Minimum	544,12 PLN/1 person.
Maximum	754,28 PLN/1 person.

Source: own calculations

The Mazovia Province was ahead the other regions in terms of the NHF's outlays on hospital treatment, both on average and in every analyzed year (Fig. 3). Contrary, the outlays of the above mentioned Podkarpackie Province were lowest in every year. Yet the analysis of the data shows clearly that every region of the country saw an increase in the discussed outlays, and their average growth of almost 34% was highest in 2008 compared to 2007.

Figure 3: The NHF Outlays on Hospital Treatment in the Years 2007-2010 (in PLN per One Person)

Source: own calculations

4. Polish Hospitals and the Social Development

The main goal of the present dissertation is to find the relationship between the social development of a country and the accessibility of public hospital services⁷⁹. To this end the analysis was divided into three steps.

The first part of the analysis was connected with the classic statistical analysis of variables describing the activity of hospitals. These were: *E* (outlays of the National Health Fund on hospital treatment), *NT* (number of people treated in hospitals), *NB* (number of hospital beds), *NB* (number of hospital person/days), *NP* (number of doctors employed in hospitals), *NN*

⁷⁹ Such relationships are interesting for many scholars (Bray, Jemal, Grey, Ferlay, Forman, 2012).

(number of nurses employed in hospitals). Each variable describing the activity of hospitals was calculated for 1 thousand people for each of the 16 provinces. The analysis was based on data from 2012. The results are shown in table 3.

As the data show, the average level of outlays on hospitals in 2012 was slightly higher than 756 thousand PLN/1 thousand people and, like in the preceding years (tab. 2), it did not have a big territorial diversification. Minor deviations from the average were also recorded in the case of the number of available hospital beds (8,33%) and the number of the employed nurses (8,78%). The number of doctors employed in hospitals is the biggest cause for concern. Its territorial diversification was as high as 37% which means the accessibility to doctors and accordingly to hospital services was very different from one province to another.

Table 3: Basic Statistics Describing the Activity of Hospitals in 2012

	<i>E</i>	<i>NB</i>	<i>NT</i>	<i>MD</i>	<i>NP</i>	<i>NN</i>
Mean	756.49	4.85	212.36	1.17	1.02	3.32
Standard deviation	38.92	0.40	21.41	0.12	0.38	0.29
Variation coefficient	5.14	8.33	10.08	10.44	37.39	8.78
Median	758.32	4.88	209.09	1.16	1.05	3.33
Minimum	699.33	3.96	176.07	0.92	0.43	2.83
Maximum	856.43	5.63	250.58	1.40	1.65	3.80

Source: own calculations

The second part of the empirical analysis focused on finding the relationship between the social development of regions and the variables of the activity of hospitals. First the coefficients of correlation between the above mentioned features and the *LHDI* index for the year 2010 were calculated.

In the course of the analysis (tab. 4) we learned that there was a strong and positive linear correlation between the local index of social development and each of the above mentioned variables describing the activity of hospitals.

Table 4: Pearson's Coefficient for the Analyzed Features

	<i>E</i>	<i>NB</i>	<i>NT</i>	<i>MD</i>	<i>NP</i>	<i>NN</i>
LHDI	0.77122	0.60712	0.65698	0.61490	0.61670	0.65152

Source: Own calculations

The calculations bring us to the conclusion that the correlation between *LHDI* and its Health Index component turns out relatively weak (Pearson's coefficient is equal to 0,497326929). Similarly, the correlation between *HI* and the variables representing the activity of hospitals is surprisingly low. For this reason the further part of the empirical analysis focused on variables connected with the education and affluence of the society without the consideration of the expected life length of infants and the aggregated coefficient of deaths from cancers and heart diseases.

In the third part of the analysis we attempt to assess the spatial disproportions in the distribution of features describing the activity of hospitals and the affluence of the society represented by GDP expressed in current prices in millions PLN and the number of university graduates (*HS*)

representing the education level. Like before, each of these variables was analyzed as a typical value in every province in 2012.

In this stage we used the so called Florence localisation index (F), which offers a general insight into the spatial structure of phenomena, i.e. their mutual territorial distribution. It is assumed that with the value of the analyzed index below 0,25, the analyzed phenomena have a high level of distribution, or little concentration, which means a full territorial comparability of the distribution of two compared phenomena. Values within the range [0,25; 0,49] indicate a medium distribution level of the analyzed phenomena, or a medium territorial concentration. Values $F > 0,49$ characterize phenomena with a low level of distribution, or high territorial concentration level and a full territorial inconsistency [2]. The results of the analysis are presented in the table 5.

Table 5: Florene Localisation Coefficient

	<i>E</i>	<i>NB</i>	<i>NT</i>	<i>MD</i>	<i>NP</i>	<i>NN</i>
<i>GDP</i>	0.04675	0.05341	0.04510	0.01596	0.06296	0.01437
<i>HS</i>	0.03913	0.05097	0.03815	0.04720	0.05954	0.04328

Source: Own calculations

As the analysis shows, there is a high territorial convergence between the affluence of provinces and the variables characterizing the activity of hospitals. Similarly, when it comes to the education of the residents of these regions (represented by the number of university graduates) and the variables concerning hospitals we can speak of their full territorial convergence.

5. Conclusion

The level of health of the population of every country is perceived today as one of the main manifestations of their development. Not only does it determine the quality of life of the population, but also strongly influences the country's socio-economic development. It is in the interest of every state to ensure a possibly high level of medical services accessibility to all citizens as only a healthy population can stir the country's development. This kind of relationship is especially visible in countries with a public health care (Zweifel, Breyer, Kifmann, 2009). As the research shows (Stuckler, Basu, Suhrcke, Coutts, McKee, 2009), also a reverse relationship can be observed. The economic situation of a country also influences the health of the population.

However, regardless of the direction of the relationship between the economy and health, their very dependence is the crucial element, and identifying such links, especially between the social development of the Polish provinces and the public health care, was the goal of this work.

The social development of the country was examined with the use of Human Development Index and Local Human Development Index. The values of these measures for Poland (mentioned above) unfortunately do not mean a high level of social development of the country compared to the other ones. Also the individual provinces do not show high levels of this development. However, a relatively uniform value of *LHDI* indicates a generally homogeneous social development of the provinces. The research also shows a relatively strong correlation between the social development with the variables determining the activity of hospitals in these regions. Considering the right of equal access to hospital services, a positive

observation is the spatially homogeneous outlays of the public payer on hospital care. Yet from the standpoint of the economy it seems surprising as it would mean that hospitals in each region offer a similar range of services (at a similar price) and have a comparable efficiency or effectiveness because it is these factors that are closely connected with the volume of financing of the units.

Also connected with the analysis of the accessibility of hospital services, highlighted by WHO and the Polish health policy⁸⁰, is the alarming fact of the high diversification of the Polish provinces in terms of the number of doctors employed in hospitals. Significant territorial disparities are surely connected with the massive migration of Polish doctors to other countries which is why the number of patients in hospitals and the number of hospital person/days is decreasing.

The present work showed that the problem of the Polish society is not only the relatively high diversification of the level of social development in individual provinces, but also its general low level. Hospital care turns out to be linked with the social development of these regions. On one hand it is homogeneous in terms of the financial resources, on the other diversified when it comes to the distribution of human resources.

All of the results presented above gain a particular relevance when we look at similar statistics characterizing the European Union countries which could be a starting point for further analysis.

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⁸⁰ One of the main goals of the National Health Programme for the years 2006-2013 is evening out regional differences regarding health situation.

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Migration – Models and Principles of Immigrant Integration

Monika Nová

Charles University Prague

Hussite Theological Faculty, Department Psychosocial Sciences and Ethics

Pacovská 4

Prague, Czech Republic

e-mail: monika.nova@htf.cuni.cz

Abstract

The presentation deals with the current wave of migration - it is about integration and people on the road, the Balkan 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. The paper looks at different models of integration and the basic principles applied to integrate the migrants into European Union. In her discussion the author debates the subject of social & economic relations as a result of the immigrant's access to accommodation and the labor market. That is why the author also examines the issue of social exclusion. In the final section she discusses European values.

Keywords: Integration, Migration, Migration Crisis, Models of Integration

JEL Classification: H51, H52, D6

1. Introduction

European migration crisis (also termed the European refugee crisis) is an international political crisis under way in European Union (EU) since 2015 and attributable to the multitudes of migrants trying to reach EU - both refugees and economic migrants. To get to the central parts of Europe, the migrants opt chiefly for two routes - the Balkan route from Turkey across the Aegean Sea and Balkan to the Central Europe and the Mediterranean route from the north Africa across the Mediterranean Sea to Italy. The destination of their choice being most frequently the countries of western and northern Europe - Germany first of all, then Sweden, Austria, France and the countries of Benelux.

As follows from Eurostat data, in 2015 the member states of EU received 1,256.000 applications for asylum.

The two main routes of access to EU, the Balkan one and the Mediterranean one, are the ways of passage for illegal immigration of economic migrants and also refugees, coming particularly from the Middle and Near East. This route stretches from Turkey as far as Germany or even farther to the western and northern Europe. Currently (2016) the route passes through Greece, Macedonia, Serbia, Croatia, Slovenia and Austria.

The Balkan route of migration came into existence about 2010, when the illegals started to come to EU across the Balkan Peninsula in greater crowds. In 2015 the number of migrants rose much above what was experienced in the previous years. Consequently, some countries on the route became unable to cope with the situation and the European immigration crisis was born.

2. Models of Integration

Drbohlav (2001) draws attention to the fact that immigrants wishing to achieve the status of permanent residents in their target country should expect an involved process of adaptation to a new way of life practiced by the local majority. Such adaptation will have many forms based on a variety of factors. A factor of crucial importance rests in immigration policy of the country of destination and in its attitude towards immigrants generally. The process of adaptation will also depend on the migrants themselves and their readiness for integration; on physical and cultural kinship of the coming and the local population; on where the incoming minority settles; on the geographic position and distance between the home and host countries; and also on the historical and present status of migration movements observed in a given ethnic group.

2.1 Three Basic Models of Immigration Policies

Farther on, Drbohlav (2001) introduces three basic models of immigration policies pursued in today's world:

1. Discrimination model - supposes a temporary stay of foreigners. The immigrants are only integrated into a specific sector of society and denied access to the others (social welfare, citizenship). Such denial puts them socially economically at a disadvantage.
2. Assimilation 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. This approach is closest to the immigration policy of France.
3. Multicultural (plurality) model - supports whatever differentiates minority from majority. The immigrants are granted equal rights in all segments of society and are not expected to abandon their distinguishing characteristics. Just the opposite - the government encourages and tries to develop what is special in them. This model can be seen e.g. in Sweden and Canada.

The countries are apt to embrace one model while using also elements from others. Some countries, however, have a history of employing all the models, one by one (Australia).

The immigrants are inclined to gather into ethnic neighborhoods in the largest cities and in highly urbanized areas. Only what is known as the second wave penetrates into also other regions of the host country. This tendency to concentrate is motivated by collective resistance against possible xenophobia and racism from the majority. The ethnic group is mutually supportive in the process of adaptation, particularly as regards its cultural, economic and social aspects. Municipal neighborhoods are fed by newcomers through migration networks and institutions at work in the enclave, while the system is left by those who, having improved their social & economic status, chose to move into wealthier regions with better living conditions (Drbohlav, Uherak 2007). Nevertheless, they keep in touch with their ethnic enclaves by visiting them and using ethnic services (social organizations, restaurants, shops). It can be concluded that successful economic & cultural integration results in leaving the enclaves and integrating into the majority society.

2.2 Fundamental Principles of Immigrant Integration into EU

The Hague Program lent considerable weight to better coordinating the policies and initiatives of integration on the national level within EU. We will characterize the main joint principles of how the immigrants should be integrated into EU in view of conclusions drawn by the European Council and by the representatives of member states (2004).

The integration is a dynamic reciprocal process of mutual adaptation of all immigrants and the populations of member states.

The process encompasses on the one hand merging immigrants into the society and on the other hand providing conditions wherein the host society will be ready to accept full participation of the immigrants - economic, cultural and political.

1) The integration will require that the main EU values be duly honored

Everyone living in EU shall be obliged to honor the main values of European treaties, legislation applicable in the member states and the Charter of Fundamental Rights of the European Union, namely the principles of law-governed state, freedom, democracy, human dignity, equality and nondiscrimination. The member states will make sure that both the locals and the immigrants understand their rights and duties, behave accordingly and are equally protected.

2) Positioned centrally in the process of integration is employment - when employed, the immigrants contribute to the wealth of society and the contribution can be seen and appreciated. Their chances of finding employment can be boosted if the qualifications they acquired in other countries are recognized, if they are offered a possibility of vocational training and easier access to jobs.

3) A condition sine qua non of successful integration is a basic knowledge of local language, history and institutions of the host society - that is why the immigrants must be given a chance to learn. Only then they will be able of speedy adaptation to their new society as regards work, education, accommodation and health care.

4) If the immigrants, and particularly their offspring, are to have better prospects of success and more active participation in society, education emerges as a matter of utmost importance. Only properly educated, the newcomers will be able to join in all spheres of everyday life.

5) An indispensable prerequisite of better integration lies in the immigrants' access to institutions, to public property, private conveniences and services just like full citizens, in a nondiscriminatory manner.

The EU law prohibits discrimination based on ethnic or racial origin in these areas: employment; education; social welfare; healthcare; and access to goods, services & accommodation. Foreign nationals, who have their rights curtailed, are treated as unequals, their risk of social exclusion is heightened and such a situation can linger on for several generations.

6) An underlying mechanism of integration rests in frequent contacts between immigrants and the locals. Such contacts can be developed by holding joint forums and encouraging intercultural dialog.

7) Effective integration policy will require cooperating with also other subjects of public and private life: companies; political parties; media; and cultural, social and religious organizations.

In carrying out the integration policy, feedback is needed to learn whether the policy is effective and meets progress expectations - to this end we use the relevant indicators, objectives, mechanisms and their assessments.

3. Discussion

Relying on the "Basic Principles for Immigrant Integration Policy" adopted by EU, the author discusses and supports with arguments what is stated below.

.Keler maintains that people having only a basic qualification or no qualification at all are to all intents and purposes excluded from the labor market (unable to offer what is in demand and lacking the needed technical knowledge & competence, they do not have a realistic chance of obtaining any senior position). Moreover, their potential jobs are frequently drained to south-east Asia.

Švehlíková, an economist, believes that Germany currently passes through the peak stage of industrial automation. The automation, i.e. Industry 4.0, is about to hit the German labor market and entail a massive drop in labor force (author's note: Industry 4.0 is a term depicting the contemporary trend of digitizing, automating and introducing changes to the labor market. The early visions of the so-called fourth industrial revolution cropped up in 2011. "Smart factories" expected to emerge will rely on cybernetic & physical systems supposed to take over repetitive and simple jobs still executed by people).

And of all countries it is exactly Germany that has to face the greatest number of immigrants who can, for reasons specified above, get only lower qualified jobs, but even such jobs start to be at a premium and Švehlíková contends that the trend is here to stay. In this context the term of "new poverty" is gaining currency.

The author believes that worth mentioning is also the media picture of the crisis.. When depicting the situation, media resort to terms like "migrants, refugees, fugitives! ... anything but "people". Such words elicit emotions then affecting the way we act, speak and influence others.

Jarolímek (2015), a psychotherapist, wrote that "the linguistic aspect, i.e. the way we speak about others, reflects the way we think about them and, ultimately, feel about them. Our feelings are then translated into how we behave, speak and affect others". Using the word "people", we are better aware of our joint humanity. Speaking about "migrants", we do not feel involved because it is not us who are migrating just now.

The central issue of the crisis is accommodation of the immigrants in Europe, the problem of their social exclusion and what is known as the pitfall of social exclusion. Social exclusion results primarily from poverty and low income, aggravated by other factors like discrimination, inadequate education and/or poor living conditions. Socially excluded people are cut off from institutions and services, from social networks and educational opportunities. Social exclusion translates itself, for example, into long-term unemployment, dependence on social welfare, living in secluded parts of communities (ghettos), insufficient qualification, failing health, disruption of families and the loss of self-esteem. Adapting to social exclusion, the people develop specific values and norms such as placing stress on the presence; inability to plan for the future; feelings of despondency, helplessness or impotence to improve their own social standing.

4. Conclusion

Currently topic is the inflow of immigrants from Syria and other countries to Europe. Newspapers, TV and social networks communicate the opinions of people who are in dread of Europe losing integrity and fear the loss of their jobs, safety and bright future with Muslims for neighbors.

The most acute anxieties and questions they raise concern religious, safety and economic matters. Do we have whatever may be needed to tackle the task of integrating the newcomers? Do we have enough jobs for immigrants, not having enough of them for ourselves? Will not be our safety compromised? Will not this situation lead to introducing Islam into Europe? These are certainly vexed questions...

The author believes that these questions should be, at least from time to time, salted with questions detached from money, from religious disputes or the number of job vacancies. These different questions could help us better understand why people leave their countries; what they experience travelling to Europe; who of their families had to be left behind, etc.

The author states that working at the hotspot I saw children, women and men crying, heard stories of people who were driven out of their homes, had to abandon promising careers and academic studies; I became aware that thousands of people lost their lives just craving for safety and a better life in Europe, that the Mediterranean Sea is a one big mass grave for the migrants. The hotspot experience has certainly made the author more humble - internally and externally.

European values are derived from the Christian, Hebrew and Greco-Roman cultures. The Ten Commandments of Christianity are embraced even by nonbelievers, and have always been a guiding principle of European deportment. Europe has started to compromise its traditional values (Fiala, 2015). The nations of Europe, however, should stick to their solidarity and avoid a stage in which the wave of migration would make them phase solidarity out of their everyday life.

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European Integration in Rural Areas Through Local Action Groups – Complexity of the Implementation of Local Development in the Czech Republic

Svatava Nunvářová

Masaryk University

Faculty of Economics and Administration

Department of Regional Economics and Administration

Lipová 507/41a,

Brno, Czech Republic

e-mail: nunvar@econ.muni.cz

Abstract

The article is focused on the European integration in the rural areas, through the Local Action Groups using the method Leader. The activities of the Local Action Groups, included in the rural development, are also focused on the Common Agricultural Policy, which is one of the basic elements of the European integration. The Local Action Groups are presented in terms of their basic definition and functions. The attention is closely paid on their strategic planning, which is essential to perform their activities. The article is the discussion of the possibilities of the LAGs functioning in the rural development in the Czech Republic and their potential benefits, resulting in the questions for the further research.

Keywords: *Local Action Group, Common Agricultural Policy, Rural Development, Strategy of Development*

JEL Classification: *O18, O38, R11*

1. Introduction

The European integration has gone through the several development steps. One of them was the definition and the promotion of the Common European Policies. The oldest policy of the European Community (now European Union - EU) is the Common Agricultural Policy (CAP), which was introduced in 1962. It was such an important area that became a part of the Treaty of Rome, signed by Germany, France, Italy and the Benelux countries in 1958. The existence of the CAP was one of the important requirements of the establishment and functioning of the European free market.

The original intention of the CAP was to develop the agricultural production to ensure the food sufficiency at reasonable prices for the consumers (in the period after World War II), ensuring a fair standard of living for the farmers and the stabilization of the markets. One of the intentions was also to modernize and to increase the performance of the agriculture sector, so that the workforce can be released to the booming industry. The objectives and the instruments to achieve them have changed during the time, depending on a number of the CAPs reforms. First, the CAP was implemented by the common market organization of the selected agricultural commodities, based on the system of the guaranteed prices, where the ideal price level in the market was determined annually. In case of decline in the real prices, the farmers were given the price guarantee and the opportunity to sell the surplus production to the intervention store. Another tool based on the financial solidarity was the establishment of the

European Agricultural Guidance and Guarantee Fund, which not only financed the above described market operations (Guarantee section), but partly it also provided the structural reform of the European agriculture (Guidance section). The attention was also focused on the relationship between the agricultural sector and third countries, where the principle of the topping-up in prices at the level of the European community or the export subsidies were used. It reduced the prices of the European farmers to the level of the world prices and increase their competitiveness in the world markets.

The CAP was subjected to the several changes and revisions of its objectives and the used instruments after the sharp rise in the productivity, the overproduction of the agricultural commodities and the significant expenditure burden on the CAPs budget. This was mainly influenced by the ongoing CAPs reform in the 80s of the 20th century. For example: Mansholt Plan (the modernization of the agriculture, the retirement of farmers), Fontainebleau Agreement (the reduction in the expenditures on the CAP, the reduction of the guaranteed prices, the introduction of the milk quotas), Dolores package (the revision of the CAPs financing). The groundbreaking changes of the CAP were managed by the McSharry reform in 1992, when the subsidies for the production and the volume of the production were limited and the compensation for the diminished production were introduced. In 2000, the Agenda 2000 reform incorporated the environmental goals, supporting the sustainable development of the rural areas (mainly through the Local Agenda 21). In 2003, the Fischler reform divided the CAP into two pillars, which are applied today. The agricultural policy was separated from the rural development policy, along with the environmental policy, which led to the different allocation of the financial resources. The EAGGF (European Agricultural Guidance and Guarantee Fund) was divided into the EAFG (European Agricultural Guarantee Fund) and EAFRD (European Agricultural Fund for Rural Development). The next step in 2008 was called "Health check", which is mainly characterized by liberating the quotas on the agricultural commodities. The last reform of the CAP - the "Europe 2020" complemented the generally focused Lisbon strategy in 2010. It is focused on the areas of the sustainable sufficient (viable) food production, the natural resources and the balanced territorial development of the rural areas. At the present time, the CAP is also focused on the production of good food at the affordable prices and the possibility of the satisfactory livelihood for farmers, but also sustainability with the respect to the environment (landscape and its features and protection, welfare for livestock animals) and the function of the agriculture for the rural development, the revitalization of the rural areas and the rural economy.

1.1 Common Agricultural Policy and Rural Development

The rural development was added to the objectives of the CAP in 2007. It happened in the order to meet the objectives agreed in the Agenda 2000. In the meantime, the rural development was a part of the Policy of Economic and Social Cohesion of the EU. A significant part of the EU territory has a rural character (almost 90 % of the total area of the countries – see more about the definitions of the rural areas, for example: Petr, 2013 or Nunvářová, Petr, 2015). The CAP is changing due to the efforts to preserve the culture of the land, located in the surroundings of the rural settlements, and also due to the perception of the landscape, not only as a space for the agricultural production, but also as a place for the further activities of the population (e.g. Leisure). Although the main focus of the CAP is the support for farmers and the agricultural production (in terms of the amount of the funds), the other features of the rural areas grow in importance, for example: the protection and maintenance of the landscape, the environment, historical, social and cultural potential of the rural areas and their population.

The rural development in the CAP includes the several areas of interest, for example: the support for knowledge transfer and innovation in agriculture and forestry, the promotion of innovative technologies to support the sustainable forest management, promoting food chain organization, support ecosystems, resource efficiency, promoting social inclusion, poverty reduction and economic development (European Parliament [online], 2016).

The total budget of the European Union was 140.862 mill. EUR in the year 2012. The CAP represent about 40 %. The big amount of the expenditures on the CAP is allocated to the area of the agriculture and the rural development represent about 5 – 20 % of the CAP expenditure. Due to the CAPs reforms, since 2007 the rural development has been the second most important area, where the resources are allocated. Table 1 shows the specific amounts of the funds in the implementation of the CAP in the Czech Republic.

Table 1: Expenditures on Agriculture According Subsidies

Subsidies (mill. CZK)	2012			2013 (estimation on 30.6.2014)		
	CZ	EU	total	CZ	EU	total
Direct Payment, Top-Up and commodity support	528	20 699	21 227	160	23 454	23 614
The Rural Development Programme	2 633	9 233	11 867	2 401	8 668	11 068
OP Fisheries	33	97	129	19	58	77
Other national support	7 848	0	7 848	7 496	0	7 496
Market organisation	118	305	423	120	341	461
Total	11 160	30 334	41 494	10 196	32 521	42 716
Subsidies (%)	2012			2013 (estimation on 30.6.2014)		
	CZ	EU	total	CZ	EU	total
Direct Payment, Top-Up and commodity support	4,73	68,24	51,16	1,57	72,12	55,28
The Rural Development Programme	23,6	30,44	28,60	23,54	26,65	25,91
OP Fisheries	0,29	0,32	0,31	0,19	0,18	0,18
Other national support	70,33	0,00	18,91	73,52	0,00	17,55
Market organisation	1,05	1,01	1,02	1,17	1,05	1,08
Total	100,00	100,00	100,00	100,00	100,00	100,00
The share of EU resources			73,11			76,13

Source: Ministry of Agriculture, [online], 2015, p. 342

In the period 2014 to 2020, the amount of 875.300.000 EUR is allocated to the direct payments and the amount of 312.969.048 EUR to the rural development from the EU budget. (European Commission, [online], 2016, p. 3) The farmers and their production get a significant amount of money. The CAP policy is implemented in the Czech Republic by the Rural Development Programme (currently in 2014 - 2020). It is divided into four priority axes (improving competitiveness of farming and forestry, improving the environment and landscape, the quality of life in rural areas and diversification of the economy and the Leader axis). There is a considerable part of the funds intended for the farmers. In terms of the aim of the article, the attention is paid to the fourth axis of the Rural Development Programme – the development of the rural areas implemented through the Leader method, which is implemented through the Local Action Groups (hereinafter referred to as LAG). In the programming period 2007 –

2013, the territorial development through LAGs represented about 5 to 10 % of the funds allocated to the entire Rural Development Program (RDP). In the period 2014 - 2020 is planned allocation of 7 %, which is 1.519.233.380 EUR from the EU budget. The significant part of the funds is allocated to the agricultural sector and only a small part to the other activities associated with the rural areas.

Here it was possible to draw funds from two areas. It was the Support for the implementation of operations under the local development strategy (146.7 mill. EUR) and the Preparation and implementation of cooperation activities LAG - technical support, project management and implementation (7 mill. EUR). In 2013, the total amount of 112 LAGs were supported by the Leader method (from the total at that time existing 170 LAGs). (Ministry of Agriculture, 2016, p. 17) The objective of the Czech Republic was to implement the qualified LAGs in all rural areas. Therefore, the LAGs, which were not adequately prepared in the period 2007 - 2013, were preparing for the new programming period. Such training could represent e.g. the experience with participatory planning and decision making.

In the Czech Republic, the first LAGs began to form in 2002, while they could get the support from the Rural Renewal Program. In the first EU programming period 2004 - 2006, the Leader + program was implemented, funded by the EU in the Operational Program Rural Development and Multifunctional Agriculture in the Czech Republic. In the years 2004 – 2008, it was followed by the separate national program Leader ČR, which was funded from the state budget (budget chapter of Ministry of Agriculture). Since 2008, the LAGs activities are funded by the Rural Development Program (IV. Axis Leader).

The current EU programming period 2014 – 2020 shows that the central government authorities appreciate the Leader method because of the opportunities of the LAGs funding were extended. Not only the support increased their number (to the current 183 (NWLAG [online], 2016)), but also extended the grant opportunities. The Axis IV remained in the RDP. It is also possible to draw the funds from the other operational programs (not only from the CAP). The National Strategic Plan Leader 2014+ proposes widespread use of the Leader method in all operational programs of the Czech Republic. The Integrated Regional Operational Programme (IROP) allocates 1.85% of the intended funds on the implementation of the planned local community development strategies (for LAGs). In the period 2014 – 2020, the planned allocation is 10.207 mill. CZK from the IROP, from the Operational Programme Environment another 500 mill. CZK, from the Operational Programme for Employment 1.730 mil. CZK, from the RDP 3.080 mill. CZK, and from the Operational Programme Research, development and education 300 mil. CZK. In total, the allocation is about 15.817 mill. CZK. It means that (with the exception of the RDP) a significant amount of the funds will be implemented and their use will be decided by the apolitically functioning local communities in the rural areas.

Besides the expanding grant opportunities for LAGs, the more qualitative requirements for the LAGs are established. Newly, the LAGs must submit the comprehensive and methodically complicated territorial development strategy until 2020 and also go through the process of the LAGs standardization. The key condition of the possibility to apply for the funding to implement the strategy of the community development area is to meet the standards. The several dozen bodies have undergone the process of the LAGs standardization, but we cannot estimate the definite figure because the preparations are still in the process at this time.

The article introduces the Local Action Groups as a relatively new coordinator of the cooperative development in the rural areas. It is focused on the definition of the functional

requirements for the existence of LAGs and their effects in the practice, with regard to the needs of the new programming period. The method of comparison and also the historic method, analysis and synthesis are used in the article.

2. Coordinator of Rural Development – Actors, their Functioning, the Possibilities and Limitations

The LAG is a community of people who are actively contributing to the development of their micro-region. The Association is based on the principles of a partnership. The LAG works on the basis of the LEADER approach (the Leader). The priority is to use the community method of the strategic planning development of the territory and to involve all stakeholders in the creation and implementation of the local development strategy in the micro-region. The existence of the strategy is the key factor for the spatial development. The funds to implement the development strategy are raising mainly from the EU budget and the national programs. LAGs must meet a number of requirements to get the funds to finance their activities. These requirements are designed to ensure that the public funds will be provided, not only for the well-functioning organizations, but also for the territorially important and necessary activities and investments.

2.1 Leader method and Rural Development

The Leader means interconnecting the activities of the developing rural economy. It was established in 1991. It was originally the initiative of the European Union, developing as the CAP. Its aim was to strengthen the development potential of the rural areas by utilizing the local initiatives and skills, promoting the acquisition of know-how in the process of the local integrated development and diffusion of know-how to the other rural areas. (European Commission [online], 2006, p. 6). The Leader was applied as an initiative three times Leader: Leader I (1991 - 1993), Leader II (1994 - 1999) and Leader + (2000-2006). In addition, the Member States or regions had separate Leader programs with the separate financing from the EU. Since 2007, the Leader method has been included in the allocation of funds in one of the axes of the CAP.

The method is successful and "the effectiveness of the strategies is increasing when the relevant decisions is made and implemented by the local bodies at the local level, the clear and transparent procedures are used, the support from the competent public administration and the technical support required for the transfer of best practices is provided" (European Commission [online], 2006, p. 8).

The Leader is characterized by a "bottom - up" approach, in which participants are involved in the community decisions about the territorial strategy, and the choice of the priorities monitored in the local area. The local inhabitants and the local stakeholders should take the leadership and get involved in the local development. The combination of "top - down" approach seems also suitable, when the cooperation with the central and the regional public administration representatives is able to achieve better results. This can be represented as the appropriate and reasonable support or the methodological guidance and the best practice examples.

2.2 Local Action Groups Criteria

The criteria that must be met to establish a LAG are defined in the Rural Development Program of the Czech Republic. This document outlines the national priorities in the framework of the CAP, it defines the criteria which LAGs must meet for their establishment and activities. It

also defines the criteria to use funds for their existence and for the development of their territory from the EU funds.

These are the local parameters for the establishment of a LAG:

- geographically homogeneous areas, isolated units can be involved only in specified cases,
- the population from 10 000 to 100 000 outside the town with a population greater than 25 000
- no overlaps in area of each LAG,
- participation of public administration representatives in LAGs is up to 49 % (this also applies to the governing body), the other half consists of business representatives and non-profit organizations, the number of partners is at least 21,
- LAG partners must be residents of the micro-region, own business in the micro-region or demonstrate that, they are effecting the micro-region by their activities,
- LAGs must have determined statutes, organization, structure and to be registered,
- LAGs create its own bodies: the highest, decision-making, selection, control, with a LAG office,
- LAGs must discuss and approve the strategy for the territory of the LAG,
- LAGs are based on the Leader method (Ministry of Agriculture, [online], 2014).

These local areas are characterized by the small size, homogeneous and cohesive territory, with the common traditions, identity and common needs and expectations, without the need to take into account the territorial organization of the public administration.

LAGs are communities of representatives from the public, private and non-profit sectors. The number of the representatives from the public sector is limited to a maximum of 50% in order to avoid a LAG being just another form of the voluntary associations of municipalities. On the other hand, it encourages other stakeholders to involve in the development of the micro-region, for example: citizens, nonprofit organizations, representatives of the private and the business sector. For example, local entrepreneurs (craftsmen, farmers, business owners), nonprofit organizations, associations that bring together local residents because of their specific interest (firefighters, women's associations and others) should be involved in the development of the micro-region. Regardless of their size, partners vote equally in decision-making.

3. Mode of action of LAGs

The essence of the LAGs is to create the local territorial development strategy. The Strategy (its creation and implementation) is the result of the strategic management. The strategy identifies the long-term goals of the LAG and the scope of the activities of the organization. The strategic management includes activities aimed at the maintaining long-term harmony between the mission of the organization, its strategic objectives and the available resources. It takes into account the internal requirements of the actions of the organization and the external environment, in which the organization operates. The strategy is formed by the strategic planning process, which is a creative process to identify the critical areas and to find the agreement on the goals, objectives and strategies, which are then implemented to solve the situations in the critical areas.

In the case of using expert methods, the strategic planning process features several steps. One example is the eight steps (phases) of the Strategic Planning:

1. Preparation of the strategic planning process, establishment of public-private partnership, involving e.g. establishment of a body (commission, committee), which will organize the entire process and will be in charge of it.

2. Analysis of the current situation of the organization, which gives an answer to where the organization is and what factors have an influence on it.
3. Formulation of the development vision, define problem areas (identification of critical areas and mission of the project), gives an idea of the goals and the future development.
4. External and internal analysis – SWOT analysis that helps to understand and to identify the various problem areas and those aspects that can or cannot be affected by their action.
5. Definition of the development objectives of the organization and the actions to achieve them (setting objectives, goals and strategies – called Action Plans).
6. Draft and adoption of the strategic plan, including the process of publicizing the strategy and the public debate.
7. Implementation of the strategic plan.
8. Evaluation of the performance (monitoring) and update of the strategic plan (Berman, 2009).

All steps are considered to be important. However, the essential steps are the organization of the process and the implementation of the action plan. The good-quality feature of the created strategy and the functional strategic planning is the active inclusion of the financial instruments into the management of the organization.

In the public sector, the Strategic Management is depending on the nature, structure and mission of the particular organization that incorporates them in its management. In practice, the strategy is usually implemented by the expert methods, as described above. It is possible to use the community method or other methods that alter the quality of the strategic planning. Involving the public (and possibly other stakeholders) into the process is a prerequisite of the expert and community methods in the strategic planning. The expert method is more concentrated on the strategic planning process in the terms of strategies making. The community method is more concentrated on the cooperation and the participation of the various stakeholders into the strategic planning. The very process of the community strategic planning is complemented to the step of identifying and applying the values and needs of the stakeholders involved in the strategy.

The approach used in the development of the LAGs strategies is a combination of both methods, expert and community. This is also due to the name that was used in the strategy of the Rural Development Program, in the National Strategic Plan Leader 2014+ and in the related methodologies of the management and the central authorities. Here we talk about the Strategy of Community-Led Local Development (SCLLD), which is defined as the basic development document of the entire territory of the LAG, interconnecting goals, resources and bodies from the territory. This strategy should be implemented by the Community-Led Local Development (CLLD), which is "coherent set of operations to meet the goals and needs at the local level, which contributes to the European Union's strategy for smart, sustainable and inclusive growth, and which is designed and implemented by the LAGs" (Ministry of Agriculture, [online], 2016, p. 5). The Local Development Strategy should focus on the local needs and the potential of the territory and on the networking and cooperation between different stakeholders in the territory. It should include innovative features in the local context.

The establishment of the SCLLD is the starting point for obtaining the LAG certificate, which is a document that a LAG received after the successful completion of the standardization process. The standardization process is executed by the State Agricultural Intervention Fund, which assesses if the requirements were met within the territorial scope, partners of the LAG,

organizational, legal and financial functioning of the LAG. These Standard requirements must be met to receive the certificate and then the ability to apply for the support in various grant programs, in the order to fund the implementation of the strategy. By meeting standards, LAGs prove that they have the capacity to contribute to the implementation of the programs financed by the European Structural and Investment Funds. LAGs passing the standardization process are able to submit the subsidy applications in the support of their Community-Led Local Development Strategy (SCLLD) to the Ministry of Regional Development, as the body responsible for this area of the LAGs selection. The complexity of the process can be demonstrated by the many LAGs, which spent months and invested hundreds of thousands CZK to create the strategies.

If the certified LAG is successful in the process of fundraising, it can receive funds for its actions (the very existence of the organization - salaries, office, ...), as well as for the implementation of the strategy (the financial allocation for the development of the territory). In the territory, LAGs also play the role of "grant implementation agencies" that redistributes the received funds to the other subjects (private and public) from its territory. Besides supporting "foreign" projects, LAGs can also implement their own projects. An important task is to implement such projects that meet the real needs and also lead to increase of the local competitiveness.

The existence of LAGs is threatened by the discontinuity of the fundraising allocated for the functioning of LAGs offices (secretariats). LAGs incomes are often irregular and they usually do not cover the office costs, for example: incomes from the implementation of various training courses, additional services (photocopying, printing, accounting, project management) or membership dues. Another problem are so-called pre-projects, which must be financed from the own resources and only after the successful implementation of the project and the approval of its costs they will receive the project grant, which is not 100 % of the costs. So, self-financing is required, which LAGs often solves by the bank loans. While many LAGs are relatively new, to obtain such a loan is difficult.

In accordance with the standards of functioning, each LAG chooses an adequate organizational structure. LAGs are the typical nonprofit organization independent of the political decision making. The names of used bodies and their specific tasks vary. Generally, LAGs establish the bodies, which perform functions of management, control, selection, monitoring, and performance. The supreme body is the assembly of all partners involved. Managing Authority (e.g. Committee, council) generally approves the strategy. The controlling body focuses on the principles of economy. LAGs have usually so-called selection committee, which evaluates the submitted projects according to predefined criteria and prepares their order to implementation. One of the bodies is also a monitoring committee to monitor implementation of the strategy and the progress of the project implementation. Executive function has e.g. secretariat office or manager and his staff. Legal forms that LAGs use are Public Service Company, Association, Association of Legal Entities and Institute.

4. Conclusion

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. So far, the preparation of the grant programs was primarily included in the public administration, contributions were provided through the public authorities and the individual applicants apply mostly for a grant. The Leader method supports the cross-sectoral partnerships, which distribute the money for the development in the territory

(while LAGs are private individuals). A successful LAG must first develop a partnership and its members must agree on its development strategy, which is the core for the funding applications of local applicants' sub-projects (also LAG itself) who will be addressed by a public appeal to implement their projects. A key role of LAGs is mobilizing the development potential of the micro-region in which LAGs operate.

The combination of the expert and the community methods in the purpose of the creation of the territorial strategy brings its positives (opportunity to involve all stakeholders in the territory and to participate and take over the responsibility for the implementation of the final strategy) and the risks that represents excessive bureaucracy associated with it. LAGs work as implementing agencies of the European Funds and they put considerable demands on the applicants. The maximization of the professionalism and the clarification of the priorities and objectives mean the considerable use of the resources on the strategy formation process, the certification process and the implementation of the strategies and the projects. On the state level of administration in the process of assessment, evaluation and allocation of funds, other necessary people and resources are added for the functioning of this process, which needs to be then controlled.

In practice, the process then creates such paradoxes that a number of strategic documents with time and territorial overlaps are generated at various levels. These strategies are accompanied by the investment of the considerable resources. The usual range of a strategic plan (especially with regard to the often spatially significant parts dedicated to description of the current state) is around 150 pages, but we can also find the LAG strategies, which have over 400 pages of the text and their creation was worth hundreds of thousands CZK. One territory can have the strategy of the individual municipalities, the voluntary associations of municipalities (associations of municipalities) and also LAG strategy. The strategy follows the strategy of the whole region and possible strategies at national level. The great emphasis is put on the strategic planning process itself, instead of on its outcome and the actual implementation of the strategy.

The ideal is not also the financial security of LAGs existence. The complex process of certification shifted their ability to obtain funds for its organization and functioning and meeting their strategies.

It is clear that the meeting the conditions for the drawing such an amount of the funds by many dozens of subjects is no simple process. It is needed to pay attention to the many circumstances, in order to apply, control and comply the principles and procedures of the European Union. The example of the evaluation of the quality of the functioning of the LAGs is the case study Evaluation of the LAGs functioning in the years 2010 – 2012, the Ministry of Agriculture of the Czech Republic (Svobodová, 2015, p. 4). Another example of the LAGs quality evaluation is in Woods (2005) and Arroyo (2015). However, how to combine the procedures and principles of the EU with the reality in the territories in practice? How to set the requirement for the territorial development through strategies versus the need for their complexity and comprehensiveness? Some managers of the LAGs reported in interviews that their development strategies are 200 and 450 pages. Other strategies are developed by the municipalities, regions and central government authorities, the Government of the Czech Republic. The question is whether the effort and the time spent on the creation of these documents (especially their extensive analytical part) could be used differently in the development of the territory. And also how to achieve preservation of the possibility of the quality community planning and the actual selection and the implementation of the suitable projects that actually lead to the development of the rural areas? Is it possible to meet the EU requirement by the simpler (e.g. less bureaucratic) way?

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Third Countries Migration and the Immigrant Investor Programs in the EU – the Case of Chinese Immigrants in Portugal

Barbora Olejárová, Peter Čajka

Matej Bel University

Faculty of Political Science and International Relations

Department of International Relations and Diplomacy

Kuzmányho 1, 974 01

Banská Bystrica, Slovakia

e-mail: barbora.olejarova@umb.sk, peter.cajka@umb.sk

Abstract

The immigrant investor programs are becoming increasingly popular way of acquiring residency rights and subsequently citizenship of the European Union's member states by the third-countries immigrants. The first chapter of the paper deals with different ways of the programs designed to gain residency rights for the financial subsidy existing in the receiving states. Regarding the large scope of the topic, second part of the paper narrows the research area and by means of a case study of the Chinese immigrants in Portugal, it explains the Portuguese Golden visa program in more detail. At the same time it deals with the motivation of the third-countries citizens to move to the EU using the immigrant investor programs and it explores the reasons behind the Chinese preferences when choosing Portugal as the receiving state. Last part of the study analyses the potential risks and benefits of the aforementioned programs - depicted on the case of Portugal - regarding the economic efficiency, security concerns and the ethics of gaining citizenship for an investment in the local economy.

Keywords: *Chinese Immigrants, European Union, Immigrant Investor Programs, Portugal*

JEL Classification: *F21, F22, F50*

1. Introduction

Following the civil unrest and the economic and political instability in the particular home countries; the European Union struggles with an unprecedented influx of third-countries immigrants from the southern and eastern Mediterranean region and from the sub-Saharan Africa. Paradoxically, at the same time many of the EU's member states introduce the so called immigrant investor programs designed to facilitate arrival of the rich immigrants mostly from China, Russia and the Middle East into their territories. Although very popular in the third countries; the issue of selling residency rights is relatively unknown among the public in the European Union. Thus, the related concerns include the economic effectiveness of these programs, security matters, as well as legal and ethical aspects of selling residency rights and citizenship. The exact statistical data for all of the EU' states on the amount of third-countries immigrants using the immigrant investor programs are not available. However, the estimated numbers indicate Chinese to be among the biggest groups of the programs applicants. Therefore this study examines the aforementioned concerns by means of a case study focusing on the Chinese in Portugal, aiming to have a closer look at this topic and to indicate the benefits and risks of the investor programs in the European Union.

2. Portuguese „Golden visa“ and the Rich Chinese Immigrants – Reasons for Moving Abroad

Immigrant investor programs or the citizenship-by-investment programs are tools allowing the third-country immigrants to obtain a temporary or permanent residency and eventually - after a specifically set period of time - also a citizenship in a European Union's member state in return for an investment in the economy of the receiving state. The term citizenship-by-investment has been used mainly in respect to Malta, where it was possible until 2014 to gain citizenship directly after an investment without any previous residence in the state. However, this has been adapted after a pressure from the EU's member states and the resolution of the European Parliament 2013/2995[RSP], ascertaining that „...the matters related to citizenship are indeed an area of exclusive competence of the Member States, but that in regulating their membership, states should uphold the values enshrined in the EU treaties, with particular regard to mutual trust and rights attached to EU citizenship.“ (Džankić, 2015, p. 1). Moreover, it is contradictory to the Council Directive 2003/109/EC concerning the status of third-country nationals who are long-term residents to grant long-term resident status to third-country nationals who have not resided legally and continuously within the territory of a particular EU member state for five years immediately prior to the submission of the relevant application. Currently we can distinguish different models of immigration investor programs regarding the forms of investment and the price for buying residency rights:

1. investments pointed directly to the government
 - A) a direct “cash” support of the government via a non-refundable fee
 - B) buying of regular of low-interested government bonds
 - C) providing a low-interest loan
2. investments into the private-sector assets
 - A) buying the private property in the receiving state - which has been widely used in Spain, Portugal, Italy and Greece - the countries with collapsing property markets after the debt crises that hit the EU in 2009
 - B) investing in private-sector assets (Sumption, Hooper, 2014).

Portugal introduced its Golden residence permit program, also known as Residence Permit for Investment Activity, in 2012. Commonly called the „Golden visa“, this regime based on the Act 29/2012 amending the Act 23/2007 and further amended by Act 56/2015 and 63/2015 allows citizens from the third countries to acquire temporary residence in case they fulfil one of the following provisions:

1. the transfer of capital with a minimum value of EUR 1 million into Portuguese listed or unlisted companies;
2. the transfer of capital with a minimum value EUR 500 000, for purchasing shares in investment funds or in venture capital geared to capitalize small and medium companies;
3. the transfer of capital with a minimum value of EUR 350 000 to be applied in research activities by institution constituting the Portuguese scientific and technological system;
4. the transfer of capital with a minimum value of EUR 250 000 to be applied for the artistic output recovery or maintenance of the Portuguese cultural heritage;
5. the acquisition of real estate with a minimum value of EUR 500 000 or with a minimum value of EUR 350 000 in case it is a property older than 30 years or located in the urban regeneration areas;

6. the creation of at least 10 new jobs (Cuatrecasas, Gonçalves Pereira, 2015; SEF, 2015; Lipková, 2014).

The Golden residence permit program is valid for one year with the possibility to renew the „Golden visa“ for two more periods of two years. After five years of temporary residence, one is eligible to apply for a permanent residence permit. After six years of residence, an immigrant is eligible to apply for citizenship in Portugal. There are two major advantages of the Portuguese program – first and foremost, the temporary residence permit in Portugal allows an access to the other 25 Schengen area states. The other advantage is a very short required period of time, when the immigrants really have to be present in Portugal – only seven days pro year (EYGM, 2014). This fact is very welcomed by those applicants, who do not really want to live in the EU, but they just want to secure a reliable and convenient back-up place for living for themselves and their families. This brings us to the other part of the study devoted to the explanation of the question why are Chinese immigrants keen to invest enormous amounts of money to set up a residency in Portugal. The scientific studies dealing with the topic of immigrant investor programs outline a set of general foreign investor’s motivations for obtaining the alternative residence rights in the EU (Sumption, Hooper, 2014). Among them, the most important ones applicable to the Chinese immigrants are:

First - striving for the freedom of movement and a visa-free travel in as many countries as possible. According to the Henley and Partners Visa restrictions index 2015, there are only 45 countries that Chinese can enter visa-free. Portugal on the other hand is ranked no. 4 together with Spain, Belgium, Canada and New Zealand, making it possible for its citizens to travel to 170 countries of the world without the need to apply for a visa. This is very convenient, especially, for the businesspeople, which can save money and time of applying for visa by gaining the citizenship or residency rights in the particular state (Sumption, Hooper, 2014; Henley and Partners, 2015).

Second - securing of a back-up place for living in case of a potential future change of the political situation in the sending state or after a political turmoil or economic upheaval in the home country (Wise, 2014). China is a country based on the ideology of communism and Confucianism. Confucianism is often believed to establish a foundation for the success of communism in the present China. Both of the ideologies share the idea of a sacrifice of an individual for the good of the society and in a certain way opposition towards materialism and the accumulation of wealth. Both of the ideologies can be a base for the theory promoted by an expert on the Chinese foreign and domestic policy Elisabeth C. Economy, claiming that „...*amassing personal wealth in China has always been a source of political vulnerability.*“ (Economy, 2014). According to the Boston Consulting Group’s Global Wealth Report 2014, there were 2,4 million millionaire households in China in 2013 whereby approximately half of them now possess a property abroad or plan to resettle abroad in the upcoming five years (Wise, 2014).

Third - establishing residence in a low-tax jurisdiction. In the case of Portugal we cannot talk about a tax-haven, as is the case with some Caribbean islands or south-American states. Nevertheless, Portugal offers a relatively favourable Non-Habitual Residence regime for the new residents in Portugal. „*Non-Habitual residence regime provides a flat income tax rate of 20% for qualifying employment and self-employment income, and a tax exemption for different foreign-source income. To be considered as a tax resident, applicants must remain in Portugal for more than 183 days during the relevant fiscal year or have a dwelling in Portugal on December 31 of that year, with the intention of holding it as a habitual residence.*“ (Verschoor, Reis, 2012). This is far more beneficial than the extremely progressive tax system in the PRC

introduced to diminish the gap between the poor and the rich in China, ranging from 3% to 45% for the salaries above 83 500 yuan (EUR 11 857) (Sumption, Hooper, 2014).

Fourth - founding a new home in a developed western country with a high-quality of life and healthy environment. Although it might seem unimportant, pollution is a big issue in China. Thus, one of the biggest attractions of the European countries that the immigration investor agencies promote is the beautiful nature, healthy environment and clean air.

Fifth - education and family reasons. Nowadays, most of the Chinese, who have such opportunity, leave the country to complete their studies abroad, mostly in the EU or in the USA. As this is very costly, it might be economically beneficial for the parents to get the residency of the EU's state and subsequently educate the children in these countries without being obliged to pay international student fees (Sumption, Hooper, 2014).

However, there are certainly more attractive programs in the EU regarding the price for the residency permit or the waiting time for granting citizenship by naturalisation, than Portugal - for example Greece, Hungary or Latvia. Yet Portugal remains the most attractive destination for the Chinese nationals, who received 75-80% of Portugal's immigrant investor visas since the beginning of the program in October 2012 (Sumption, Hooper, 2014). According to the Immigration, Borders and Asylum Report (RIFA) published by the Portuguese Immigration and Borders Service (SEF), Portugal issued 2465 residence permits for investment activity from 8th October 2012 to 31st August 2015 – 2 332 among them granted by acquiring real estate. After Chinese, the successful applicants are mostly Brazilians, Russians, South Africans and Lebanese (Golden Visa Portugal, 2015). The high numbers of visa Chinese applicants might be caused by strong economic and historical ties between these two states, explained in the following points:

1. Geographical proximity between Africa and Portugal. The economic and political engagement of China in Africa in the 21st century has led to the creation of many companies and relocation of the Chinese workforce in the African states. As noted by Miguel Frasilho, head of Aicep, Portugal's trade and investment agency: „*Chinese executives working in Africa can make a home in Portugal where their children can go to school and they can visit.*” (Wise, 2014).
2. Portugal as the bridge between China and the other Portuguese speaking countries important to Chinese economy and business - particularly Brazil and Angola - for its oil reserves necessary for Chinese developing industry (Wise, 2014, Baláz, 2014). For Brazil as well as Angola, China is both the largest import and export partner with 16,3% of import and 18% of export for Brazil and 23,7% of import and 48,1% of export for Angola (CIA, 2015). Portugal and China had quite intense investment relations and high level of trade, which did not decrease even after the handover of Macao to China. Moreover, many Chinese companies operate in Portugal and the country is used as an anchor of the Chinese investments in the Portuguese speaking countries. Among many examples, the most visible one was the SINOPEC's acquisition of 30% stake in Petrogal Brazil's deep sea oil assets in 2011. Petrogas is a part of the Portuguese oil company Galp Energia. Another case in point is Angola, being the second largest supplier of crude oil to China for 2014. With 13% of the countries imports, Angola is extremely important in the so called infrastructure-for-oil policy of China (EYGM, 2014).
3. Macau as the former Portuguese colony. Macao has become the Portuguese colony in the 16th century and only since 1999 it constitutes a special administrative region of the People's Republic of China. The colonial history of this territory has its

consequences until today – approximately 100 000 inhabitants of Macau possess Portuguese passport. This creates a precondition for deeper relations between China and Portugal relating the still existing connections between Macao and Portugal apparent in the movement of persons and economic or cultural ties.

3. Risks and Benefits of Selling Residency Rights to the Third-Countries Citizens

Selling residency rights and eventually citizenship of the EU's member states has always been a very controversial issue. On one hand – the critics of these programs question their real economic efficiency. On the other hand – they point to the risks related to selling residency rights associated with the threat of money laundering and corruption; insufficient security checks on the third-countries immigrants related to security threats such as organised crime or terrorism and last but not least – there are certain ethical concerns regarding the nature of residency rights and citizenship itself based on the question, whether it is right to exchange these entities for money. (Kaňa, Mynarzová, 2014).

The issue of money laundering is the first matter of concern among the critics of the immigrant investor programs. As it was mentioned in the previous chapter, the lowest amount of money one has to invest to gain residency rights in Portugal is EUR 250 000 for the artistic output recovery or maintenance of the Portuguese cultural heritage. Yet China controls inbound and outbound foreign exchange flows. The entire system is quite complicated as explained by Dan Harris, an internationally established attorney dealing with the legal aspects of the business matters in China. *„If a Chinese citizen needs to make an overseas payment it is required to purchase the foreign funds with RMB from a bank qualified to do foreign exchange business. When converting RMB to a foreign currency at a Forex Bank, the bank is required to review whether the outbound capital is for investment or for regular payment. Outbound capital investment refers to overseas equity investment and is strictly restricted. Outbound regular payments are permitted, including those for overseas tours, relatives' visitation, business negotiations, etc. Chinese citizens can convert and remit freely up to USD \$50,000 equivalent per year. Conversions exceeding the USD \$ 50,000 quota is still possible, but the citizen cannot complete it at a bank counter freely; he or she must apply to the local State Administration of Foreign Exchange for written approval. Chinese banks will not let the extra conversion go without seeing SAFE's approval letter.”* (Harris, 2012). This restriction applied in practise means, that in order to transfer high amounts of money abroad to pay for the residency rights, some of the immigrants might be compelled to ask their family members or friends to send the money from their foreign currency accounts to amass the necessary amount of money. In this way, the transactions are hard to trace up which ultimately simplifies the potential for money laundering (Wise, 2014). Another point interlocked with money laundering is corruption. A set of corruption scandals regarding the Golden visa program in Portugal based on the fast-tracking applications in exchange for bribes led to the temporary suspension of the program itself in July 2015 (Golden Visa Portugal, 2015).

There is another concern regarding the immigration investor visas – the economic efficiency of these programs. The basic argument of the governments introducing the immigrant investor programs says that in this way it is possible to boost the economy, intensify the foreign direct investments in the state, to create new workplaces in the state or to stimulate the property market or the construction activity. Yet the empirical evidence on the impact of these programs is usually absent. As noted by Sumption and Hooper *„...countries, that require private-sector business investments may have little control over where and how the money is invested and*

whether investments actually create the expected number of jobs – especially since applicants can withdraw their investments as soon as they qualify for permanent residence or citizenship.” (Sumption, Hooper, 2014). The direct investments to the government might be more efficient, although this form of programs is the most controversial one relating the aforementioned topic of corruption. On the other hand most of the investors are highly-qualified and well-educated people entailing a brain-gain for the receiving state and supporting the transfer of the know-how (Vošta, Abrahám, 2011). According to the official governmental sources, the total investments generated by the golden visa in Portugal between October 8th 2012 and August 31st 2015 was EUR 1,49 milliard. Thus, the program in this particular state is evaluated as a successful one, although this is not the case everywhere. Especially programs based on providing a low-interest loan are regarded as the least efficient ones, as the investors get their money paid back ultimately. Moreover, after they receive the permanent residency in the particular state, they might be tempted to move elsewhere, as they are not bound by any ties with the state, such as ownership of a private property or investments in the state's economy (Golden Visa Portugal, 2015; Sumption, Hooper, 2014; Carrera, 2014; Džankić, 2012).

The other issue concerned is the security regarding the background of the applicants. On a regular basis, the screening procedure should make use of all of the available sources, i.e. the databases from INTERPOL and Europol, Visa Information System (VIS) and Schengen Information System (SIS), as well as review of the police certificates of the states where the applicant has lived including the business records. However, not all of the sources in the home countries are reliable and incorruptible. From this reason, it is not possible to completely eliminate the threat of an involvement of the applicants in the criminal cases (Sumption, Hooper, 2014).

The last matter concerning the immigrant investor programs are the legal and ethical aspects of selling citizenship. Citizenship is regarded as a legal and political relationship between the state and the individual constituting certain rights and obligations for both sides. It is a plenary competence of the state to confer its citizenship by the internal laws (Bolečeková, 2011). However, according to the judgement of the International Court of Justice in the *Nottebohm Case, 1955* - the requirement for the international recognition of the citizenship is the existence of a genuine link between the state and the person. As we have mentioned before, the immigrant investor programs are not a direct way of becoming a citizen of the EU's member state today. One can become a citizen through naturalization after he or she fulfils certain conditions described in the previous chapter. The problems connected with this issue are twofold. First of all – it is questionable, whether one can speak of a genuine link in the case, when the person gets for example Portuguese citizenship after being a resident of Portugal for six years without the necessity to live in the country for longer than seven days a year and whether the investment activities in the state and the basic knowledge of Portuguese language requisite by the law can be regarded as sufficient to claim the existence of the genuine link. Secondly, the European citizenship has been established by the Maastricht Treaty in 1993 and is complementary to the national citizenship. Thus, the citizens of the EU's member states are also the citizens of the European Union itself and they have certain rights promulgated in the treaties (Ondria, Kollár, 2011). From this reason the states don't like to watch some EU's members to grant citizenship impetuously and quickly to the third-countries citizens. Not only does this endanger the EU's security, but the act of exchanging citizenship for money undermines the ethical value of citizenship itself.

4. Conclusion

According to the data available, Chinese are the biggest group of immigrants making use of the immigrant investor programs in Portugal. Apart from the high ranking of Portugal in the Visa restriction index and the favourable non-habitual residence tax regime and clean environment, the reasons for the Chinese to pick up this state as a place for buying residency rights are the economic and historical ties among the two countries. First of all, Portugal is an anchor to the other Portuguese speaking countries, such as Angola and Brazil, which are important for the Chinese oil policy. Furthermore, Portugal's geographical proximity to Africa is relevant for those immigrants, who work for the Chinese companies in Africa but want to secure a safe and wealthy place for living and studying for their children. The historical ties among Macao as the former Portuguese colony and Portugal are significant, as well. Although many critics of the programs object to their economic efficiency, at least according to the official governmental sources, the total investments generated by the Portuguese Golden residence permit program are EUR 1,49 milliard so far. On the other hand, the concerns related to the threats of the extension of organized crime and the money laundering proved to be right – on one hand regarding the Chinese policy towards foreign investments, on the other hand in connection to the corruption in the Portuguese system. Concerning the issue of the subsequent acquisition of citizenship - although it is exclusively the issue of the nation states to define the conditions for acquiring its citizenship; from the point of the international law – the citizenship without the existence of a genuine link cannot be recognized and in the case of the Portuguese program, the genuine link is many times hard to find. Last but not least – there are some moral concerns regarding the issue of selling residency rights and citizenship, however, these cannot be scientifically evaluated.

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CSR Reporting in Slovakia

Renáta Pakšiová

University of Economics

Faculty of Economic Informatics, Department of Accountancy and Auditing

Dolnozemská cesta 1

Bratislava, Slovakia

e-mail: renata.paksiova@euba.sk

Abstract

Interest in sustainability and its implications for business in Europe has increased steadily. It is increasingly recognised that sustainability not only poses ethical issues but also has direct implications for economic performance. The development of the regulatory framework of markets, technical and organizational innovations, and new societal and consumer perceptions in integrated Europe, have changed the business context and the determinants of corporate success. The aim of the paper is to detect and evaluate reports involved in generating information about corporate social responsibility (CSR) of 50 largest (by sales volume) companies in selected industrial sectors in SR. The findings show that only 14 of 50 companies published a standalone CSR report and 28 of 50 companies published this information as a part of their annual reports (for 2013) within the Slovak Republic.

Keywords: Corporate Responsibility, CSR Reporting, Sustainability, Development, Transparency

JEL Classification: D21, D23, K32, M00, M14

1. Introduction

Corporate social responsibility (CSR) is a business model, which is not oriented only on getting profit from business just now, but with corporate self-regulation do business social and ecology friendly (Petera, P., Wagner, J., and Bouckova, M., 2014). The aim of this responsible business is to increase long-term profits through positive public relations, high ethical standards to reduce business and legal risk, and shareholder trust by taking responsibility for corporate actions (Petera, P., Wagner, J., Knorova, K. and L. Siska, 2015).

CSR reporting becomes a competitive advantage in market conditions, given the increasing interest of investors and a society in a sustainable development, apart from sole short-term profits.

1.1 Sustainability and Sustainable Development

Terms "sustainability" and "sustainable development" come from the 70's, initially used in connection with the idea that an uncontrolled growth of anything (population, production, consumption, pollution, etc.) is not sustainable when resources are limited (Petera, P. and Wagner, J., 2015).

The commencement of declaring a global interest in environment and development may be identified in the conclusions of the 1972 UN Stockholm Declaration on Human Environment. In 1983, UN World Commission on Environment and Development (WCED) was established, initiating a new era of social and environmental sustainable economic growth with its "Our

Common Future" report, adopted by the UN General Assembly on the December 11, 1987, and setting up the first definition of the term "sustainability". The support for the sustainable development was later declared by the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, where 4 fundamental documents were adopted: Rio Declaration (27 principles), Convention on Biodiversity, Framework Convention on Climate Change and AGENDA 21 (40 chapters) that together make a basis for strategy-making on "sustainable development" on all levels. (Ministry of Environment of the SR [online], 2016) According to the UN recommendation, its member states were expected to elaborate and adopt their own national strategies for sustainable development by the end of 2002. (EU [online], 2016)

1.2 European Integration, EU and Sustainable Development

European integration on the European continent represents various levels of political and economic integrations. It is a development of a mutual cooperation among European states, mainly in an economic field. The most intense it has been since the end of the WWII in the form of cooperation among European and non-European states within various international organisations. Nowadays, clearly the most intense cooperation is being built among EU member states. EU is an integrating group of 28 member states. Main goals of the European Union include building Europe with a significant economic growth, competitive economy and improving environmental quality.

EU is aware of the importance of the sustainable development strategy and of the opportunity and risks of economics globalisation process in this field. Thus, it endorses this social responsibility in its strategies and reflects this attitude in its legal acts on business environment in EU. (Kubaščíková, Z., 2008)

The basis for the sustainable development is applying the corporate social responsibility, which has a huge impact on societal, economic and social aspects of a society corporations function in.

The definition of CSR is "the responsibility of enterprises for their impacts on society". Respect for applicable legislation, and for collective agreements between social partners, is a prerequisite for meeting that responsibility. To fully meet their corporate social responsibility, enterprises should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders, with the aim of: maximising the creation of shared value for their owners/shareholders and for their other stakeholders and society at large; identifying, preventing and mitigating their possible adverse impacts. (Eur-LEX [online], 2016)

CSR should be company led. Public authorities can play a supporting role through a smart mix of voluntary policy measures and, where necessary, a complementary regulation. Companies can become socially responsible by following the law, or by integrating social, environmental, ethical, consumer, and human rights concerns into their business strategy and operations. (European Commission [online], 2016) The Commission has played a pioneering role in the development of public policy to promote CSR ever since its 2001 Green Paper and the establishment of the European Multistakeholder Forum on CSR. In 2006 the Commission published a new policy whose centrepiece was strong support for a business-lead initiative called the European Alliance for CSR. (Eur-LEX [online], 2016).

Europe 2020 is the EU's growth strategy for the coming decade. *"In a changing world, we want the EU to become a smart, sustainable and inclusive economy. These three mutually reinforcing priorities should help the EU and the Member States deliver high levels of employment, productivity and social cohesion."* Concretely, the Union has set five ambitious objectives - on employment, innovation, education, social inclusion and climate/energy - to be reached by 2020. Each Member State has adopted its own national targets in each of these areas. (EC Europa [online], 2016)

In the framework of a political and economic integration within EU the consolidation of access to the sustainable development in the common space is the priority. This attitude is reflected in EU strategies and consolidation of access to the reporting of financial and non-financial information on enterprises in the form of EU directives, IAS/IFRS Standards and Interpretations.

Non-financial and financial reporting provides shareholders and other stakeholders with a meaningful, comprehensive view of the position and performance of companies. Large public-interest entities in the EU (listed companies, banks, insurance undertakings and other companies that are so designated by Member States) with more than 500 employees should disclose in their management report relevant and useful information on their policies, main risks and outcomes relating to at least environmental matters, social and employee aspects, respect for human rights, anticorruption and bribery issues, and diversity in their board of directors. In reporting, there is a significant flexibility for companies to disclose relevant information, including reporting in annual reports or separate reports, as well as they may rely on international, European or national guidelines (e.g. the OECD Guidelines for Multinational Enterprises, ISO 26000, the UN Global Compact, etc.).

At first, the European Commission (European Commission [online], 2016) has launched a public consultation on the non-binding guidelines on methodology for reporting non-financial information following Article 2 of Directive 2014/95/EU on disclosure of non-financial and diversity information by certain large undertakings and groups. The purpose of this public consultation was to collect views from stakeholders. The consultation was part of the Commission work related to preparing non-binding guidelines on methodology for reporting non-financial information. Currently valid is the basic legal act, Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 (EUR-LEX [online], 2015) 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 (Directive 2013/34/EU) as amended by 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 - Directive 2014/95/EU.

1.3 Slovak Republic in the EU and Sustainable Development

Slovak Republic adopted its "National strategy for sustainable development for Slovak Republic" as SR Government Resolution No. 978/2001 on the October 10, 2001. Two main goals were declared: reduction of the use of non-renewable natural resources while rationally using renewable resources and reduction of environmental burden.

Accounting Act No. 130/2015 Coll., amending Accounting Act No. 431/2002 Coll., entered into force on July 1, 2015 and is published in insert 40/2015 of the Collection of Laws of the

Slovak Republic. Its provisions regulate measurement methods according to Directive 2013/34/EU of the European Parliament and of the Council 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. This amendment was adopted based on the request of the Directive that Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by July 20, 2015.

Section 20 of Accounting Act No. 431/2002 Coll. was supplemented by Act No. 130/2015 Coll., with paragraphs 9 to 15 (about reporting non-financial information of public-interest entity (MFSR [online], 2016). This amended provisions in the 3rd part of the Accounting Act (Financial Statements), Article 20 entered into force on January 1, 2017, thus in line with the request of the Directive transposition so that the amended provisions apply first to the financial statements for an accounting year starting January 1, 2017 or during the calendar year of 2017.

2. Problem Formulation and Methodology

The development of the regulatory framework of markets, technical and organisational innovations, and new societal and consumer perceptions in integrated Europe have changed the business context and the determinants of corporate success (Petera, P., Wagner, J., Mensik, M., and Bouckova, M., 2013).

The aim of the paper is to detect and to evaluate reports, which is involved in generating information about corporate social responsibility (CSR) of 50 largest (by sales volume) companies in selected industrial sectors in SR.

In our research, we focused on studying and analysing publicly available relevant reports and information on large companies (Large companies: Employees > 250 and turnover > 50 mio (€) or balance sheet total > 43 mio) from trustworthy data sources (Finstat [online], 2015); (Register UZ [online], 2015); (websites of reviewed corporations) online (in the scale of mandatory publicised corporate data in the SR Financial Statements Registry - <http://www.registeruz.sk/>). Predominantly, we studied 50 enterprises with the largest net sales for the accounting period ending in 2013 (this year was chosen because of the completeness of available information regarding the time shift of information publicised by enterprises) of various industry sectors, according to the statistical classification of economic activities - SK NACE (Financial Administration SR [online], 2015) by NACE (European Commission NACE [online], 2015). We were determining ways and forms enterprises used to publicise their attitudes in the field of Corporate Social Responsibility for 2013, before the way of reporting of non-financial information in SR and EU enterprises had been legally set.

A similar research (with the sample of 50 largest companies of each country by net sells) was performed (in addition to SR) in more Central and Eastern European countries (Estonia, Lithuania, Latvia, Poland, Czech Republic, Slovenia, Hungary, Croatia, Bulgaria, Romania), coordinated by International Performance Research Institute located in Stuttgart, Germany (IPRI-institute [online], 2016) and focused on evaluating the status quo of CSR in the context of sustainability reporting in Central and Eastern Europe. (IPRI [online], 2016); (Petera, P., Wagner, J., Knorova, K. and Siska L., 2015).

Basic scopes of detection and evaluation within the examined sample:

1. In the analysed group of 50 large companies, we were determining a number of sectoral structure of the sample: Manufacturing; Electricity, Gas, Steam and Air Conditioning Supply; Construction; Wholesale and Retail Trade; Repair of Motor

- Vehicles and Motorcycles; Information and Communication (Financial Administration SR [online], 2015).
2. In the sample of companies, we were determining a structure of ownership form representation: Privately-held, publicly traded (with government as majority owner), Publicly traded, State-owned. Based on annual reports data, we were determining markets they usually operate on: On foreign Markets up to 100%, On foreign Markets up to 75%, On foreign Markets up to 50%, On foreign Markets up to 25%, Exclusively domestic Market.
 3. We were determining the type of CSR report companies use: Any Information, Information only on Website, Part of Annual Report, Stand Alone Sustainability Report. With companies publicising Part of Annual Report, Stand Alone Sustainability Report, we were determining the report type: Individual Country Report, Global Report (for group of companies - consolidated).

For better understanding, the results are projected in tables and graphs.

2.1 Data from the Research of Reports of Companies

From the available information, we were, in a selected group of the first 50 large companies with the largest net sales for 2013, studying a number and structure of companies from multiple perspectives in line with the research goals. The determined data is given in the following tables.

Table 1: Structure of Industry Group - Defined after NACE Code

Industry group - defined after NACE	Number of
C - Manufacturing	30
D - Electricity, Gas, Steam and Air Conditioning Supply	17
F - Construction	0
G - Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	0
J - Information and Communication	3

Source: author's research

Table 2: Numbers of Companies of Ownership form and Companies' Market Orientation

Ownership Form of Companies	Number of	Companies' Market Orientation	Number of
privately-held	37	On foreign Markets up to 100%	24
Publicly traded (with government as majority owner)	9	On foreign Markets up to 75%	9
Publicly traded	3	On foreign Markets up to 50%	6
State-owned	1	On foreign Markets up to 25%	1
		Exclusively domestic Market	10

Source: author's research

Table 3: CSR Reporting Form and Type of CSR Report from Public Reports

CSR Reporting Form	Number of	Type of CSR Report	Number of
Any Information	2		
Information only on Website	6		
Part of Annual Report	28	Individual Country Report	16
Stand Alone Sustainability Report	14	Global Report (for group)	26

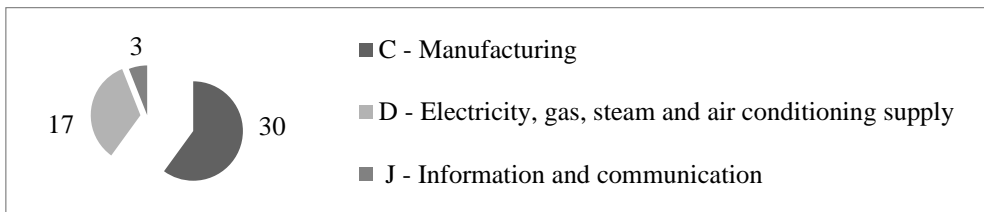
Source: author’s research

3. CSR Reporting in SR Solution

Studying information on enterprises operating in SR brought up the following data:

1. Out of the group of filtered companies in SR based on EU criteria - Large companies (Employees > 250 and turnover > 50 mio (€) or balance sheet total > 43 mio) in the first 50 according to the net sales, the most numerous is the industry group C – Manufacturing (30 companies). The largest company according to this criterion in Slovakia was Volkswagen. Industry groups manufacturing and electricity, gas, steam and air conditioning supply represent a great risk, mainly in the environmental share of the corporate responsibility.

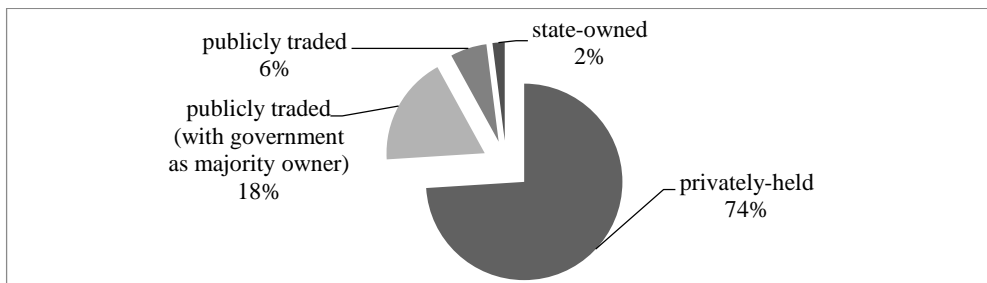
Figure 1: Structure of Companies of Industry Group



Source: author’s calculations

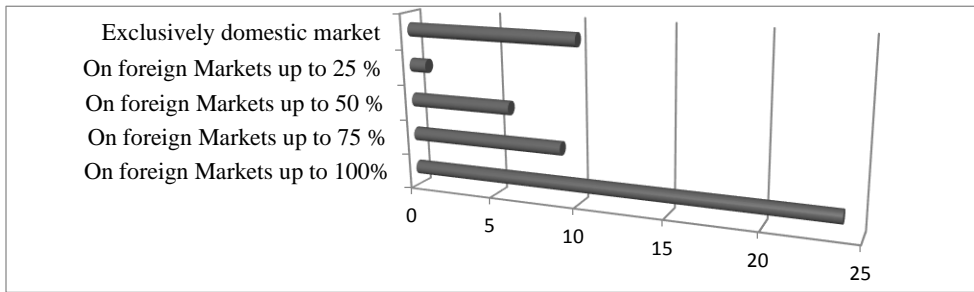
2. The determined structure of the ownership form within studied companies corresponds to the fact that most companies in SR are privately-held (74% of companies) following the privatisation process from the end of the 20th and beginning of the 21st century. Only 2% of the largest companies were state-owned, making it one company out of 50, specifically eustream, a.s.

Figure 2: Structure of Ownership form of the Largest Companies in SR by Net Sales



Source: author’s calculations

Figure 3: Companies' Market Orientation

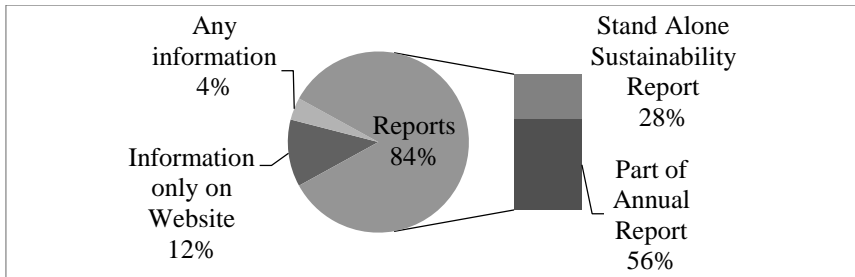


Source: author's calculations

Given the fact that most companies are held by foreign investors, the prevailing production orientation of those companies is on the foreign markets (more than 24 out of 50 companies, i.e. 48%). 10 companies (i.e. 20%) are exclusively domestic market oriented. The lowest percentage is in the category of "On foreign Markets up to 25%".

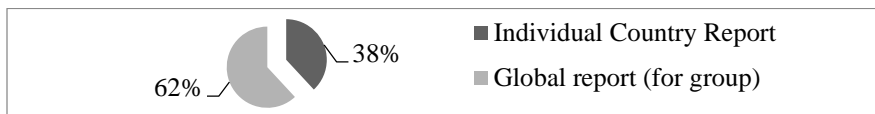
3. Studying the way of reporting the attitude of 50 largest companies in SR to corporate social responsibility and transparency of their attitude to CSR (Corporate social responsibility) showed that publicised reports prevail, those mainly as parts of annual reports (28 companies out of 50), most frequently of consolidated annual reports for the group of companies – global reports (26 companies out of 50). This result stems from the fact that 74% of companies is private-owned with major shares of foreign owners, mainly from Western European countries, in which CSR reporting has longer tradition.

Figure 4: CSR Reporting Form



Source: author's calculations

Figure 5: Type of CSR Report from Public Reports



Source: author's calculations

Only two companies out of the examined sample did not publish any information on the corporate responsibility for 2013 and 6 companies published such information only on their websites.

4. Conclusion

The increase of the disclosure of social and environmental reporting (SER) may be attributed to a heightened public interest in issues related to corporate social responsibility (CSR), but is also likely driven by the government policy in this area. Within the European Union (EU), a rather harmonized approach of regulations on SER and the respective disclosure practice could be expected, because the EU directives provide requirements for the regulations in the member states. Nonetheless major differences in content, quality, depth and form of disclosure can be found among reports in different EU countries. (IPRI [online], 2016)

In CSR reporting, there is still insufficient consolidation in EU countries, as well as in the Slovak Republic as such. In 2013, the way of reporting the non-financial information was not legally set, the fact that mirrored in the attitude the enterprises took towards CSR reporting. Given the selected group of the largest companies according to the net sales, the research focused on, it is clear from the ownership structure form, they predominantly consist of companies with a mother accounting unit, which is reflected in the prevailing number of consolidated (global) CSR reports (26 out of 50 companies) and a small percentage of companies which did not publicise such information (2 out of 50 companies) or publicised them solely on their websites (6 out of 50 companies). The findings show that only 14 of 50 companies published a standalone CSR report and 28 of 50 companies published this information like part of Annual Report (for year 2013) within the Slovak Republic.

Despite efforts invested into a global consolidation of standardisation leads of non-financial information reporting (e.g. Global Reporting Initiative – GRI) in the field of sustainability development (GRI [online], 2015), the rate of standardisation and legal enforcement has been slow and formally insufficient. It does not reach the standardisation level of financial information reporting. However, we can assume these issues will be an EU priority in the following period, given the formulation of strategies on the EU level and national strategies for the sustainable development. Practical strengthening of non-financial information reporting can already be seen in the amended Accounting Act No. 431/2002 Coll., implementing provisions of amended Directive 2013/34/EU of the European Parliament and of the Council on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings. Thus, new opportunities for further research open in the field of non-financial information reporting after January 1, 2017, the date particular provisions of the last amended Accounting Act No. 431/ 2002 Coll. enter into force, on reporting non-financial CSR reporting information in annual reports of public-interest entity (non-financial information regarding the development, performance, position and effect of the accounting unit activity on the environmental, social and employment issues, information regarding the respecting of human rights and information concerning the fight against bribery and corruption (hereinafter referred to as the “social responsibility area”). (MFSR [online], 2016)

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Support of Social Innovations: Subsidies from the Operational Programme Education for Competitiveness

Zuzana Palová¹, Jarmila Šebestová²

Silesian University in Opava

School of Business Administration in Karviná

Department of Economics and Public Administration¹, Department of Business

Economics and Management²

Univerzitní nám. 1934/3

Karviná, Czech Republic

e-mail: zuzana.palova@centrum.cz, sebestova@opf.slu.cz

Abstract

Social innovations are crucial for economic and social development, and thus social welfare. Their implementation still depends largely on public support, especially in less developed countries. The largest financial support for social innovation in the Czech Republic is nowadays from the European Union funds. Main goal of this paper is evaluate effectiveness of financial support from the Operational Programme Education for Competitiveness (OP EC) in 2007-2013 in area of social innovations in chosen regions (Moravian-Silesian, Plzen, Hradec Kralove and Ústi). The analysis will be done trough the questionnaire among the beneficiaries of financial support from the OP EC. The main is evaluation of creation of social innovation as positive externality. Authors would like to find the relations between creation of social innovation and financial support from the OP EC. According to survey results it is also possible to classify created social innovation according type, creator, and priority axis in relationship to beneficiary.

Keywords: European Union Funds, Operational Programme Education for Competitiveness, Regions, Social Innovation

JEL Classification: O35, O38, R11, R28

1. Introduction

Social innovations are crucial for economic and social development, and thus social welfare. Their implementation still depends largely on public support, especially in less developed countries. There are also some definitions which have been put forward and have gained currency due to their explanatory value. One definition which can claim such currency is that deployed by Murray et al (2010) in the Open Book of Social Innovation who, „... *define social innovations as new ideas /products, services and models) that simultaneously meet social needs and create new social relationships or collaborations. In other words, they are innovations that are both good for society and enhance society's capacity to act*“.

The aim of this paper is to find the relations between creation of social innovation and financial support from the Operational Programme Education for Competitiveness. Authors assumed that there could be a positive link between the amount of financial support and number of created social innovations. This assumption will be confirmed by correlation analysis. The classification of created social innovation according type, creator, priority axis in relationship

to beneficiary etc. belongs into other objectives. This paper calculates with the condition that the Operational Programme Education for Competitiveness do not support the project for creation of social innovation but for other social projects especially in sector of education. Social innovations are created as positive externality from other social projects.

The research included all businesses except municipalities, regions and public administrations in the four regions in the Czech Republic. Authors chose these regions: the Moravian-Silesian Region, the Usti Region, the Hradec Kralove Region and the Plzen Region. These regions have been chosen because Hradec Kralove and Plzen Regions are known as the regions “good for life” and the Moravian-Silesian Region and the Usti Region are contrast to them. The Moravian-Silesian Region and the Usti Region belong to the “worst” regions in the Czech Republic. Selection of regions was supported by the results of previous studies (Hučka, Kutcheraurer, Tománek, 2008; Palová, 2015; Viturka, 2010; Wokoun, 2007).

2. Problem Formulation and Methodology

Social innovations were firstly mentioned by Drucker, when he argued that social problems will be new dominant power in the coming 20-30 years (Drucker, 1986; Zhou and Lundstrom, 2014). Social innovations improve well being in the society and lead to development of social conditions (Dawson, Daniel 2010). Support of social innovations authors could explain as a social entrepreneurship spiral (Chand, Misra, 2009), where authors can find the policy framework, support and locally based practices to bring social impact for society.

Literature indicates that the disparities across the districts are quantified based on development indicators. These are broadly classified as: income of its population; the infrastructure existing in the districts; health, education and employment levels of its population (Gupta, 2014). These indicators are mostly connected with entrepreneurial activity and their innovative spirit which have an influence on local society behaviour. Regional governments are not in an easy position. The competitiveness of regions largely depends on internal learning and innovation capacities in the examined region. In many case studies, firms between 10 to 49 employees are proactive in the process of on-going learning and innovative process. They are still under the pressure from the market to offer unique product or service to survive and to be competitive. They exist qualitative and quantitative barriers to support innovative climate within organization based on owner’s personality, financial sources and others competencies which could cause low innovative activity (Ćwik, 2007). In the Czech economy structural changes, i.e. changes in the sector (branch) structure of the economy, are still ongoing, and the related changes in the professional and qualification structure of the labour force - during the transformation process labour force has been transferred from the primary and secondary sectors to the tertiary, where in the tertiary sector banking and insurance have recorded the steepest increase (Tvrdoň, 2015).

A lot of social innovations (in programming period 2007-2013) were created in the Human Resources and Employment Operational Programme. One challenge was focused even directly on creation of social innovation. In this paper authors would like to find if social innovations were created also as positive externality in the OP Education for Competitiveness.

2.1 The Operational Programme Education for Competitiveness

A significant macroeconomic impact on the Czech economy has the Cohesion Policy of the EU, especially the EU funds. These funds should strengthen competitiveness and to reduce economic and social disparities between regions, thereby helping to fulfill the goals of the Lisbon Strategy and a Strategy Europe 2020.

The OP EC was focused on improving the quality and modernizing systems of initial, tertiary and further education and linking it to the comprehensive system of lifelong learning, and improving the conditions in research and development.

The OP EC consisted of 5 priority axes. Priority axes were: Initial education, Tertiary education, research and development, Further education, Systematic framework for lifelong learning and Technical assistance.

2.2 Data Description of Operational Programme Education for Competitiveness

The research included all businesses except municipalities, regions and public administrations in the four regions in the CR. Authors chose these regions: the Moravian-Silesian Region, the Usti Region, the Hradec Kralove Region and the Plzen Region. Regions, municipalities and public administration were excluded because most of their support from the EU funds was through the individual calls (individual projects). Because of that there was not direct competition between individual economic entities for obtaining grants. The priority axes 4 and 5 were only for this group and were not included into the research too. Data for creating tab. 1-2 were published on the information portal of the OP Education for Competitiveness (www.op-vk.cz). Data were collected to 2nd November 2015.

Tab. 1 shows number of projects (number of realized projects in the operational programme by economic entities, the number of economic entities could be lower because some of the economic entities realized more than one project in this programming period) implemented by priority axes and regions in total. The largest numbers of projects were realized in priority axis 1 – Initial education, then in priority axis 2 – Tertiary education, research and development. The least projects were implemented in priority axis 3 – Further education. The most projects were realized in the Moravian-Silesian Region (in total 652 projects). The Moravian-Silesian Region realized the most projects in Initial education (495) and in Tertiary education, research and development. Contrary in the least projects in Further education was in the Moravian-Silesian Region (9) and the most projects were realized in the Hradec Kralove Region (79).

Tab. 1: The Number of Projects Implemented by Priority Axes and Regions in Total

	1 Initial education	2 Tertiary education, research and development	3 Further education	Total
Moravian-Silesian Region	495	148	9	652
Usti Region	193	48	18	259
Plzen Region	203	81	18	302
Hradec Kralove Region	319	52	79	450

Source: Own proceeding according data by the OP Education for Competitiveness [online] [cit. 2015-11-02]. Available from <https://databaze.op-vk.cz/Project/Search/>.

For better evaluation of the financial subsidies deployed in each region it was necessary to determine the amount of financial support for one region. Because many of the projects were implemented in more regions in the same time, and it was not possible to adequately distribute financial support by region, these projects were discarded from the overall analysis. Table 2 shows the financial support for the projects, which were realized only in one region. The table shows the total allocated amount of financial support that has been channelled into individual regions divided by priority axes.

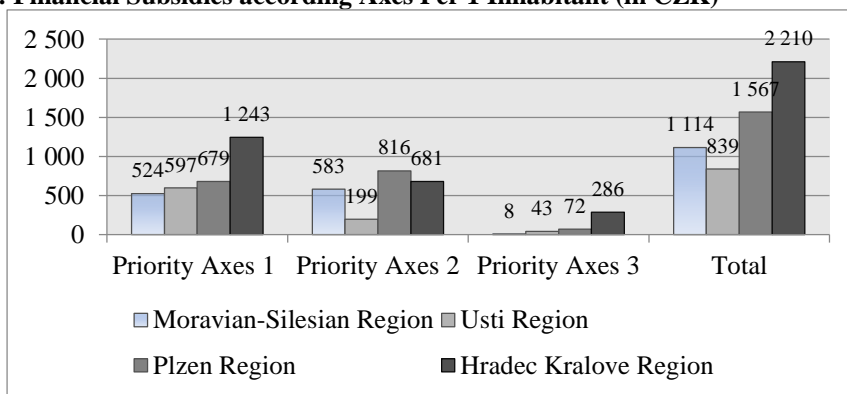
Tab. 2: The Financial Support for Projects Realized only in one Region (in Million CZK)

	1 Initial education	2 Tertiary education, research and development	3 Further education	Total
Moravian-Silesian Region	649	722	10	1 380
Usti Region	497	166	35	697
Plzen Region	387	465	41	894
Hradec Kralove amount	688	377	158	1 223

Source: Own proceeding according data by OP Education for Competitiveness [online] [cit. 2015-11-02]. Available from <https://databaze.op-vk.cz/Project/Search/>.

In order to accurately identify the subsidies spent in the regions authors had to convert the spent funds into amount per 1 inhabitant. This adjustment solved the problem of differently sized of regions where the Plzen Region and the Hradec Kralove Region belong to regions with the smallest size and lowest number of citizens. Figure 1 shows financial support realized in chosen regions converted per 1 inhabitant. From the chart it is obviously that there are large differences among priority axes and regions. The Hradec Kralove Region had the largest income in priority axes 1 and 3. On the second place the Plzen Region was. The Hradec Kralove Region got the highest income also in total with income 2210 CZK per 1 inhabitant. Contrary the lowest income was in the Usti Region (total income 839 CZK per 1 inhabitant).

Fig. 1: Financial Subsidies according Axes Per 1 Inhabitant (in CZK)



Source: Palová, Šebestová (2015)

2.3 Result of Questionnaire Research

For the analysis of social innovation in the Czech Republic authors made questionnaire by all businesses except municipalities, regions and public administrations which received financial support from the Operational Programme Education for Competitiveness in period 2007-2013. This programme was chosen because had the close link of proximity with social innovation. The all analysis was focused on four regions in the Czech Republic.

Authors received 158 correctly completed questionnaires. From these questionnaires 50 respondents answered that due to the financial support which they received for the realization their projects in social sector was created social innovation⁸¹. Next part is devoted to data evaluation of the questionnaire.

Table 3 shows division of social innovation by the size (number of employees) of economic entity (recipient of support). Economic entities are divided into five groups according the size. The largest group was created by the economic entities with number of employees 10-49. That is characteristic for the primary and secondary schools which have the largest representation in our questionnaire.

Tab. 3: Division of Social Innovation by the Size of Economic Entity

Number of employees	Number of economic entities
1-9	14
10-49	20
50-249	13
250 and more	3

Source: Own proceeding according questionnaire

Table 4 shows division of economic entities according the number of created social innovation. Apparent from this table is that the majority of the beneficiaries created only one social innovation as positive externality. Only 4 beneficiaries created 2 social innovations in their projects. In contrary 13 economic entities created more than 2 of social innovations in their projects.

Tab. 4: Division of Economic Entities according the Number of Created Social Innovation

Number of created social innovation	Number of economic entities
1	33
2	4
more	13

Source: Own proceeding according questionnaire

The last distribution of beneficiaries is division of economic entities according the legal form. Table 5 shows three kind of legal forms divided into: nonprofits organization, business companies and universities. The most of social innovation was created by nonprofits

⁸¹ The concept of social innovation means new ideas, institutions and ways of working that brings positive effects, improve or solve the problems of the local community or society in general. In the research the social innovation were created only as secondary outputs. Examples from the research: innovating teaching materials, Corporate Social Responsibility, methodological manuals, work in a fictitious company, etc.

organizations (45 beneficiaries). The main part of the nonprofits organizations consisted of schools (31 beneficiaries) which were focused on primarily and secondary education.

Tab. 5: Division of Economic Entities according the Legal Form

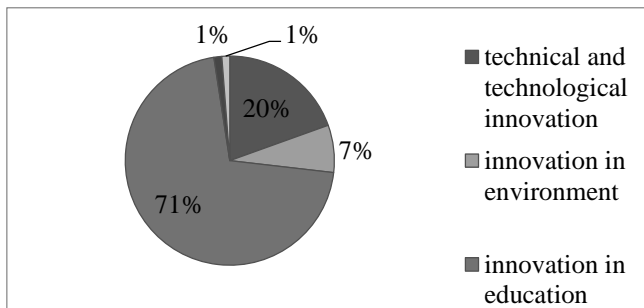
	number of economic entities
nonprofits organizations	45
business companies	6
university	6

Source: Own proceeding according questionnaire.

In the questionnaire the social innovation was divided as: innovation in environment, innovation in education, innovation in social care, innovation in health care, the creation of social enterprise, and other.

Figure 2 shows division of social innovating by type. The innovation in education was the most often innovation where 58 new innovations were created. Technical and technological innovations were on the second place (16). As opposite any innovation was not created in health care or in creation of social enterprises. That is the large difference beside the Human Resources and Employment Operational Programme where the innovation in social care and creation of social enterprises had important impact on creation of social innovation.

Fig. 2: Division of Social Innovation by Type



Source: Own proceeding according questionnaire

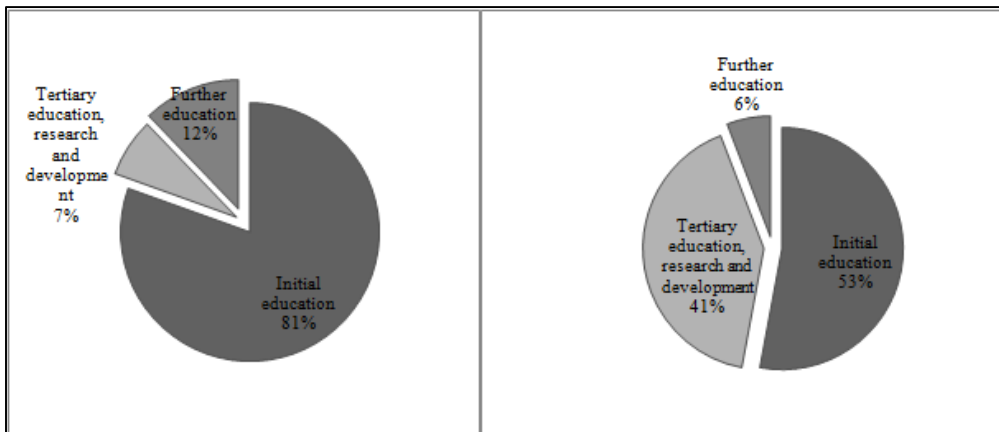
The highest percentage of created social innovation was in the Hradec Kralove Region (36%). On the second place the Moravian-Silesian Region was (30%). The lowest percentage of create social innovation was in the Plzen (16%) and Usti Region (18%). That could be because the Moravian-Silesian and Hradec Kralove Regions had higher financial support in total.

3. Problem Solution

In order to verify whether it is possible to find a link between the financial support from the OP Education for Competitiveness and creating of social innovations authors used correlation analysis. The hypothesis there was determined that between the amount of the financial support and the number of created social innovations are positive linear link. That means if the amount of financial support changes, the number of created social innovation will change also. Based on interpretation of the correlation analysis results by Vause (2002) showed the following result. Between the amount of financial support in for regions (divided according priority axes) and number of social innovation (divided according priority axes) is very strong direct link

(correlation coefficient 0.65). Correlations in individual regions were as follows: Moravian-Silesian Region weak direct link (0.36), Hradec Kralove Region strong direct link (0.86), Usti Region strong link (0.87) and Plzen Region medium direct link (0.46). It can be assumed that the growth of the funds spent in the priority axis will grow also created social innovation in the same priority axis. Based on the results of correlation analysis it is probable that values depend on each other. But it cannot prove that one variable is the cause of a second variable because correlation analysis does not imply causality. Figure 3 shows the percentage of created social innovation and the financial support divided according priority axes. The left chart monitored in which priority axes were created the most social innovation.

Fig. 3: Division of Social Innovation (left) and Financial Support (right) according Priority Axes in all Monitored Regions



Source: Own proceeding according data by OP Education for Competitiveness [online] [cit. 2015-11-02]. Available from <https://databaze.op-vk.cz/Project/Search/>.

In programming period 201-2020 there should be occurred new creating of social innovation in Operational Programme Employment. There should be creating social innovation as main output not only as positive externality.

4. Conclusion

Main goal of this paper was to find the relations between creation of social innovation and financial support from the Operational Programme Education for Competitiveness. Authors assumed that there could be a positive link between the amount of financial support and number of created social innovations. Other objectives were to classify the created social innovations according type, creator, and priority axis etc.

Authors assumed that there could be a positive link between the amount of financial support and number of created social innovations. This assumption was confirmed by correlation analysis. The hypothesis there was determined that between the amount of the financial support and the number of created social innovations are positive linear link. Between the amount of financial support (divided according priority axes) and number of social innovation (divided according priority axes) was found very strong direct link (correlation coefficient 0.65). It can be assumed that the growth of the funds spent in the priority axis will grow also created social innovation in the same priority axis. Based on the results of correlation analysis it is probable that values depend on each other.

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Latin American Integration: Its Main Trends and Comparison with the European Experience

Nikola Pařízková

Federal University of Rio de Janeiro

Institute of Economics, Post-Graduation in International Political Economy

Avenida Pasteur 250 - Urca

Rio de Janeiro, Brazil

e-mail: nikola.parizkova@pepi.ie.ufrj.br

Abstract

The paper deals with the Latin American integration, its main characteristics and challenges at the beginning of 21st century. Regional integration in Latin America as well as other regional arrangements developed as a reaction to the newly established global settings after World War II. This brought about the necessity to create broader projects on a multinational basis. However, Latin America took its own path of integration, appearing more significantly in the 1960s, further reinventing itself in the predominance of neoliberalism. Since the turn of century it dealt with a lot of criticism internally for a lack of sustainable and cohesive projects aimed at facing today's transformations in the international system and the insertion of external powers. The European integration is often referred to as a relevant example of an integration attempt. On the contrary, Latin American experience shows a number of differences due to economic, political, and geopolitical particularities which must be considered when reaching an effective regional arrangement.

Keywords: *Regional Integration, Economic Integration, Latin America, European Union*

JEL Classification: *F02, F15, F55, O19*

1. Introduction

World War II brought a new order into the international system and thus the necessity to create broader projects that would ensure the capacity of States to face upcoming challenges. In this global environment, characterized by rivalry between two superpowers, the United States and Soviet Union, and by the increasing economic growth in different parts of the world, it became more and more clear that integration arrangements among different regions of the world would be needed in order to increase competitiveness and power ahead of others.

Nevertheless, particular economic, political and other factors proved to be essential to the process of regional integration. While European integration emerged immediately after the end of the War, passing gradually from economic aims to political and supranational levels, the Latin American experience developed more remarkably in the 1960s. It mainly defended economic integration in order to balance the internal asymmetries of the region. Shaping itself further in the predominance of neoliberalism, it never reached higher levels of political integration.

In this paper, we seek to understand the main trends in Latin American integration and analyse both the internal and external factors influencing this development. The present integrationist

projects in South America have faced much criticism centred upon more efficient methods that recognize current global transformations and pressures from outside powers.

Thus, we seek to analyse the main challenges that faced Latin American integration since the beginning of the 21st century. Subsequently, we expect to make a brief comparison with the European experience to determine how the above-mentioned factors may have influenced various processes of integration.

2. Pre-Considerations Concerning Regional Integration and Methods

In this paper, we recognize different approaches to integration as functionalism, inter-governmentalism and many others. Nevertheless, we stress the importance of national States defending their interests within the international system. We assume that national States were and still are the primary players in the international system. At the same time, stronger powers have both the will and capacity to subdue the weaker in order to reach their goals.

Within the background of generally accepted theories, we seek to observe the path of Latin American integration. Subsequently, we aim to present the integrational process in South America, as well as make a brief comparison with the European Experience, on the basis of internal and external factors that motivated both processes. As the regional comparative studies remain a proper field, which is not the focus of this paper, we do not expect to reach a full comparison. However, we find it interesting to define the primary differences between both cases.

Highlighting internal economic and political factors of the region, as well as the broader geopolitical context of the major powers competing for global dominance, we expect to show that there is no pattern or theory implemented in different regions. This is due to the diverse circumstances of each, which changes as they react to transformations at global levels.

3. Latin American Integration and its Principal Trends

Latin American integration has its roots several centuries back. Since the late nineteenth century, attempts at integration coincided with the broader projects of external powers. These were mainly led by the United States, aiming to advance its international trade. In the 20th century unique projects of regional integration appeared in Latin/South America that stress the importance of creating arrangements devoid of external interference. Following chapter discusses the main trends of the integration in this continent.

3.1 Latin American Integration Prior to the Turn of the 21st Century

Latin America took a much slower path on a very different basis, compared to that of Europe. This underdeveloped continent first needed to learn how to ameliorate the internal differences of the region, something that Europe (although far more destroyed by the War) had already overcome. Furthermore, we stress the influence of neoliberalism on integrational processes in South America which settled the conditions in which entered the 21st century.

3.1.1 A Path for Development

After World War II, while most of European countries sought to re-establish themselves, Latin America had a very different task, as its underdevelopment was large by comparison with other areas of the world. This region, though very rich in natural resources, had little organization, large internal differences and was composed of poorly established national States. It needed to find an effective way to exploit its potential and catch up with other parts of the world.

A developmental view focused on its economic and commercial aspects can be found in the work of Raul Prebisch (1949), founder of ECLAC (CEPAL) and structuralist thinking in Latin America. Integration, in his view was important to create a broad regional common market, allowing technologically more advanced and complex industries in the region, at the same time creating regional divisions of labour based on production and industrial trade.

The further ideas of Gunnar Myrdal (1956) and Albert Hirschman (1958) also influenced Latin American integration. They recognized the relationship between geographical space and economic development. They treated the question of the relationship between development and various economic spaces and focused on the relationship between regions and countries with different levels of development. They were followed by Celso Furtado (1974), specifically addressing the issue of peripheral integration within Latin America.

The ideas of all the above-mentioned authors agreed that the most advanced regions would simultaneously attract better investment capital, business and other advantages. At the same time, inequalities in the less developed regions would simply bring more inequality. All three authors emphasized the creation of regional centres in order to support the development and increase the public income. In this sense it would prove to be increasingly important to focus on infrastructure and productive allocation.

On the basis of this thinking, various integrational attempts were launched within Latin America between the 1960s and 1980s. The Latin American Free Trade Association (ALALC), also inspired by European Communities, was created in 1960 and aimed to establish a common Latin American Market among Argentina, Brazil, Chile, Mexico, Paraguay, Peru, and Uruguay. Transformed in 1980 into the Latin American Integration Association (ALADI), it had as its main purpose reaching an efficient economic and social development within the region.

3.1.2 The Influence of Neoliberalism

The first wave of regionalism lost importance during the seventies due to the development of the European integration process. The neoliberal environment that emerged in the eighties and nineties as the "second wave" of regionalism became prevalent and drove the reform of economic pro-market liberalization, also having its influence in Latin America.

In this environment and with roots in the Andean Pact and Andean Community of Nations (CAN), the Mercosur was founded in 1991 to assure certain economic aims, also trying to develop some kind of political advance of integration throughout the region.

Still, new approaches appeared in the environment of neoliberal dominance during the nineties, which accentuated an increasing liberalization. They were driven by both national governments and international organizations, creating a globalization discourse that sought financial and trade liberalization. Namely, we speak about Open regionalism (1994) and New regionalism (2002), advocating the liberalization of economic flows at a multilateral level.

Under the economic neo-institutionalism that considered institutions as fundamental in facilitating the free movement of goods and capital, Open regionalism and New regionalism aimed to reduce the state's role (in relation to subordination to market forces): "Based on their geographical proximity, the regional blocs served as instruments in multilateral liberalization negotiations, with a second-best policy option in front of the current deadlock (or temporary) international trade liberalization (which was the best option, "first best")." (Padula, 2010, p. 38).

3.2 Challenges of Latin American Integration Since the Beginning of 21st Century

Not even Open and New regionalism proved itself an effective advance of integration in South America. Thus, in the 2000s, there was an attempt to introduce new and more progressive governments, critical to neoliberalism, which would at the same time not absolutely eliminate its proposals. Since then, integration (as a public policy) came to divide the continent. Latin American integration faced a great deal of criticism due to its neoliberalist character. That aspect makes the region vulnerable to external insertions and thus its incapacity to face today's transformations on a global scale.

Despite that, a number of projects like "Alca" sought to revive a new regionalism (strengthening bilateral agreements of free trade which would, however, make the continent even more dependent on hegemonic power). Subsequently, Mercosur highlighted economic integration as well as the importance of integration throughout all South American territory, along with an emphasis on economic and social development to defeat inequalities. This would help not only establish a sovereign external policy for these countries but also its position among the other emerging countries in Asia and Africa.

Mercosur was born during the predominance of neoliberalism and in the environment of "Washington Consensus". Nowadays it seems more important to set the rules in order to be able to meet new challenges. Thus, in the transformations the world has faced since 2008, it seems Latin American integration should aim its development toward integrating the entire continent to fight and reduce asymmetries, thus creating an institutional democratic mechanism to make effective decisions. Due to the diversion of the region, that should enhance a variety of existent regional blocks and, no less importantly, concentrate on infrastructure, which is very important for internal development and defence policies. (Sarti et al., 2014)

4. Latin American Versus European Paths

Since the twentieth century, regional integration has gone hand in hand with attempts to theorize those processes. Thus, a wide range of varied theories of regional integration was formulated to find the best possible means of integration. It was B. Balassa (1961) who made a significant attempt to solve the theoretical problems of integration among independent national economies, proposing various stages of integration. However, as experience has shown, the particularities of each region must be considered when trying to reach an appropriate method of integration.

Comparative regional studies remains its own field and we do not expect to suggest a full comparison. We also take into account that the regions of South America and Europe are of a very different nature. An attempt at comparison of the two continents was made by Garini (2010), then developed further by Manousek (2012), among others. Despite the differences in both cases, it seems interesting to clarify how economic, political and geopolitical factors may influence the processes of integration.

4.1 Internal Factors

A traditional discussion in international relations concerns the nature of integration and what motivates joining it. Thus, we can distinguish an integration adopted on the basis of economic or political motivation (or combination of both) and development of this trend over time as a reaction to changes. Not separable from external factors, yet we consider motivations a part of the internal aspects of integration.

Giplin (2001) highlights the ambiguity of the understanding of motivations toward integration. Citing A. Fishlow and S. Haggard, he recognizes market-driven integration and policy-driven integration. More importantly, he states that historical experience has shown that economic unification more frequently followed policy and not vice versa, as “there is no example of spillover from economic and monetary unification that has led automatically to political unification.” (Gilpin, 2001, pp. 357)

We must keep in mind the importance of both factors is relative and differs in each case. (Nogueira & Messari, 2005) In this sense, the integration of Latin America was driven mainly by market forces, as it always took shape on a primarily economic basis. To the contrary, European integration was a very unique case of policy-driven integration, beginning with economic and security aims which soon took on a supranational character.

Latin American integration was established on a mainly intergovernmental basis (seen also in the European case, however, not at such a scale). Influenced by the dominance of neoliberalism, the economic character of integration was settled in this region, advancing slowly until now. Here we stress that, on the basis of key macro economic variables, there is a prove of a long-term cointegration of economies among major countries, which can give a rise to larger economic integration. However, even though important, the long-run synchronous behaviour of macro economy is not the key condition of successful economic integration and yes the sort-run cycles. (Abu-Aarn and Abu-Bader, 2008)

European integration followed a functionalist path, in which international organizations were seen as solutions for international problems, effectively supplementing the functions of State. These might subsequently lead to so-called “spillover effects” - the prevalence of international and supranational institutions within national political interests. (Haas, 2004) However, not even neo-functionalism succeeded in explaining the crisis of European integration and was soon abandoned, as along with most former theories.

These supranational/intergovernmental trends may be also explained by the approach of Milward (1994) who stresses the factor of destabilization of most European States after the period of 1929-1945 and the need to recreate themselves. That would be an explanation for the supranational and political character of its integration. As he stresses: “Nation-states have a certain portfolio of policy objectives which they will try to realize in the face of economic and political internationalization. These policy objectives are almost entirely shaped by domestic political pressures and economic resources and will therefore vary from country to country and over time.” (Milward, 1994, p. 21) The interdependent method of cooperation among European States proved inefficient and was soon replaced by integration.

The Latin American continent was not touched in such a large scale by the two Wars. Its underdeveloped character was willing to attain economic advances and catch up with other powers among the world by gradually building up its integrational processes on a mainly economic basis. Thus, the Latin American integration process has mainly advanced through cooperation among governments, with so far just a few political attempts (for example the Parliament of Mercosur).

4.2 External Factors

As integrational processes not only bring about advantages such as economic growth, they also serve as an arrangement providing security to member countries. We consider the wider global context of integration as a fundamental part of the topic. In academic terms, it is realism that gives importance to the political interests of integration which are not only internal (the legitimacy of States and establishing power internally), but also external, which leads us to the geopolitical dimension of integration.

The geopolitical aspect of security would mean maintaining the relative autonomy of member states to have a capacity to project the power of these States or the entire block in the international system and thus have a voice in different spheres of international structures. At the same time, that would be unthinkable without a central actor capable of developing strategy and leading the process (Germany for the European Union, the United States in the case of NAFTA, Japan in the case of Asia Pacific and Brazil in the case Mercosur). (Gilpin, 2001)

This geopolitical project (strategy) is always of an expansive or defensive nature, dependent upon the different nature of States, the spread of developed areas to marginal regions and integration of all territory. (Strange, 1996) The geopolitical issue is present in realistic development theory, with an emphasis on the protection of member states against external threats, creating security and defence projects to maintain sovereignty. In this view, however, it would be important to consider the relative position of each State to adopt an effective strategy.

It was Friedrich List (1841) who already emphasized the importance of European unification in a geopolitical context of United States' rise, with Russia and Germany willing to dominate Central Europe during that period. As mentioned above, the Second World War with its new geopolitical settings drove States to integration processes, shaping themselves furthermore during the Cold War conflict. Not only the fall of the Soviet Union, but mainly the impact of US interests in Western Europe after 1991 have had without doubt a wide influence on the European path of integration until now.

In the Latin American case, we stress the fact that the continent has a very specific and strategic geography, with natural resources that make it very interesting for external powers. However, it at the same time it shows a high level of political fragmentation among countries of the region, with the absence of a regional power able to promote its common interests and thus protect from interference by outside powers. (Padula, 2013)

Considering the aspect of development and economic growth as fundamental, we highlight the role of external powers in the Latin American integration process, especially that of United States. One of the critics of this trend, Samuel Guimarães (Brazilian diplomat and the first High General Representative of Mercosur), stressed that this tendency brought about many advantages along with many side effects, such as the incapacity of effective unification within South America along with a minimal possibility to act as a whole and conclude efficient and cohesive agreements. Besides asymmetries and infrastructure deficiencies between regions, we highlight the recent movements of the same external powers preventing progress of integration at a larger scale, which is not in their interest. (Guimarães, 2012)

In summary, in an environment that is challenging, neoliberalism would be wise to follow projects of social inclusion and formation of large domestic markets to make rational use of natural resources and strengthen the national productive capital and domestic enterprises. At the international level, it seems important to defend the self-determination of the block, i.e. to

not adhere in large scale to alignments with external powers. On the contrary, South American countries should concentrate on reasonable construction of a South American bloc with a policy of market diversification and exports. In other words, he draws attention to Mercosur for a non-dependent development policy of Mercosur, as opposed to free trade agreements that would lead to the contrary.

5. Conclusion

Regional integration arrangements that have emerged since the end of the Second World War aim to provide States with economic and political advantages, along with security from other regions and world powers. However, the methods of integration differ from region to region and depend upon a variety of unique factors. Integrational processes in Latin America identified a number of them due to its special geography, wealth of strategic resources and internal political fragmentation.

Latin American Integration, compared to Europe, shows a number of differences in both internal and external character. European Integration, which appeared immediately after the war, gradually passed on to a supranational character. On the contrary, even though Latin America tried to overcome its intergovernmental character, the spillover has not happened so far in the case of that continent.

It was the predominance of neoliberalism that in a wide range influenced the development of integration in South America. However, since the turn of the century, it has faced internal discussions between those defending development policies and conservative critics, who defend the commercial and financial opening of member countries of Mercosur to the world. Furthermore, it faces criticism due to its incapacity to create projects able to effectively face today's transformations in international systems.

Moreover, we stress the importance to look at the broader global context of powers competing for dominance in the international system. Latin American integration, which was also to a large extent supported by the United States, needs to concentrate on creating sustainable and cohesive projects, including all the territory of the continent, to act unanimously and reach a self-determination which does not align with the interests of external powers.

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Taxes and Contributions Costs of Slovak Companies from the Viewpoint of the Economy's Competitiveness

Luboš Pavelka¹, Peter Krchnák²

University of Economics in Bratislava¹, Paneuropean University²

Faculty of Business¹, Faculty of Business and Economics²

Dolnozemská cesta 1¹, Tematínská 10²

Bratislava, Slovakia

e-mail: lubos.pavelka@euba.sk, peter.krchnak@is.paneurouni.com

Abstract

In Slovakia, there are voices from the political and academic circles which claim that the tax and contributions burden on the employers is too heavy, what influences the competitiveness of Slovakia in a negative way and hence the country is presented as less attractive for foreign companies. The authors of this paper hold an opinion that such statements are not completely correct. When the total labor costs in the Slovak Republic are compared with those of other EU countries, one can reach a conclusion that Slovakia belongs to a group of countries with low labor costs, especially in comparison with its western neighbors like for example Austria or Germany. The authors of this paper will build their arguments on the officially available data in the statistical databases that are maintained by the Eurostat and they will argue that other aspects like the low enforceability of law due to ineffective judiciary or the underdeveloped infrastructure in some regions are the factors that negatively influence Slovakia's competitiveness.

Keywords: Competitiveness, Corporate Taxes, Payroll Tax, Total Labor Costs

JEL Classification: H25, J32, O52

1. Introduction

In today's globalized world, the attention paid to studies of competitiveness of individual countries keeps growing. The more effective it is to manufacture a good or provide a service in a country, the more competitive that country is. The competitiveness is dependent on various factors. One such factor is the labor costs needed for production of a good or provision of some service. However, there are other important factors as well, such as: functionality of institutions, law enforcement, level of corruption, energy costs, qualification and availability of skilled labor, administrative difficulties for conducting businesses, state of infrastructure and the state's support in the area of innovations and technological advancements. The World Economic Forum considers high level of competitiveness of a country to be a key to high economic growth and to the increase of wellbeing of its citizens thanks to their high productivity (Schwab 2015). Therefore, it is very important for a country to create an attractive environment for SMEs and multinational corporations, since capital and labor show much higher mobility today than in they did in the past. This is demonstrated in the rising willingness of people to work abroad. Contemporarily, Slovakia finds itself among EU member states that show the lowest levels of competitiveness within EU. There are voices claiming, that it is because of Slovakia's high tax and contributions burden for employers. One of main goals of this paper is to debunk such claims via a comparative analysis of Slovakia's competitiveness

with other EU member states. The next goal is to show that there is still a large heterogeneity in competitiveness among countries in the European Union and also to show that isolated comparisons of statistics about payroll taxes does not have a very good informative value.

2. Heterogeneous Competitiveness of EU Member States

It is a well-known fact that the members of the European Union are not at the same level of the socio-economic development and hence there must be differences among them when it comes to competitiveness. If we look at the results of a global competitiveness survey that is conducted annually by the World Economic Forum, we will find out the following facts. Germany has reached the highest value of the GCI (Global Competitiveness Index) among the EU member states. The value that Germany achieved is 5.53. The lowest score of 4.02 is now assigned to Greece (Schwab 2015). The 1.51 point of difference does not seem to be very noteworthy at the first glance but in the worldwide ladder of competitiveness, Germany stands on the 4th place and Greece is 81st (Slovakia is 67th), what is 77 places lower. After a closer examination of the index, one can find out that the western EU member states and especially the older members (save few exceptions), find themselves on higher places in the worldwide ranking than the states that joined the EU later, like for example those that joined as part of the 2004 enlargement. For this reason, it is difficult to assess the competitiveness of the European Union as a whole. If we take into consideration the EC10 group that is composed of Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, Netherlands, Sweden and Great Britain, we will see that this group has kept the 3rd place in the world ranking since 2009. This group is exceeded only by the United States and Japan. However, if we take into consideration all the present 28 EU member states, a drop by 2 places occurs and the EU is exceeded by China and South Korea. If the EU had its 28 present members since 2007, it would have been on the 4th place above China till 2009 and since then it would have started falling behind.

One of the key reasons for that is the low research and development expenditures in the member states and especially in those that joined the EU later (Priede & Pereira, 2015). In today's world of the so called knowledge based economy, the support of research and development is very important, because one needs to generate higher added value and increase the quality of production in order to succeed in a difficult competitive environment. This problem is addressed by the Europe 2020 strategy. Unfortunately, just like in the case of the Lisbon strategy, EU struggles to fulfil the goals of this new agenda. One of the key targets that the majority of countries fails to meet, is to spend 3% of GDP on support of R&D. There is another reason for supporting R&D beside its' importance for the knowledge based economies. This reason is a positive relationship between expenditures for this activity and exports of goods that have high technological requirements. This relation is well observable in countries like Czech Republic or Slovakia, but none of those 2 countries meets the 3% GDP requirement. However Czech Republic does better than Slovakia with 2% of GDP being spent on R&D, whereas Slovakia's expenditures oscillate around approximately 1%. The only countries that meet this target are Denmark, Sweden and Finland. (Neuwet & Priede, 2015).

For further demonstration of the variety in competitiveness within the EU we can pick another factor for judging a country's competitiveness. It is the openness of its economy and especially the ratio of exports to GDP and the growth of this ratio. As we mentioned before, Slovakia is among the weakest countries in the EU according to its expenditures on R&D, but when it comes to the exports/GDP ratio, it belongs to the EU's pinnacle. The growth rate of its exports is very fast as well. Before and closely after the crisis, the growth rate of exports was in 2 digit numbers (Baláž, 2015). Similar story applies to other V4 countries as well. Such variety among

member states complicates EU the implication of a unified strategy, since every country has to take different steps for improving its own competitiveness.

It is even difficult to compare EU countries with each other according to individual statistics, namely in the area of payroll taxes. The problem is that not all the countries finance its healthcare system via compulsory contributions. Some countries leave it up to an individual to decide how they want to finance their health insurance. For example, Slovakia, Austria and Germany have health insurance included in the contributions that are paid by both, an employer and an employee. On the other hand, companies in Finland, Greece, Great Britain and in some other member states, do not pay health insurance contributions for their employees. In these countries, the health insurance is financed by a portion of a tax that is paid by an employee. So if we compare solely contributions burden statistics, we do not always compare the same thing. We will focus on the Slovak Republic in the following chapter and via comparative analysis, we will show that even if the pay roll tax is higher in the percentage terms in Slovakia, the employees there are still cheaper for companies than they would be in other states. Further we will point out that Slovakia should focus on improving other areas of competitiveness than the payroll tax burden.

3. Comparison of Labor Costs and Other Competitiveness Indicators of Slovakia with the Rest of the EU

Recommendations for improving Slovakia’s competitiveness issued by professional organizations and business associations, focus on decreasing payroll taxes. One of many studies that attempt to support such recommendations is “Analýza, monitor finančného (daňového, odvodového, poplatkového) zaťaženia podnikania“, that has been conducted by the Center for Social Dialogue of Slovak Republic. This study places Slovakia among countries with a very expensive work force when it comes to contributions that an employer has to pay for their employees (Concerto et al. 2014). It is true that in Slovakia, the contributions burden is shifted more on to the employer’s side who has to pay 35% of an employee’s salary as contributions. However, as we stated in chapter 2, the comparison solely based on the percentages could be misleading. Secondly, percentages do not enter in to an employer’s accounting but the total cost of labor does and according to Eurostat, the labor costs in Slovakia are very low in comparison with the rest of the EU.

Figure 1: Total Labor Costs in the EU Expressed in Euros/Hour



Source: Eurostat

Figure 1 shows that Slovak Republic definitely belongs to countries with cheaper workforce. Its' labor costs barely reach 10 EUR per hour of work. Slovakia is the 9th most expensive country in relation to the labor force. Further this figure shows that in reality, the other costs (costs extra to wages and salaries) in Slovakia are not among the highest ones in the European Union. As we can see, the yellow part of the column that depicts these other costs, represents a fairly low amount in Slovakia and it is comparable to Czech Republic for example. These costs are not dramatically different from other countries of the V4 and they are significantly lower than in many western member states. In order to get a complete picture, it should be stressed that according to the data from EUROSTAT, the non-wage costs (contributions to Social Insurance Agency and health insurance) related to the hourly wage of an employee, represent 2.6 EUR/hour on average in the Slovak economy (except in the agricultural sector). The European Union's average is 6 EUR, so Slovakia's labor costs are more than 50% lower than the average of the EU (WKO, 2014). Another fact that makes Slovakia's labor attractive, is that the average wage keeps growing far slower than labor's productivity (Ondrovič et al., 2015). Between 2006 and 2015, the labor productivity grew annually by 2.8% points on average in Slovakia. This is the 3rd highest value in the EU. Slovakia is only exceeded by Lithuania and Romania. Compared to the EU's average labor productivity, the growth rate in Slovakia is 2.2% higher. Hence we can conclude that Slovakia offers relatively cheap labor force that keeps increasing its productivity (Eurostat, 2015).

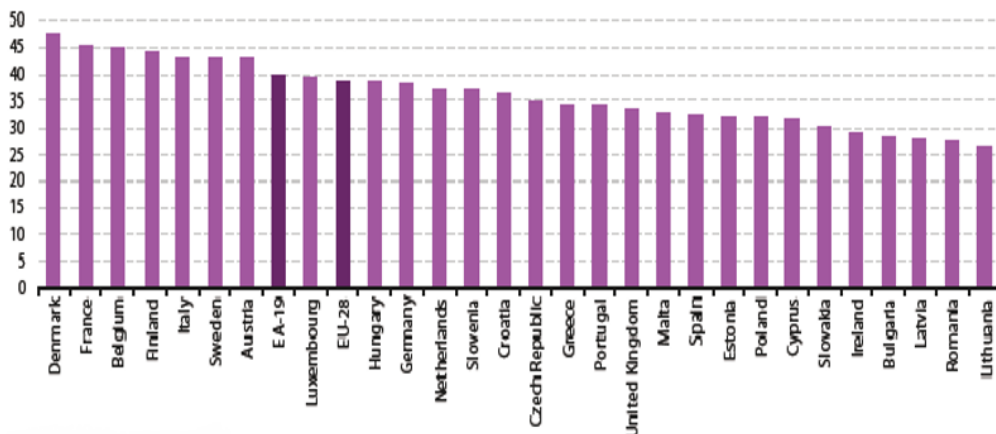
Even the corporate taxes in Slovakia are not among the highest ones. Companies have to pay 22% tax from their profits, which is the highest among the V4 countries but at the same time it belongs among the lower ones in the EU, especially in comparison with the western countries. A similar statement can be said about the effective tax. The effective tax at 19.04% is the 14th highest in the European Union (Eurostat, 2015). If we measure the relative taxation pressure (the difference between the EU's average effective tax and effective tax in a country) Slovakia comes 14th as well. The Effective corporate tax in Slovakia is 1.7 percentage points lower than the EU's average equal to 21% (Eurostat, 2015). This helps Slovakia's competitiveness, because investors take tax burden into consideration when they decide in which country to invest. There is of course a negative relationship between the amount of FDI a country receives and the tax burden. Tax burden further gains on its' importance when countries share a common currency, because that means that investors do not have to worry about the exchange rate risk (Salvatore, 2002). One also has to take into consideration that Slovakia provides tax reliefs as a part of the investment incentives.

High corporate income taxes prevent entry of new businesses into the market and demotivate people to start a business. So if a country wants to encourage people to start a business, the corporate income tax should be lower than the personal income (Giacomo, 2010). Slovakia has progressive taxes on personal income and the top rate is 25%, while the corporate income tax rate is 22% (Eurostat, 2015). This means that people are motivated to start their own company because that way their income will be taxed less. Besides that, Slovakia is one of few countries that do not levy any tax on dividends or profit sharing of limited liability companies. An individual only has to pay 14% health insurance contributions from profit sharing income that is up to the 60 times the amount of the average wage in the economy (in Slovakia this amount is equal to 51480 EUR). All other income above that level is relieved from the health insurance contributions and they are not included in the basis for calculating those contributions.

Another fact showing that companies are not heavily burdened by taxes, is that state's income stemming from taxes and contributions paid by employees and employers, represents only

approximately 30% of Slovakia's GDP. This is caused by the low effectiveness in tax collection and by the fact that a substantial portion of GDP is created by companies that enjoy investment incentives in the form of tax breaks. The figure 2 shows that 30% is the 6th lowest value in the EU and the lowest value among the V4 countries (Eurostat, 2015).

Figure 2: Tax and Compulsory Contributions as a Percentage of GDP



Source: Eurostat

Therefore, we can safely say that payroll tax burden or the corporate taxes are not the primary reasons why Slovakia is trailing behind almost all other EU member states. The following factors have more significant influence on the competitiveness of a country than the labor costs: employment in high-tech industries, R&D expenditures, law enforcement, infrastructure, government effectiveness, control of corruption, availability and quality of the university and high school education. What matters most today, are the conditions for research and development because companies that lead in innovating, offer their clients an added value and hence they maintain an advantage over other companies. Therefore, when a country creates a favorable environment for companies to innovate, it becomes more competitive (Staničková, 2014). The fact that the EU's western countries with much higher corporate and payroll taxes are far more competitive than Slovakia, further proves that other factors have a stronger impact on a country's competitiveness. There are gaping differences between Germany that is contemporarily the leader of the EU and Slovakia. These differences are very well visible in the areas of innovations and effectiveness of institutions (for example courts). In these 2 cases, the GCI differences are 2.2 points and 1.79 points respectively (Schwab 2015). For that reason, instead of lowering corporate and payroll taxes, Slovakia should rather focus on those 2 areas in the interest of improving its competitiveness.

4. Conclusion

Substantial differences in competitiveness still exist among the EU member states. That is a reason why it is difficult for the European Union to implement a unified strategy for improving its competitiveness. All its countries have different weak areas which they need to improve and so one centralized strategy may not work well for every country. Competitiveness wise, Slovakia is among the worst countries of the EU. Today, there are voices claiming, that this is because of its high corporate and payroll taxes. However, as we have showed in the 3rd chapter of this paper, such claims are not true. In reality, the amount of contributions into the state's coffers paid by the employers and employees, represents roughly 30% of Slovakia's GDP and

as such, belongs among the lowest in the EU. The problem of low competitiveness of Slovakia lays somewhere else. Slovakia does not support research and development enough and it does not create good enough conditions for companies to innovate. Also, in comparison with Germany (the most competitive country in the EU), Slovakia maintains a catastrophic functionality and effectiveness of its institutions (such as courts for example). In the end, we can claim that the government should focus on areas such as law enforcement or support of R&D instead of lowering the corporate and payroll taxes.

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Technological Clusters in Europe as a Tool of a European Industrial Policy Based on Innovation

Enrica Pavione, Roberta Pezzetti

University of Insubria
Department of Economics
Via Monte Generoso, 71
Varese, Italy

e-mail: enrica.pavione@uninsubria.it, roberta.pezzetti@uninsubria.it

Abstract

European countries are today facing the need to sustain the growth and the modernization of the national economic systems, relaunching the competitiveness of the enterprises on the international markets. In this context, the capability to produce innovation and knowledge is assuming increasing importance and explains the increasing role that is recognized to technological clusters, able to aggregate a number of both public and private economic actors around innovative projects in research-based and science-based sectors. In the European experience, innovative clusters today act as tool for a European industrial policy that puts innovation at its heart and they represent a privileged laboratory of primary interest for identifying long-term strategic solutions functional to both the modernization of the economic system and the advancement of the integration process in the perspective of the European Economic Union.

Keywords: *European Competitiveness, Firm's Strategies, Industrial Policy, Innovation Policies, Public-private Partnership*

JEL Classification: *03, L5, L1, M2*

1. Introduction

In recent decades, the European countries are faced with epochal changes, which put in discussion the competitiveness of national productive systems (Giraud, 2012; Velo, 2007). The projection of the European economic systems in the global market requires both institutions and economic players the continuous search for innovative solutions, able to cope with and support the rhythms of a competitive arena increasingly fierce. The economic crisis highlights an urgent need to endow the European Union with new tools that would allow it to participate in the globalization process on an equal footing in relation to other more advanced competitors. Competition from developing countries and, in particular, the Asian emerging economies, puts deeply into question the European industrial model and its productive structure. The need to ensure the maintenance of competitiveness at international level from one side determines the need of a revisitation of traditional competitive paradigms in manufacturing sectors; on the other hand, it implies a shift of the national economic systems toward sectors with greater scientific and technological intensity (Mosconi, 2014; Velo, 2009).

This perspective highlights the need for Europe to foster a new phase in the process of integration that assumes economic nature, by developing a common industrial policy to foster the modernization of the European system.

2. Problem Formulation and Methodology

The lines of action, currently in the process of definition, pose a growing emphasis on the relaunch of scientific research, in order both to enhance European competitiveness in sectors with a high content of innovation and to recover the delay with respect to other economic contexts (Amin and Cohendet, 2004; Velo, 2009). These interventions appear due, in particular, to the strong slowdown in investments in innovation carried out by European companies, particularly with reference to the sectors of high technology intensity, of crucial importance for maintaining the competitiveness at international level in the long-term. These sectors are today playing the role of the driver of a broader process of modernisation of the European economy; this is evident by considering their traditional character science-based, which gives them some distinguishing features: the time horizon of long period on which they develop the production processes, the need for huge investment in research and development (especially with reference to basic research), the connected high level of entrepreneurial and financial risks. These peculiarities imply the need to bring together a plurality of economic actors, both public and private, around strategic innovative projects able to mobilise substantial resources (both financial and managerial) and skills and to allow the sharing of the risks and costs connected to the exploitation of scientific and technological opportunities (Lerner and Kortum, 2000). In particular, the set of relations between public and private actors - companies, institutions, universities and research centers - around innovative projects emerges as a critical success factor, able to promote and support both coordination and cooperation between operators (Dohse, 2000; Isaksen and Hage, 2002).

In this framework, the aim of the paper is to analyse the opportunities open by the economic challenges for the development of a common industrial policy, capable of enhancing the capacity of the European system to produce innovation and knowledge. Under discussion is the ability to foster a revivification of a long-term entrepreneurial vision able to re-launch the European economy (Molle, 2007), by promoting the development of scientific projects and industrial sectors that are regarded as strategic for supporting the process of both economic and social modernisations. The paper is descriptive. In the first part the focus is on the role that, in the current phase of economic development, science-based and research-based sectors are playing in promoting the modernization and the competitiveness of the European economic system. In the second part the analysis will be devoted to investigate technological clusters as a tool for implementing a European common industrial policy based on innovation; in particular the study investigate the conditions under which cluster could act as a privileged laboratory for experimentation of original forms of public-private partnership between enterprises of different size, institutions, universities and research centers, able to foster the process of "cross-fertilisation" in order to enhance the creation of new knowledge and its transfer and dissemination.

3. Discussion and Problem Solutions

In the managerial literature, the cooperation between different economic actors, in sectors with a high innovation content, is generally traced back to the concept of clusters or technological district (Camagni, 1995; Porter, 1998; Cooke, 2001; Lawson, 1997). This term refers to the presence of a network of complex and multiform relationships, both formal and informal, between different economic actors, capable of facilitating the transfer and dissemination of knowledge and advanced technologies. The valorisation of research activities conducted by the actors belonging to the cluster and the sharing of expertise implies several factors: the presence of a strong academic base equipped with excellent facilities for research activities

linked with the business system; a plurality of actors of heterogeneous nature focused on the provision of highly specialised services (local and national institutions, businesses, universities, research centres and a constellation of services enterprises); and the geographical concentration of all the actors, which arises from the need to facilitate both the formal and informal information flows and the exchange activities (Dahl and Pederson, 2004).

As regards the industrial side, the existence of productive sites, of successful entrepreneurial initiatives, of information and research infrastructures provide a stimulus both to the activities and investments, in reason of the degree of integration between the various actors. With reference to the environmental conditions, the vectors that guide the development of technological clusters are related down to an institutional context able to stimulates the production of advanced knowledge and the launch of innovative initiatives, both in the scientific field and in business, the availability of financial resources and the presence of excellent research facilities.

Under this profile, in the current phase of economic development, technological clusters could act as a privileged laboratory for experimentation of original forms of partnership between enterprises of different size, institutions, universities and research centers, able to foster the process of "cross-fertilisation" in order to support the creation of new knowledge and its transfer and dissemination.

In the most advance international experiences, the critical success factor is represented by the intervention of a "control booth" which guide the development of the cluster, especially in the initial phases of its life cycle according to a top-down approach, different depending on the competitive contexts and of the sectors involved. This is a distinguishing factor with respect to traditional industrial districts, which historically have developed according to spontaneous bottom-up models (Velo, 2009)

In continental Europe, even in the presence of different situations, the development of technological clusters is largely dependent on public initiative (He and Fallah, 2011). This represents an organizational solution that takes its origin from the vision that historically has been assigned to the public actor as the entity in charge for the protection of the general interest. In the European experience, the clusters originated on the initiative of the public actor, according to a top-down approach, are often the result of the intersection of different types of public intervention: the policies for the management of the territory and/or local development; support policies for research and innovation; policies aimed at improving the competitiveness of enterprises (both large firms and SMEs) involved in the cluster. In some cases, after an initial phase characterised by spontaneous aggregation initiatives, public intervention arises as an instrument to support the development of the cluster and to guide its strategic trajectories in the medium-long term.

In this perspective, the European technological clusters are today configuring as integrated tools for the development of the territory, able to involve both public and private actors in the creation, dissemination, learning and application of new advanced knowledge (Rocha, 2004). Technological clusters are able to reproduce, in a logic of permanent laboratory, natural conditions that have in the past favoured the emergence of reality as the industrial districts manufacturing.

In this framework clusters and the regions they concerned assume the function of collective goods, both from the point of view of companies and from that of the public actor.

At European level, to date, there is not an industrial policy in the full sense of the term, that assigns to public institutions a role of “strategic direction” able to guide the development of socio-economic system as a whole, including through the enhancement of technological clusters (Jamet, 2006; Medoza and Rouhier, 2012). Nevertheless, the concept of technological cluster as a toll of industrial policy is located in the center of the initiatives taken by some member states and European regions, who see these realities such as privileged instruments for boosting innovation in territorial systems and, at the same time, strengthening the cooperation among different national and international economic actors (both private and public) around innovative science-based projects. In this framework, the French and German experiences appear of particular interest: in both cases, from one side innovation is at the heart of national economic policy and, on the other side, the public actor plays a growing strategic role in the promotion and development of innovative clusters, which act as a tool of the state’s industrial policy in strategic sectors of the economy. In this perspective, both countries share a common vision as regard innovation: the need to use a policy involving a stronger state role in order both to address the lack of dynamism of European companies and to guide the modernization of the whole economic system according to a long-term perspective. This approach aiming at combining the free play of competition with state intervention is particularly evident in the French experience: the Beffa report reflects this logic of greater involvement of the French state in terms of innovation by also allocating public funds to selected key sectors (Beffa, 2005). The creation of poles of competitiveness falls into this idea and it was part of a new approach to industrial policy based on innovation.

Even in the presence of different national experiences, in both countries the industrial policy interventions have initially found implementation in a traditional dimension, that translate in the adoption of measures able to ensure favourable conditions to industrial competitiveness: the incentives for research and development activities together with measures aimed at improving the functioning of markets and intellectual property are the main tools in this sense (Lorenzi and Cohen, 1997). In both countries, these measures have made it possible to catalyze the resources and skills necessary to develop innovative projects, in many cases located along the technological frontier.

Alongside these measures, the policy of boosting innovation has resulted in the search of original forms of cooperation between public and private actors and the definition of renewed strategic organizational solutions, capable of catalysing resources and expertise and to encourage the development of new and original types of public-private partnerships. The initiatives in this sense made in both France and Germany are concentrated on some key industrial sectors - biotechnology, nanoscience, aerospace, energy, etc. - consistent with the sector-based policy in favour of strategic sectors also adopted at European level (Mendoza and Rouhier, 2012).

In particular clusters could today represent a laboratory for fostering coordination of public policies and entrepreneurial activities for R&D from the national to supranational level. The idea behind a European coordination in R&D policy is based on two main arguments: from one hand, the policy of a state generates externalities for other member states, and on the other hand, the increasing returns to scale makes a more effective policy at supranational level (Coriat, 1997; Tabellini and Wyplosz, 2004). The emerging experiences of cross-border clusters (such as the BioValley, Europe’s leader in the field of life sciences, which focuses on three areas of the Upper Rhine in France, Germany and Switzerland) lie in this framework and reflect the aim to create sectoral specialised regions at European level able to cooperate in strategic fields, by sharing goals, resources, skills; at the same time, cross-border clusters could

strengthen the European industrial structure by supporting the emergence of European champions able to enjoy a sustainable comparative advantage at global level (Dohse, 2000; Mosconi, 2014).

In this perspective, Europe should invest to set up an innovation agency, according to the ANVAR France's model, to move more structurally the issues of innovation (and of innovation policies) to the supranational level in order to strengthen cooperation among countries on innovative projects and to concentrate both financial and entrepreneurial resources.

4. Conclusion

In the current framework, Europe is facing the challenge to adopt a common European industrial policy able to guide and structure the European economy, in a long-term perspective, and to create the conditions for the modernization of the whole economic system. Science-based and technology-based industrial sectors are today regarded as strategic for re-launch both the competitiveness of the European economy and its ability to produce and disseminate innovation and knowledge, in a competitive global framework characterized by a strong acceleration of the innovative dynamics. The temporal horizon of long period that in such sectors characterizes the productive process, the necessity of huge investments in research and development, the connected high level of both entrepreneurial and financial risks, imply the need to aggregate a number of economic actors, public and private, around innovative projects.

The setting that assigns a lead role to public institutions for the creation of forms of agglomeration between different operators in the science-based sectors, already adopted by some European countries, could form the basis for the exploitation of knowledge and innovation in all sectors of production, even the most traditional and till today are the backbone of European industry. In this perspective, technology clusters represent a tools both to foster knowledge creation and to mobilize, within a geographical area, huge resources and skills and share risks and costs related to the exploitation of scientific and technological opportunities.

In several European experiences, the public actor plays the entrepreneurial role of planning, guiding and co-ordinating a network of public and private actors in strategic sectors of the economy, according to a top-down approach to industrial and economic development. At the same time, technology clusters could act as a tool of a common European industrial policy based on innovation, as the recent experiences of cross-border clusters demonstrate. In this perspective technology clusters today act as an institutional and entrepreneurial privileged laboratory for promoting and fostering a greater cooperation between states around innovative scientific and entrepreneurial projects, whether in terms of R&D or in the spatial organization (and geographical specialization) of the competencies among different territories.

By setting the cluster policy from a national to a European level, Europe can promote sectoral specialised regions at able to cooperate in strategic fields by sharing goals, resources, skills; at the same time, a common cluster's policy could strengthen the European industrial structure by supporting the emergence of European champions able to compete, in a leadership position, at global level.

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Factors Affecting Online Group-Buying Intention in the Selected Countries of the EU: An Extended Perspective on the Theory of Planned Behaviour

Pavína Pawlasová

VŠB - Technical University of Ostrava
Faculty of Economics, Department of Marketing and Business
Sokolská třída 33
Ostrava, Czech Republic
e-mail: pavlina.pawlasova@vsb.cz

Abstract

The statistics of Eurostat confirm that internet usage and online buying of the EU inhabitants has been still increasing phenomenon. The online group-buying intention in the selected countries of the European Union is explored in this article. Primary survey led by author is focused on the factors affecting this intention according to an extended perspective on the theory of planned behaviour. The identification of the significance of the factors is very important for increasing of the intention to participate in the online group-buying. The article is namely driven to find out the differences between Czech and Slovak perception of the factors. A structural equation modelling was used as the research method of analysis. The optimal models of the Czech online group-buying intention as well as of the Slovak online group-buying intention were found. The results confirm that professional e-WOM is the most important factor for Czech and also for Slovak customers.

Keywords: *European Union, Online Group-buying, Structural Equation Modelling, Theory of Planned Behaviour*

JEL Classification: *C10, M31, M37*

1. Introduction

The internet usage penetration and the related online purchasing have been still increasing in the EU countries. Nearly 80 % of the EU inhabitants use the internet regularly and more than half of the EU inhabitants bought some goods on the internet websites in last twelve months (Eurostat, 2015a, Eurostat, 2015b). According to the statistics of Eurostat (2015b) there is the lower online purchasing penetration in the Czech Republic (45 %) as well as in Slovakia (50 %) than the average online purchasing penetration in the EU countries (53 %). There is a potential to attract more Czech and Slovak internet users to buy some goods on the websites.

The online purchasing does not consist only of e-shop purchasing but also contain the online group-buying (G-B), e-auctions etc. This paper focuses on the online G-B that refers to a sales method with purchasing of goods and services at significantly reduced prices when required number of buyers participate in the purchase (Shiau and Luo, 2012).

2. Problem Formulation and Research Methodology

There is a potential to attract more Czech and Slovak internet users to buy some goods or services on the online G-B websites, meaning the managers of online G-B websites are able to increase customer purchase intentions (Cheng and Huang, 2013).

The savings of money is the most often customer reason to participate in the online G-B (Erdogmus and Cicek, 2011). The prior studies confirm that the price is one of the most important factor affecting willingness to buy goods and services. Customers express a willingness to pay a slightly higher price for food quality certified products (Velčová and Del Chiappa, 2015). The internet users of Generation Y use mainly price comparison websites to get some information about goods. (Krbová and Pavelek, 2015). The prior studies also confirm that geographic comparison of consumers' perception of different topics is very important because the consumers' perception of topics can vary in different countries (Pawlasová, Spáčil and Valečková, 2014a; Pawlasová, Spáčil and Valečková, 2014b).

However, there are also other determinants of consumer online shopping behaviour. As Cheng and Huang (2013), Hansen et al. (2011) suggest in their studies, the theory of planned behaviour (TPB) can be applied for the purpose of analysis of the factors affecting online G-B intention. The TPB is generally accepted as a theory for exploring an individual behaviour. This theoretical model specifies that behaviour of an individual is predicted by intention. The intention is determined by attitude, subjective norm and perceived behavioural control that concerns behaviour. The intention indicates the probability of an individual behaving in certain way (Fishbein and Ajzen, 1975; Ajzen, 1991).

In the context of these prior research perspectives, the aim of this paper is the identification of the factors affecting online G-B intention according to the extended perspective of the TPB in the selected countries of the EU. The primary research was conducted in the Czech Republic and Slovakia.

2.1 Introduction of the Research Methodology

The online questioning was conducted in September 2015. The respondents expressed their opinions to the statements on a 7-point Likert scale. The statements were proposed according to Cheng and Huang (2013). The population were all online G-B users in the Czech Republic and Slovakia. The sample consisted of 419 respondents from the Czech Republic and 361 respondents from Slovakia. The detailed structure of respondents is shown in Table 1.

Table 1: Structure of Czech and Slovak Sample of Respondents

Frequency of online group-buying purchases		Gender		Age	
Czech sample of respondents (n=419)					
Once a fortnight	12.2 %	Man	30.3%	18 – 34	60.9 %
Once a month	56.3 %	Woman	69.7 %	35 – 54	28.6 %
Quarterly	25.8 %	Total	100.0 %	55+	10.5 %
Less often	5.7 %			Total	100.0 %
Total	100.0 %				
Slovak sample of respondents (n=361)					
Once a fortnight	10.3 %	Man	28.5%	18 – 34	62.4 %
Once a month	27.7 %	Woman	71.5 %	35 – 54	32.1 %

Quarterly	34.6 %	Total	100.0 %	55+	5.5 %
Less often	27.4 %			Total	100.0 %
Total	100.0 %				

Source: author's calculations

2.1.1 Analysis of data

A structural equation modelling (SEM) was applied to determine the most important factors affecting customers' intention to participate in online G-B according to the TPB. The analysis was calculated in SPSS Amos 20. The significance level of 0.05 was used.

Structural Equation Modelling

A structural equation modelling (SEM) is a method of statistical analysis which is similar to the regression modelling but SEM is more sophisticated. The advantage of this technique is introducing of latent constructs really appearing in such a phenomenon in which there are some latent factors due to the respondent subjectivity (de Oña et al., 2013).

Nachtigall et al. (2003) say that a general structural model consists of two parts – a *measurement model* where the relations between the observed and the latent variables are measured and a *structural model* where the relations between the latent variables are measured. A structural model determines which unobserved variable is independent (exogenous) and which unobserved variable is dependent (endogenous) (Urbánek, 2000).

A *measurement model* is algebraically interpreted as two systems of equations in matrix form (Urbánek, 2000; de Oña et al., 2013):

$$\bar{x} = \Lambda_x \bar{\xi} + \bar{\delta}, \quad (1)$$

$$\bar{y} = \Lambda_y \bar{\eta} + \bar{\varepsilon}, \quad (2)$$

where \bar{x} is the vector of the indicator for the vector of unobserved variable $\bar{\xi}$, \bar{y} is the vector of the indicator for the vector of unobserved variable $\bar{\eta}$, $\bar{\xi}$ stands for the vector for the unobserved exogenous variable, $\bar{\eta}$ is the vector for the unobserved endogenous variable, Λ_x and Λ_y are the matrixes of the structural coefficients for the relations of variables' vectors \bar{x} and $\bar{\xi}$ and variables \bar{y} and $\bar{\eta}$, and $\bar{\delta}$ and $\bar{\varepsilon}$ are the vectors of residual variables for the vectors \bar{x} and \bar{y} .

The structural model is defined as (de Oña et al., 2013):

$$\bar{\eta} = B \bar{\eta} + \Gamma \bar{\xi} + \bar{\zeta}, \quad (3)$$

where B and Γ are the matrixes of the structural coefficients of the unobserved endogenous (exogenous) variables and $\bar{\zeta}$ are the measurement errors.

The *validity of the proposed model* can be confirmed with multiple chi-squared tests. The CFI and NFI were applied in this research. The rate of change of a conditional mean is understood as a regression coefficient. Standardized regression coefficients should take values of 0.5 and higher if the relations between the variables are significant (Hair et al., 2010).

The comparative fit index (CFI) is algebraically interpreted as:

$$CFI = \frac{P_N}{P_{N_b}}, \quad (4)$$

where P_N and P_{N_b} are the parameters of noncentrality for the estimated and the basic model. The estimated model presents the tested proposed model and the basic model presents the null model in which the unobserved variables do not correlate. The CFI should be close to 1.000 for the optimal model. This index does not fluctuate much with the sample size (Urbánek, 2000).

The normed fit index (NFI) is calculated as:

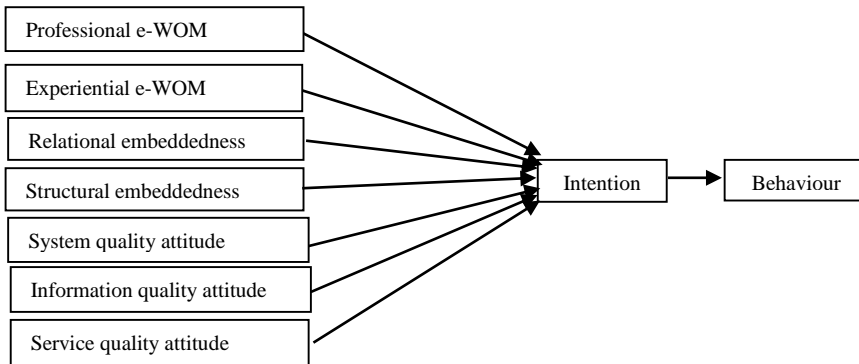
$$NFI = 1 - \frac{F}{F_b}, \quad (5)$$

where F is the minimum value of the loss function for the estimated model and F_b is 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 analysed model designed according to Cheng and Huang (2013) combines e-WOM, network embeddedness, website quality attitude and the TPB to determine factors affecting online G-B intention. The research model is shown in Figure 1.

Figure 1: Research Model



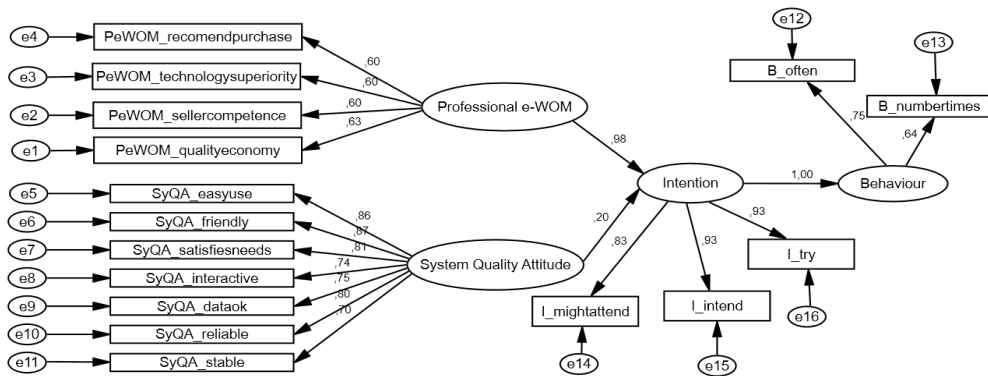
Source: Author modification according to Cheng and Huang (2013)

The electronic word-of-mouth (e-WOM), which is the passing of information from person to person by electronic media communication, was classified into professional and experiential e-WOM. Professional e-WOM is constituted of positive comments regarding a product or service quality. Experiential e-WOM is identified as positive emotional comments made after using a product or a service (Sun and Wu, 2008). Structural embeddedness constitutes a whole network structure within which a member can efficiently give-and-take information. Relational embeddedness indicates the mutual trust between individual members involved in a transaction (Granovetter, 1992). The system quality constitutes usability, availability, reliability, adaptability and response time of system. The information quality involves the quality of information system output; it means personalisation, completeness, relevance, ease of understanding and security of website. The service quality includes assurance, empathy and responsiveness of website (DeLone and McLean, 2003).

3.1 Validity of the Model for Czech Intention to Online Group-Buying Behaviour

The proposed model by Cheng and Huang (2013) was not optimal for Czech customer intention to online G-B (the actual values of CFI=0.639, NFI=0.532), therefore the variables that were not statistically reliable and significant were excluded from the model. These were all observed variables creating the latent variable Experiential e-WOM, Structural embeddedness, Relational embeddedness, as well as Information quality attitude and Service quality attitude. The optimal model of behaviour is designed below, see Figure 2.

Figure 2: The Optimal Model of Czech Intention to Online Group-Buying Behaviour



Source: author’s calculations.

3.1.1 Validity of Measurement Model

All relations between latent and observed variables are statistically reliable according to the actual significance levels. Considering the actual values of standardised regression coefficients, all tested relations between variables are statistically significant.

Czech customers of online G-B believe that most of family leaders, cyber-friends and people with the same interests that they respect on the internet recommend ingredients or specifications of G-B products, recommend technology superiority of G-B products, recommend the sellers’ competence and productivity and recommend G-B products for their quality, value and economy. The impact of these factors creating latent variable Professional e-WOM on the consumer intention is moderate.

According to the research, there is the strong impact of having a positive opinion that online G-B website interface is stable, reliable, easy to use, user friendly, satisfying users’ needs as well as providing interactives features between users and system and the data transmission of online G-B website is unobstructed.

Czech customers also claim there is a strong probability of might online G-B intention and behaviour in the near future. They also state they try to intend and intend online G-B.

3.1.2 Validity of Structural Model

According to the analysis, all relations between latent exogenous and latent endogenous are statistically reliable. According to the actual values of standardised regression coefficients, only the relation between latent variable Intention and Professional e-WOM is statistically significant. The impact of System quality attitude on consumer intention to online G-B is weak, whilst the impact of Professional e-WOM on consumer intention to online G-B is very strong.

It was found that there is direct impact between intention and behaviour of the Czech online G-B customers, so there is a very strong probability of online G-B intention and behaviour in the near future.

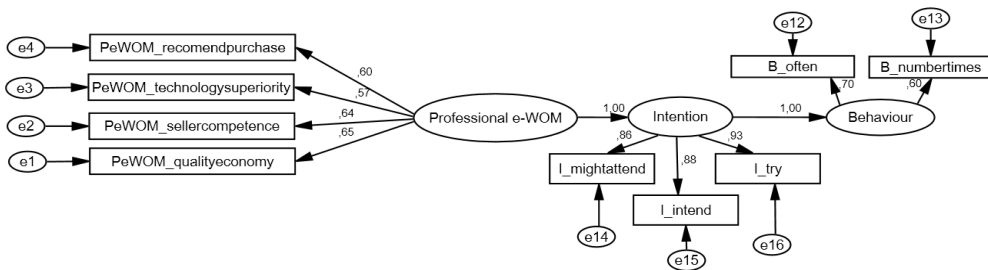
3.1.3 Goodness-of-Fit Indexes of the Optimal Model

The actual values of CFI and NFI show the proposed model is optimal. CFI of this proposed model takes value of 0.966. This is a very high value. Also NFI taking value of 0.904 claims that there are very little possibilities to improve the model and fit the real data more. According to NFI the proposed model fits the real data in 90.4 %.

3.2 Validity of the Model for Slovak Intention to Online Group-Buying Behaviour

The proposed model by Cheng and Huang (2013) was not optimal also for Slovak customers' intention to online G-B (the actual values of CFI=0.439, NFI=0.345) therefore the variables that were not statistically reliable and significant were excluded from the model. These were all observed variables creating the latent variable Experiential e-WOM, Structural embeddedness, Relational embeddedness, as well as System quality attitude, Information quality attitude and Service quality attitude. The optimal model of behaviour is designed below, see Figure 3.

Figure 3: The Optimal Model of Slovak Intention to Online Group-Buying Behaviour



Source: author's calculations.

3.2.1 Validity of Measurement Model

All relations between latent and observed variables are statistically reliable according to the actual significance levels. Considering the actual values of standardised regression coefficients, all tested relations between variables are statistically significant.

Slovak customers of online G-B believe that most of family leaders, cyber-friends and people with the same interests that they respect on the internet recommend ingredients or specifications of G-B products, recommend technology superiority of G-B products, recommend the sellers' competence and productivity and recommend G-B products for their quality, value and economy. The impact of these factors creating latent variable Professional e-WOM on the consumer intention is moderate.

Slovak customers also claim there is a strong probability of might intent and intent the online G-B and behaviour in the near future. They also state they try to intend very strongly.

3.2.2 Validity of structural model

According to the analysis, all relations between latent exogenous and latent endogenous are statistically reliable. According to the actual values of standardised regression coefficients,

there is direct impact between latent variable Intention and Professional e-WOM as well as between Intention and Behaviour of the Slovak online G-B customers, so there is a very strong probability of online G-B intention and behaviour in the near future.

3.2.3 Goodness-of-Fit Indexes of the Optimal Model

The actual values of CFI and NFI show the proposed model is optimal. CFI of this proposed model takes value of 0.976. This is a very high value. Also NFI taking value of 0.911 claims that there are very little possibilities to improve the model and fit the real data more. According to NFI the proposed model fits the real data in 91.1 %.

4. Conclusion

The statistics of Eurostat (2015) states there is a potential to attract more Czech and Slovak internet users to buy some goods and services on the websites. This study discusses the consumers' intention to participate in online G-B. The aim of this paper is the identification of the factors affecting online G-B intention according to the extended perspective of the TPB in the selected countries of the EU. The study focuses on customers in the Czech Republic and in Slovakia. The TPB was used to identify these factors. The factors Professional e-WOM, Experiential e-WOM, Structural embeddedness, Relational embeddedness, System quality attitude, Information quality attitude and Service quality attitude are indicators that influence the consumer intention in online G-B according to this theory.

A structural equation modelling was applied and it was found that professional e-WOM is the most important factor affecting Czech and Slovak intention to participate online G-B. Czech customers also claim that System quality attitude has a weak impact on their intention to participate in online G-B. But this factor is not important for Slovak customers. There is a strong probability of online G-B intention and behaviour of Czech as well as Slovak customers in the near future. It agrees with the market trends in the online G-B in the Czech Republic and Slovakia.

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Czech Pig Farming Sector after the Entrance to the European Union

Marie Pechrová, Tomáš Medonos

Institute of Agricultural Economics and Information

Mánesova 1453/75

Prague, Czech Republic

e-mail: Pechrova.Marie@uzei.cz, Medonos.Tomas@uzei.cz

Abstract

The pig farming sector was one of the most heavily affected agricultural production after the entrance to the European Union. Czech producers failed to compete on the EU market as the imports and negative foreign trade balance increased. Besides, the total number of sows which represents the production capacity has been decreasing since the entrance. Because the performance of the firms in relation to other firms on the pig production market is linked to the productivity, the aim of the paper is to analyse the productivity, technical and efficiency change of the companies in the sector. Using Malmquist productivity index, we decompose the total factor productivity change on technical change and efficiency change. Results show that the technology change in time was negative as same as the total factor productivity change. There was not a frontier shift due to innovations in the sector. However, an improvement in technical efficiency by 2.13% was noted. TPF decline can explain the fact, that Czech pig farms are still not competitive on the EU market.

Keywords: Efficiency Change, Malmquist Index, Pig Farming, Technical Change

JEL Classification: D24, O33, Q12

1. Introduction

The entrance of the Czech Republic (CR) to the European Union (EU) helped the Czech agriculture to become profitable (Pechrová, 2014). However, not all branches developed positively. Especially the pig farming sector was one of the most heavily affected. Cancelling the import tariffs (in order to comply with the *acquis communautaire*) lead to increased imports of live animals and pig meat. The producer's prices were low and the costs of production high (Štolcová and Homolka, 2012). Producers from CR failed to compete on the EU market. "In the broader meaning competitiveness is related to the ability of farms generate sufficient income from the market and non-market activities at the EU single market. In a narrower sense it is the level of productivity of resources compared to competitors in other countries" (Ministry of Agriculture, 2014).

The total number of sows which represents the production capacity has been decreasing since the entrance. While there were over 250 thous. sows in year 2004, there were only 106 thous. of them in year 2012. The decrease slowed down recently and may stop in near future. Věžník and Bartošová (2004) examined the number of cattle and pigs in period 1960–2001 in Czech regions. They found out that "a sharp decline in cattle numbers in Southern and South-Eastern Moravia can be explained by the transition and a higher orientation on pig raising (a suitable fodder base)". The dominance of Jihomoravský region in the share of sows was true until year 2007 when it decreased in favour of Prague and Středočeský regions.

The number of pig farms and their structure changed too. While there were 39 400 of pig farms in 2007 in 2013 it was only 26 250. There was an increase in the size of the largest herds together with the disappearance of the smallest noted in the EU (Marquel et al., 2014). Larger companies can achieve returns to scale. It was confirmed by Keizer and Emvalomatis (2014) that “the trend towards fewer and larger farms characterising agriculture in most industrialised countries can be partly attributed to larger farms becoming more productive by exploiting the economies of scale inherent in the production technology they employ”. In the CR, the trend was similar. While in 2005, majority of companies had economic size less than 2 000 EUR (measured by standard output); there were 10 times less of them in 2010. Similar development happened in categories from 2 000 to 3 999 euros and from 4 000 to 7 999 euros. On the other hand, the number of farms over 8 000 euros increased (with exception of group 25 000–49 999 euros) (Eurostat, 2015).

However, the financial situation of the of Czech pig breeders is getting better as after long period in loss, pig breeders became profitable in 2012 and 2013 (return on total assets was 3.6%, 2.3%, respectively) (Špička, 2014). Efficiency and superefficiency of Czech pig farms was evaluated by Friebel and Friebelová (2006) using non-parametric data envelopment analysis (DEA) which measures a relative performance of production units with multiple inputs and outputs. Malý et al. (2011) examined the potential for pork production in the CR. They modelled production function of the sector and searched for its determinants. They found out that the most important factor of final production was the new stock weight and feed compound used in the final stage of fattening. Čechura and Šorbová (2006) analysed the price transmission in pork meat agri-food chain. However, the changes of productivity, technology, and efficiency in time after the entrance of the CR to the EU have not been assessed yet. Therefore, the aim is to assess the productivity, technical, and efficiency change over time. We apply the Malmquist index (MI) of total factor productivity (TFP) for this purpose. The MI uses DEA technology to measure the “catch-up effects” – how companies improve their efficiency to get closer to the frontier technology (i.e. technical efficiency change ΔTE) – and frontier-shift due to innovations (i.e. technical change $\Delta TECH$). Having observed the development in time of both, we may conclude on the total productivity change in the sector. For detailed explanation of the concept and definitions see Coelli et al. (2005).

Gorton and Davidova (2004) examined the productivity and efficiency in Bulgaria, CR, Hungary, Poland, and Slovakia in order to find out whether there are differences in farms' efficiency based on the size and legal form. Their results show that: “In countries in transition where small family farms are well established and managed continuously by the present farm household, they appear to be less inefficient compared to larger cohorts as against countries where small family farms are a relatively new phenomenon” (Gorton and Davidova, 2004). Latruffe et al. (2012) investigated “the differences in technical efficiency and productivity change, and the technology gaps, between French and Hungarian farms in the dairy and cereal, oilseed and protein crops sectors during the period 2001–2007”. They found that French cereal, oilseed and protein farms were on average more efficient than Hungarian farms (both under their own technology – i.e. having their own frontier), but there was no difference found for dairy farms. Keizer and Emvalomatis (2014) explored the productivity change in dairy sector in the Netherlands using DEA. They concluded that “the rate of technical progress has been higher for large intensive farms, implying that recent technical innovations are more beneficial to this type of dairy farms” (Keizer and Emvalomatis, 2014). Odeck (2009) used DEA and MI to determine the performance of grain producers in Eastern Norway. He found out that an average productivity progress over the period of 1987–1997 was 38% and was primarily due to technical efficiency changes that enabled producers to catch up with front runners (i.e.

especially farms with lower performance improved to catch up the 100% efficient firms). Also “environmental factors, such as weather conditions, impact both efficiency and productivity” (Odeck, 2009).

2. Problem Formulation and Methodology

The aim of the paper is to analyse the productivity of the Czech pig farms after the entrance to the EU and whether they were able to implement innovations and hence to achieve technical progress. Therefore, DEA and Malmquist indices that are standard tools used by researchers to assess efficiency and productivity growth (or regress) in the agricultural sector were used. MI measures changes in TFP and is calculated as a ratio between output quality change index and input quality change and is decomposed to technological change and technical efficiency change. It works in the multi-input and multi-output environment utilizing input or output orientated distance functions. Output-orientated and input-orientated Malmquist indexes coincide if the technology exhibits constant returns to scale, i.e. when the inputs change by a unit, the outputs change in the same proportion.

We suppose that the amount of output is given, try to minimize the inputs and apply input distance function. Decision making unit (DMU_q – a pig farm q , where there are $q = 1, \dots, Q$ farms in the sample) produces n ($n \geq 1$) outputs y using m ($m \geq 1$) inputs x . Technology $T = \{(y, x) : x \text{ can produce } y\}$ is represented by input sets $L(y) = \{x : (y, x) \in T\}$ (in our case there are $n = 3$) and output sets $P(x) = \{y : (y, x) \in T\}$ ((in our case there is $m = 1$). Input-orientated MI defined in a form of a distance function (D) has form of geometrical mean (1).

$$\Delta TFP = M_I(x^t, y^t, x^{t+1}, y^{t+1}) = \sqrt{\left[\frac{D_I^t(x^{t+1}, y^{t+1})}{D_I^t(x^t, y^t)} \cdot \frac{D_I^{t+1}(x^t, y^t)}{D_I^{t+1}(x^{t+1}, y^{t+1})} \right]} = \Delta TE_I(x^t, y^t, x^{t+1}, y^{t+1}) \cdot \Delta TECH_I(x^t, y^t, x^{t+1}, y^{t+1}), \quad (1)$$

where ΔTFP denotes change in total factor productivity between time t (e.g. year 2006) and time $t+1$ (e.g. 2007). D marks the distance function which is input oriented (marked by I). x represents inputs and y outputs of the production. ΔTE is technical efficiency change between time t and time $t+1$ and $\Delta TECH$ is technical change between time t and time $t+1$.

Table 1: Statistical Description of the Sample (Variables in Thous. CZK Per Year)

	Production y	Personal costs x_1	Interm. cons. x_2	Capital x_3
2006	126 539,00	17 212,63	102 292,30	8 799,02
2007	109 071,20	20 476,41	96 714,68	10 959,00
2008	101 448,40	20 068,85	101 645,80	10 692,20
2009	123 267,40	18 173,07	81 726,73	10 257,73
2010	117 029,20	17 786,61	85 542,63	10 067,10
2011	118 524,50	17 650,68	106 461,10	10 075,54
2012	141 792,30	18 267,78	126 510,50	10 600,00
2013	139 525,30	18 310,83	129 599,60	10 853,41
Mean	122 149,70	18 493,36	103 811,70	10 288,00
Standard deviation	141 620,60	23 548,38	124 111,10	10 753,85
Change 2013/2009	1,10	1,06	1,27	1,23

Source: own elaboration

There were 328 observations for 41 pig farms (NACE5A). As calculation of MI requires the balance panel data, there were 8 observations per each farm for years 2006 to 2013. The year 2006 was included to see the change of variables after the entrance of the CR to the EU. Accountancy data were obtained from database Albertina of Bisnode, s. r. o. company (see descriptive characteristics in Table 1).

Production (y) is expressed in CZK per year and is deflated by price index of agricultural producers. It would be more appropriate to use deflator for slaughter pigs, because the price development is different during years (see Table 2). However, some farms can have also other production. Unfortunately, it was not possible to distinguish the production structure of farms. Personal costs (x_1) deflated by index of annual growth of wages in agriculture are used as a proxy for the number of employees. Intermediate consumption (x_2) and capital (x_3) represents the production resources. Capital consists of depreciations of tangible and non-tangible assets and paid interests for credits used for acquisition of these assets (x_2 was deflated by index of input prices for agriculture and x_3 by price index for goods and services contributing to agricultural investment).

Table 2: Price Index of Agricultural Producers and Price Index of Slaughter Pigs

Price index	2007	2008	2009	2010	2011	2012	2013
Agricultural producers	1,000	1,088	0,818	0,862	1,027	0,895	1,073
Slaughter pigs	1,000	1,048	1,040	0,948	0,984	1,106	1,011

Source: Czech statistical office, own elaboration

The calculations were done in econometric software Stata 11.2 using program by Choonjoo Lee and command malmq. The tfpch (total factor productivity change) is decomposed on effch (efficiency change) and techch (technical change). The software also calculates changes in pech (pure technical efficiency) and sech (scale efficiency). Another table displays overall technical efficiency (efficiency score under the assumption of constant returns to scale – CRS) and PTE (under variable returns to scale – VRS) for each DMU. CRS is calculated by CCR model and VRS by BCC model. Scale efficiency (SE) is a division of TE and PTE.

3. Problem Solution

After the calculations, the extreme values, which appeared due to missing data in some observations, were discarded from further analysis. Results are presented in Table 3. MI showed that there was a decrease in TFP in pig farming sector by 2.49 percentage points (p.p.) during the examined period. Similarly, to ΔTFP change, also the $\Delta TECH$ was slightly below 1 implying the decrease by 4.40 p. p.). On the other hand, the ΔTE was positive. Technical efficiency of pig farms grew by 2.13%. It is obvious that the decrease in TFP was mainly due to the failure of pig farms to implement innovations. There was downward shift of the frontier as the farms experienced slight regress in technologies. This might be due to the lack of finances for investments into new technologies. Unlike other agricultural branches, pig farming is a production mostly without the land. Hence, it cannot benefit from subsidies per hectare of arable land (SAPS – single area payment scheme) which are provided by the EU in the same magnitude as agricultural holdings with mixed production or specialized on crop production. Only 10 farms in a sample receive regularly direct payments and Top-up. However, some investments were done as the depreciations decreased during the period. While the average depreciations were 9542 CZK/year in 2006, the investments in new assets decreased it to 7279 thous. CZK/year on average. The negative development of TFP was

milder thanks to the less efficient farms which developed their performance and improved the usage of inputs in order to follow the most efficient companies in the sector.

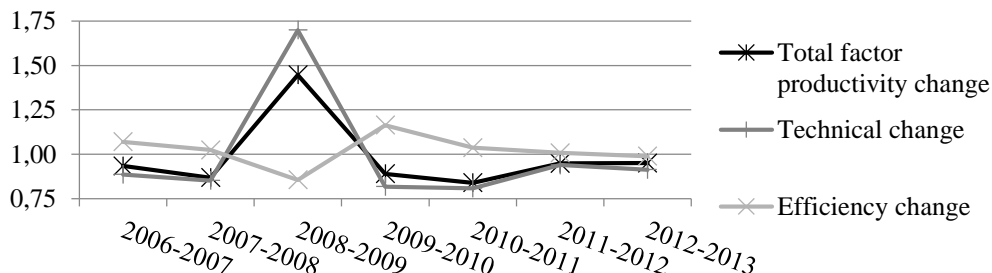
Table 3: Total Factor Productivity, Technical and Efficiency Changes in Period 2006–2013

Variable	ΔTFP	$\Delta TECH$	ΔTE	ΔPTE	ΔSE
Observations	282	280	283	275	272
Mean (Std. Dev.)	0.98 (0.28)	0.96 (0.30)	1.02 (0.29)	1.01 (0.18)	1.01 (0.22)

Source: own elaboration

The development during years was uneven and MI had been varying. According to expectations the economic crisis posed a strong problem to the pig farm companies. Despite that, there was a strong increase of TFP between years 2008–2009 driven by increased technical change. This means that there was an upright shift of frontier technology in examined group of pig farms. It points out that the sector had implemented the innovations. It is surprising that it happened between years 2008 and 2009, but expected decline might have been mitigated by the investments to technologies financed from Rural Development Programme. (Within years 2008-14 there were 182 projects for 6.84 billion CZK supported.) Despite this positive development, the overall technological change was negative as same as it was negative also in previous and following years. It can be seen in Table 1 that average amount of capital used decreased after the year 2009.

Figure 1: Development of ΔTFP , $\Delta TECH$ and ΔTE



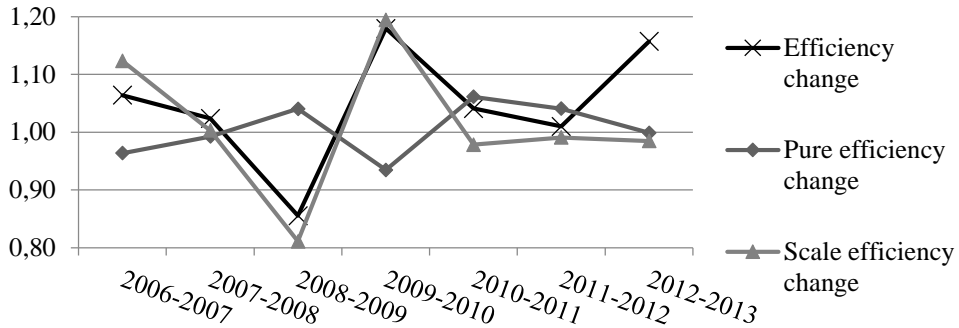
Source: own elaboration

The economic crisis had negative impact on efficiency and its development in years 2008–2009. On the other hand, for the rest of the period (2006–2008 and 2009–2013) ΔTE was higher than 1. The amount of production dropped in 2008, but personal costs stayed almost identical to the previous year. Hence, the companies failed to adjust costs and thus produced inefficiently. The personal costs (indicator of the number of employees) continued to decrease in the following years to the same level which was achieved in 2006. The highest change in ΔTE was noted between years 2009–2010 (1.18%) and 2012–2013 (1.16%). However, it might be assumed that the TFP and TE growth in 2009 can be influenced by distortion in data due to deflation by agricultural producer prices instead of slaughter pig prices and the results have to be taken with caution.

TE (under CRS) consists of pure (under VRS) and scale efficiency. The scale efficiency change followed efficiency change the period. Almost in all two years' periods, when the efficiency change was in negative direction, also the scale efficiency followed the same pattern. However,

ΔTE was lower than 1 only between years 2008–2009, while ΔSE stayed below zero since 2010. It implies that pig farms might have been too small to achieve the economy of scale, or too large to stay efficient. ΔTE and ΔSE of pig farms undergone high deflections in years 2008–2009 ($\Delta TE = 0.85$; $\Delta SE = 0.81$) and 2009–2010 ($\Delta TE = 1.18$; $\Delta SE = 1.19$). In the former case, the companies could appear to be too large (or too small to work efficiently). On the other hand, the PTE changes did not experience such extremes. Its changes developed mildly (maximum 1.06 in 2010–2011, minimum 0.93 in 2009–2010).

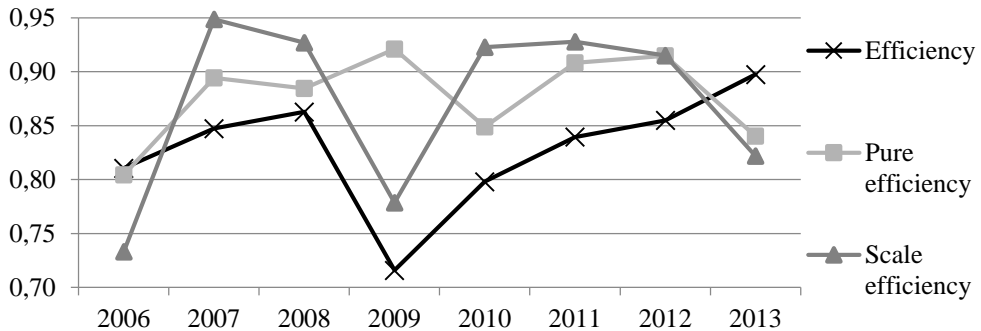
Figure 2: Development of ΔTE , ΔPTE and ΔSE



Source: own elaboration

Regarding the TE in absolute terms, an average pig farm produced with 82.83% efficiency. There is still a place for improvement by 11.17%. The companies were 100% efficient only in 16% cases under CRS. Due to the nature of BCC model (VRS), there were more 100% efficient farms (35%). On average, the pig farms were purely technically efficient from 91.04%. Scale efficiency amounted to 90.79% on average. Only 19% of pig agricultural holdings produce at their optimal scale (i.e. $TE = PTE = SE = 1$). The situation developed in time (see Figure 3).

Figure 3: Development of TE, PTE and SE



Source: own elaboration

It can be seen that after the crisis, the farms started to adjust their efficiency and scale of production. The size of the pig farms increased between 2007 and 2013. With exception of category of economical size from 25 000 to 49 999 euros, there were more farms larger than 8000 euros in 2013 than in 2007. Larger size can improve farms efficiency as they could achieve RTS (another issue is the ecological aspect of large production). We divided the farms in our sample according to quartiles of production. Production of 25% farms amount to 29 028 thous. CZK or less (*small farms*), half of farms produce in value of 92 254 thous. CZK

(under average size), the *largest farms* sold more than 167 615 thous. CZK annually. Small farms were the less overall, pure and scale efficient from all. While TE is almost equal in the other categories (on average around 85%), there are differences in PTE which reflects the size of company (under average – 89.9%, above average 91.3% and large 96.5%). Regarding the SE, surprisingly the most efficient are farms of under (95.5%) and above average size (92.4%). The least efficient are again small (86.5%), but also the large ones achieve only 88.4%. Those farms might be too large to operate efficiently. They might produce at decreasing returns to scale. Limiting the magnitude of production would help them to improve their SE.

We may conclude that the implementation of innovations and technical change was not optimal for pig producers during 2006–2013. Together with Pour and Pourová (2002) we suggest that “pig breeders, manufacturers and traders ... have to concentrate in the following years on the improvement of production efficiency (particularly decrease of production costs), achievement of a high quality production and improvement of environmental implications of the production.” According to Malý et al. (2011), “in order to maximize production, the farmers should focus on the weight of pigs coming into fattening and introduce the use of the feed compound into the production.” Other difficulties are caused also by the low prices for products and bargaining power of pig producers towards processing industry. While the consumer price of side pork increased by 1/3 in 2007–2013 (from 62.83 to 83.55 CZK/kg), the producers’ prices increased not even by 1/4 (from 46.43 to 57.26 CZK/kg). Despite that pork meat is still the most consumed meat (around 48% of the total consumption), the volume is decreasing (SCHPCM [online], 2014). Therefore, detailed analysis of other market conditions is required to conclude about causes of failure of the Czech pork producers.

4. Conclusion

The aim of the paper was to assess the changes in total factor productivity, the technologies, and efficiency of Czech pig farms. Because this agricultural sector was negatively affected by increased competition on the market after the entrance to of the CR to the EU, it was assumed that the productivity of farms and implementation of innovations and new technologies might have been insufficient. Using Malmquist index on panel data of firms we decompose the total factor productivity change for years 2006–2013 on technical change and efficiency change.

It was found out that total factor productivity change was negative during the examined period. It was mainly due to negative change in technologies implying that pig farms were not able to implement innovations in sufficient volume. On the other hand, non-technically efficient companies improved as the efficiency change was positive reflecting the “catching-up” effect of lagging farms. The most important changes happened in the size structure of the pig farms. In line with EU trend, also the number of farms has reduced, but their size has increased since the entrance to the EU. This enabled them to adjust their production and achieve the returns to scale. However, the group of the biggest farms was not the most scale efficient of all. Some farms were too large and hence producing under decreasing returns to scale. The reduction of their size would improve their efficiency. The challenge for future research is to examine also the effect of entrance to the EU on the technical change and efficiency change (and hence total factor productivity change) in other agrarian branches.

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Selected Macroeconomic Factors of the Business Environment and their Development since the Czech Republic Joined the European Union

Pavína Pellešová

Silesian University in Opava

School of Business Administration in Karvina, Department of Tourism and Leisure Activities

Univerzitní nám. 1934/3

Karviná, Czech Republic

e-mail: pellesova@opf.slu.cz

Abstract

The paper focuses on the development and prediction of selected factors of the business environment. The main focus is on macroeconomic factors in business environment of companies in the period since the Czech Republic joined the European Union. Description of selected business environment factors of companies is compiled, particularly those that affect the decision-making tourism businesses in Europe. The chosen macroeconomic components are analyzed, such as gross domestic product (GDP), economic growth, inflation, employment rate. Mentioned factors of the economic environment companies must apply to the management as it affects their economic situation. These factors affect the business environment and the formation of the product, and therefore require knowledge of estimating the future evolution of these factors.

Keywords: *Business Environment, Economic Environment, Employment, Macroeconomic Factors, Product*

JEL Classification: *Z39, L83, E24, E31*

1. Introduction

„It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change.“ Charles Darwin. Companies should follow this quote and observe carefully the business environment which affects their activities, behavior and competitiveness in the context of the European Union. Germany followed by Canada is the best country to live in according to the new World Economic Forum standings. Czech Republic is 38th from 60 evaluated countries. Evaluation criteria were culture, business environment, cultural and social heritage, civic live, economic, political and military power or overall life quality. Business environment play important role in competitiveness of the country and its standings not only in European context.

Business environment comprises many factors. The aim of this paper is however on selected macroeconomic indicators, which affect decision making in tourism businesses in European area. These are gross domestic product (GDP), economic growth, unemployment rate, inflation and exchange rate. Businesses have to apply these factors into management since it affect their economic situation.

Thanks to the rapid economic growth of the Czech Republic, our country started to catch up the European Union (EU) average again. In the 2014 the GDP per capita was 85% of the EU average, while in 2016 it will be 86% according to David Marek. Idnes.cz on the 24th February states (Idnes, [online10], 2016) that German economy grows, however companies does not invest. It threatens whole Europe. Germany could face serious issues and local industrialists does not see a bright future. Our neighbors' business confidence is declining. European leader has difficulties, which can affect whole continent.

Czech economy development is strongly dependent on the development in Germany. The interconnection of these economies through foreign trade is extensive. Therefore, there is a question how the Czech economy really converged through the years. The convergence of the Czech economic level to the Germany has begun in 2000 with slightly stronger effect than to the EU average or the Eurozone (in the period 2000-2007 Czech Republic reduced the difference compared to the Germany by 12.7 %, to the Eurozone by 12.3 % and to the EU by 10.9 %). In the year 2007 the GDP per capita in purchasing power parity in Czech Republic was 72.4 % of a German level. In 2014 it was only 67.5 %. (ČSÚ, [online], 2016).

1.1 Business Environment

Business environment is first of all specified (Vochozka, V., Mulač, P. at al., 2012) by legislatures and ministries, state authorities, state-supported institutions and agencies, courts and public administration institutions, ... business environment is a sum of all powers and influences which directly or indirectly affect the subject. These market powers affect company's ability to fulfil its business plan, its performance and prosperity. Business environment is defined (Grublová, E. et al., 2001) as sum of essential effects affecting the entrepreneur as well as the company and business. It comprises factors which affect the business on its own responsibility and for a purpose of evaluation of a business potential. We distinguish between external and internal business environment. Internal business environment – micro-level environment is fully in entrepreneurs' competence. For a business purposes the external environment could be further divided into two layers (Mach, A. et al., 2004). First outlying layer is macro-level environment containing business climate. Second one called meso-level environment is connected with regional and local factors. Company co-creates, can interfere and affect it. According to authors (Vochozka, V. et al., 2012), the external environment is the sum of all the forces and influences that directly and indirectly affect the subject, market forces which affect the company's ability to pursue its business plan, performance and prosperity.

Within the macro-level environment there are factors such a societal environment (including demographic factors), technological environment (including technological development, research and innovations), economic environment (comprising basic macroeconomic details) and political and legislative environment (comprising political stability and legislation). When analyzing macro-level environment (Starzyczna, H. et al., 2007) we focus on changes of particular factors or variables, which could not be influenced by the company itself, yet the company must be ready for these changes.

These include economic and social environment, political and legal environment, culture environment, technological environment. The analysis of economic, social and demographic environment is concerned with the development of the main macroeconomic indicators, particularly those that affect the behavior of households and firms. Main indicators studied are GDP development, economic growth, unemployment rate, inflation and exchange rate.

Information about macroeconomic environment are useful for companies, coming from various sources, having all kinds of differences. In an analysis of the macroeconomic environment, companies focus on the analysis of selected macroeconomic variables that companies basically cannot influence and must count with them and therefore include them into their expectations. If an economy is in its expansion phase, the production increases, the companies' profits increases therefore companies can increase investments. Increased production creates need for additional employers, there is also a growth in incomes of the population, leading to an increase in consumption, which is another source of economic growth. If economic development indicates a positive direction, it is good news for businesses and further strategic planning. Companies must consider listed factors in operational planning, as these affect their economic situation.

2. Analysis of Selected Indicators in the Macroeconomic Environment

For the research author used some of the basic methods of the scientific research to obtain information necessary to the complex systemic processing of the issue. The author predominantly used basic research methods including a literature review method and a method of analysis, comparison and trends. The statistical data processed by SZCO in 2004-2014 has been employed in the paper. Unfortunately, data for 2015 was not available at the time of the research.

Business environment macroeconomic indicators selected for further analysis were gross domestic product, economic growth, unemployment rate, inflation and exchange rate. Factor development is illustrated in the table 1. Companies must apply presented factors of economic environment in management as it affects their economic situation. These business environment factors influence product development and therefore the knowledge about the future progress of these indicators is essential and the trend will be calculated.

Table 1: Macroeconomic Development and Ministry of Finance Prediction (bold)

Indicator	Unit	2004	2005	2006	2007	2008
GDP	bil. CZK	3 057.7	3 258.0	3 507.1	3 831.8	4 015.3
Economic growth	% y/y	4.9	6.4	6.9	5.5	2..7
Inflation rate	% average	2.8	1.9	2.5	2.8	6.3
Unemployment rate	% average	8.3	7.9	7.1	5.3	4.4
Employment rate	% average	54.3	54.7	55.0	55.6	55.9
Indicator	Unit	2009	2010	2011	2012	2013
GDP	bil. CZK	3 921.8	3 953.7	4 022.5	4 041.6	4 077.1
Economic growth	% r/r	-4.8	2.3	2.0	-0.9	-0.5
Inflation rate	% average	1.0	1.5	1.9	3.3	1.4
Unemployment rate	% average	6.7	7.3	6.7	7.0	7.0
Employment rate	% average	54.8	54.2	54.4	54.5	55.2
Indicator	Unit	2009	2010	2011	2012	2013
GDP	bil. CZK	4 260.9	-	-	-	-
Economic growth	% r/r	2.0	4.5	2.7	2.4	2.4
Inflation rate	% average	0.4	0.3	1.1	1.9	1.9
Unemployment rate	% average	6.1	5.0	4.9	4.8	4.7
Employment rate	% average	55.7	-	-	-	-

Source: MF (2016), own proceeding.

2.1 Gross Domestic Product Analysis

Czech gross domestic product currently reaches the level of developed countries of the world. Czech economy in the period from 2004 to 2008 was very successful, using the benefits from strong foreign direct investment inflows, but also from the integration into the EU economic area (average GDP growth was 5.3 % a year). Crisis was accompanied by some of the classic symptoms- it caused a slowdown to slump in economic growth, economics recession, unemployment and growth in a number of cases, ... (Leška, D., 2012). In the year 2009 foreign demand drawdown impacted the Czech Republic (GDP declined by 4.8 %). Most of the EU countries was facing financial crisis consequences (Mynarzova, Kaňa, 2014), Eurozone debt problems and Czech Republic fall into grey average (15th position). In the year 2010 the GDP was higher by 2.2 % in year over year comparison. The gradual renewal of foreign economic boom with demand renewal enabled growth of export-oriented industries. Services market and trade also achieved above average results. In the year 2011 the GDP has raised by 1.7 %, GDP per capita was at 80 % of the EU average, ranking Czech Republic 52nd in the world. Between 2012 and 2013 the Czech economy was affected by the decline in domestic demand (for the years 2012 to 2013 GDP fell by 1.4%). The recession in the Czech Republic was in the context of the EU rather extraordinary, confirmed by the data for the whole Eurozone and the EU. GDP in the Czech Republic fell during the years 2012-2013 by 1.4% in the Eurozone area by 1.1% and in the EU by 0.3%. The recession that gripped the Czech economy in 2012 and 2013 transformed into a growth of 2% in the next year. The main cause of adverse development was also declining domestic demand by households and investors. GDP for 2014 was higher by 2.0% in year over year comparison. It was mainly caused by foreign demand, supported by growth in gross capital and households and government expenditures (ČSÚ, [online], 2016). The Czech economy is growing fastest in Europe, GDP growth in 2015 was 4.3 %. Economic growth remains driven solely by domestic demand and progress in the steady macroeconomic environment. From European countries, Poland, Slovakia and Spain exceeded the growth limit of three percent. From OECD countries the Czech Republic shows 3rd best result (see appendix 1) (ČTK, [online], 2016). Rapid growth of the Czech economy contrasts with the performance of the rest of Europe. Fast replenishing of European subsidies and continued foreign investment helped the economy.

2.2 Inflation Analysis

The Inflation development has a significant impact on decision-making processes of all economics entities, but also determines the level of other aspects such as the real interest rate, the amount of rent.... which after that again influence the behavior of both households and businesses (Jarý, Č., 2015). Inflation in 2004 was caused by cost shocks. There has been increase in fuel prices. Taking the evolution of the exchange rate into account, even the dramatic developments in oil prices, would correspond to a much higher growth of domestic fuel prices. Thanks to a good harvest, agricultural producer prices and food prices caused anti-inflationary effects. Inflation development in Czech Republic from 2004 to 2014 in comparison to EU was nearly the same. Differences are in expenditure groups. Compared to EU average, the prices of clothing, footwear and household equipment decreased in Czech Republic. Conversely, living costs increased significantly. Czech inflation average rate from 2000 to 2014 was 2.2 %, which is almost similar to the EU countries (2.3 %). The similarity with the average of countries is impaired with irregular, but quite significant increases in indirect taxes: VAT and excise duties. The biggest difference in annual increase in prices in the Czech Republic compared to the EU average was recorded in 2008 by 2.6 percentage points (3.7 % in the EU and 6.3 % in the Czech Republic). In 2015, the inflation rate reached only

0.3 %. It is the least since 2003 and the second lowest level in the history of the independent Czech Republic. Low inflation is determined largely by the depression in world prices for mineral fuels and generally low inflation globally. The average inflation rate in 2015 was 0.3 % and was the lowest since 2003 (ČSÚ, [online], 2016).

2.3 Unemployment Analysis

Czech Republic's accession to the EU was beneficial for the unemployment rate. It has since 2004, when it reached 8.3 %, downward trend until 2008 (reaching 4.4 %). The labor market in 2004 was characterized by large structural shifts, most important was the decline of businesses and the extension of long-term unemployment. Rising unemployment rate held at an increased economic performance. Since 2005, in connection with economic growth, there was a reduction in unemployment and the unemployment rate showed a decline in the regions. When the economic crisis appeared the unemployment rate rose quickly ... However, this increase was not as remarkable as in the case of the Czech Republic or Slovakia (Tvrdouš, 2015). The turning point came at the end of 2008 with economic recession. In 2009, the labor market has fully reflected the effects of the economic crisis. Consequently, in 2010 there was an expected increase in the unemployment rate. In 2009 all regions registered a decline of employed people. The high unemployment rate continued in 2010, when it reached 7.3 %. General unemployment rate reached 6.5 %, declining in subsequent years and in Q4 2014 reached 5.8 %. In 2015 Czech Republic has one of the lowest internationally comparable average values of unemployment rates in the EU. The situation in the different regions vary. The general unemployment rate fell in the Q4 2015 well below the threshold of five percent (4.5 %) reaching eight-year lows and together with Germany, the lowest in the EU. In the classification by the level of education, university graduates and persons with full secondary education with GCSE shows consistently low unemployment rate. High unemployment exists among persons with basic education.

3. Problem Solution

Czech economy in 2015 grew at a second highest rate in the European Union. Due to the structure of the Czech economy and strong trade links with Germany a probable negative risk could be further development in the case of diesel scandal (software manipulation providing false results of emission measurements) and its consequences for Volkswagen Group. So far, however, we expect little impact on the Czech Republic in macroeconomic terms. A risk for the Czech economy would be a continuing pressures on the appreciation of the Czech currency.

In 2016, GDP growth will slow down in the Czech Republic at 2-3 %, mainly due to the outage of European subsidies. Due to higher wages and new jobs, consumers will be able to buy even more. Convergence to EU regarding GDP per capita should continue. (Aktualně.cz, [online], 2016).

According to the chief economist of Raiffeisenbank, numbers of unemployed will continue to fall, albeit more slowly than this year. "The more people have jobs, the more they will feel the economic growth first-hand. Households of working people will be able to afford a few hundred crowns higher expenditures every month," he explains. The average wage, according to her in 2016 will increase to 4 % and such growth will be visible on pay check. For example, analysts from Komerční banka predict growth by 4.5 % for 2015 and 2.7 % for 2016.

Ministry of finance (MF) in Macroeconomic prediction (January 2016) expect real GDP growth for 2016 at 2.7 %. For 2017, we expect economic growth of 2.6 %. For the year 2016 the prediction is slowdown in growth to 2.5 %. In both years the economic growth should be

driven by domestic demand, both expenditure on final consumption and investment in fixed capital. The average inflation rate could reach 0.4 % in 2016, consumer price inflation could accelerate to 1.4 %, the unemployment rate should gradually decline in 2015 should reach 5.1 % in 2016, then 4.8 % (Idnes, [online], 2016).

The Ministry of Labour and Social Affairs (MLSA) in Estimation of the development of selected macroeconomic indicators (February 2016) provided estimates of trends in selected macroeconomic indicators: based on economic growth 4.3 % in 2015 the predicted growth for 2016 ranges from 2.4 to 3.2 %, for 2017 growth from 2.4 to 3.2 % for 2018 growth from 2.0 to 3.0 % (see table 2).

Table 2: Estimation of the Development of Selected Macroeconomic Indicators (Annual Growth in %) - February 2016

Indicator	Unit	2015	2016 prediction	2017 estimation	2018 estimation
GDP	bil. CZK	4421.4	4523.4	4625.3	4727.3
The average annual rate of price inflation	%	4.33	2,4 – 3.2	2.4 -3.2	2.0 – 3.0
The proportion of unemployed persons	%	0.33	0.3 – 1.1	1.0 – 2.4	1.5 – 2.5

Source: <http://www.mpsv.cz/cs/869k>, own proceeding

Based on an analysis of development of selected indicators, business environment (macroeconomic indicators), and according to CZSO data for the period 2004-2014 the GDP trend was calculated as well as inflation rate and unemployment rate (Table 3). The table shows that gross domestic product will grow, and there is a real growth of the economy. GDP growth will be from 2016 accompanied by a decline in the unemployment rate, and thus increase the employment rate. The calculated unemployment rate trend is consistent with estimates of the MLSA, the trend of economic growth in 2018 differs. It is higher by 0.6 % than the upper limit of the expected range. The trend of inflation does not correspond with the estimate in 2017 and is lower by 0.7 % than the lower limit of the expected range, and so is even lower in 2018.

Ministry of Finance in 2015 macroeconomic forecast assumes growth in employment, which replicates the economic performance. For 2016 and 2017, however, predicts lower growth. Calculated trend is higher than provided prediction. This may be due to the fact that it does not reflect external influences on economic performance, but accordingly to the prediction of MF it should copy the performance of the economy.

Table 3: Development of Macroeconomic Indicators - Trend Calculations (bold)

Indicator	Unit	2015	2016	2017	2018	2019	2020
GDP	bil. CZK	4421.4	4523.4	4625.3	4727.3	4829.2	4931.2
Economic growth	% y/y	1.6	2.3	3.0	3.6	4.3	5.0
Inflation rate	% average	0.3	0.9	0.7	0.5	0.3	0.1
Unemployment rate	% average	5.0	5.8	5.7	5.5	5.4	5.3
Employment rate	% average	66.2	66.2	66.2	66.3	66.3	66.3

Source: own proceeding.

4. Conclusion

Business environment, which is determined by legislative and economic aspects of a country influence entrepreneurs, but also vice versa, entrepreneurs influence the nature of the business environment. No business is completely isolated from the external environment. The business environment surrounds the company, and to a large extent it affects or also limits the company in certain ways. In terms of economy, business environment also shapes the macroeconomic characteristics. Therefore, an analysis of selected macroeconomic variables in the period after Czech accession to EU was performed. In terms of further development of the macroeconomic environment, the prediction of some institutions such as the Ministry of Finance, the MLSA was provided. The results of these predictions were compared with the calculated GDP trend, average annual inflation rate and the unemployment rate.

Estimation of the MLSA and the MF regarding predictions of economic growth differs. When comparing the computed trend, then the estimate of the MLSA in 2018 differs. It is 0.6 % higher than the upper limit of the expected range. Calculated trend of the inflation development does not coincide with the estimation for 2017 and is lower by 0.7 % than the lower limit of the expected range, and is also lower in 2018. MF in 2015 macroeconomic forecast assumes growth in employment, which replicates the economic performance for 2016 and 2017, however, predicts lower growth. Calculated trend is higher than provided prediction. This may be due to the fact that it does not reflect external influences on economic performance, but accordingly to the prediction of MF it should copy the performance of the economy.

It is obvious that the unemployment rate and the employment rate followed the trend of the economy, namely economic growth, however its prediction is not in conformity. The MF and the MLSA predicts a decline in the unemployment rate, which was also confirmed by the calculated trend. Generally, the calculated trend confirmed the relationship between economic growth and the unemployment rate and it is approaching MLSA estimation.

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Appendix

Appendix 1: The fastest growing economies in the developed world (OECD countries)

1.	China	7.0
2.	Indonesia	4.7
3.	Czech Republic	4.4
4.	Poland	3.7
5.	Slovakia	3.1
5.	Spain	3.1
7.	Sweden	2.9
8.	Hungary	2.7
9.	USA	2.7

Source: CZSO (2016)

When Culture Hampers European Integration – the Case of Denmark’s EU Cooperation

Jeppe Juul Petersen

Copenhagen Business School

Department for International Business Communication, Centre for the Study of Europe

Howitzvej 60

Frederiksberg, Denmark

e-mail: jjp.ibc@cbs.dk

Abstract

This article deals with Denmark’s skeptical attitude towards the EU cooperation. From a hermeneutical-institutional approach the aim of this article is to analyze why Denmark has been rejecting several initiatives from the EU. It illustrates how different democratic understandings hamper European integration. Based on Ronald Dworkin’s theoretical framework the article discusses two different perceptions on democracy: majoritarian democracy and constitutional democracy. It is shown when and why EU’s member states prefer to handle EU-related judicial disputes without involving supranational institutions. In addition, the article provides tentative comparisons to Britain and the Nordic countries since they show similar attitudes to supranational institutions. The article concludes that Denmark’s majoritarian democracy provides political cultures incompatible with the EU’s constitutional democracy and this can explain why Denmark is so reserved when it comes to EU cooperation.

Keywords: Culture, European Integration, Institutions, and Majoritarian- and Constitutional democracy

JEL Classification: F5, F 53, F55

1. Introduction

It is difficult to understand what is currently happening with the European cooperation. The European Union (hereafter EU) has daily quarrels between its member states searching for new solutions to economical growth and incompatible handling of the migrant crisis. It is no more than ten years ago that international political observers such as Mark Leonard (Leonard, 2005) wrote with great enthusiasm about why and how the EU would lead the world towards new institutional legacies in the 21st century (Østergård, 2015, p.11). In addition, observers such as Ian Manners (Manners, 2002) have highlighted how the EU’s international role goes beyond traditional understanding of international affairs. That is, a superpower not using traditional power politics, but instead setting standards for international cooperation in an increasingly global world.

Denmark has been an EU member state since 1 January 1973, but it cannot be said the relation has been flawless. The country has another understanding of EU cooperation, and as a result, what we might be witnessing today is a cultural clash (Baron and Herslund, 2012). According to researchers, disagreement on the conception of democracy hampers Danish EU cooperation, although both parts believe in democratic values:

“One of the key values shared by Denmark and the EU is democratic governance. Thus democracy is a common denominator that ought to make Denmark's cooperation within the EU a relatively straightforward affair” (Copenhagen Business School [online], 2015).

However, looking at Denmark's seven referendums on EU-related issues it somehow seems clear that it is culture that hampers European integration. The Maastricht Treaty (1993) symbolized a milestone in European cooperation which founded the EU on three pillars. One supranational pillar of the so-called European Community is the EU's supra-national institutions, in particular the Commission, the European Parliament and the European Court of Justice. The second pillar referred to the Common Foreign and Security Policy (CFSP), and the third pillar referred to Justice and Home Affairs (JHA). The two latter pillars are in their nature more intergovernmental than the first pillar. The rather fateful referendum on 2 June 1992 gave 50.7 percent against to 49.3 percent in favor for the Maastricht Treaty. The Danish *no* shocked not only Danish pro-European politicians, but European leaders in general (Dinan, 2010, p. 96). The Maastricht Treaty could only be achieved if all member states agreed, and therefore solutions to the Danish rejection had to be found. The solution was the so-called Edinburgh agreement on 12 December 1992 providing Denmark with four opt-outs⁸² (Borberg, 2015, p.191).

The Danes went to the polls on 3 December 2015 to vote on one of Denmark's four opt-outs. That is, voting in a referendum on JHA on replacing Denmark's opt-out with an opt-in model equal to Ireland and the United Kingdom. If they had voted *yes*, the Danes would have had a model allowing choosing the JHA laws and policies in which Denmark wants to take part (Folketingets EU-oplysning [online], 2015). But the Danes chose once again to say *no* to change the legal JHA opt-in. It is the second time Denmark holds a referendum on one of its four opt-outs⁸³. 53.1 percent voted against meanwhile 46.9 percent voted in favor. In fact, the result of the referendum on JHA policy follows the political agreement back to 1993 (Altinget [online], 2015). In other words, it seems as if disagreement on the conception of democracy hampers Danish cooperation in the EU. The Danish attitudes to EU legislation and conception of democracy is not only restricted to Denmark. Also the Nordic countries and Britain have experienced public skepticism (Kelstrup et al., 2012, p. 225). This can for example be seen from the following quotation that exposes different understandings of democracy hampering the European integration:

“If there is a lesson for Prime Minister David Cameron from Denmark's 'No' vote, it may be that complacency could allow Britain to drop out of the European Union when voters decide on membership in a referendum “[...]” Britain's future is also at stake. Some pro-Europeans warn an exit from the EU would hurt the economy and could prompt another vote on Scottish independence. Opponents of EU membership say Britain would prosper outside and that warnings from pro-Europeans are overblown” (Reuters [online], 2016).

The goal of the paper is to reflect upon Denmark's critical perception of the EU cooperation and to discuss some of the obstacles the European integration currently is witnessing. The article embarks on Danish political-legal culture and analyzes why Denmark continues

⁸² Denmark has four opt-outs from the Maastricht Treaty after the referendum in 1992. The opt-outs are stipulated in the Edinburgh Agreement and concern the Economic and Monetary Union, the Common Security and Defense Policy, Justice and Home Affairs, as well as the citizenship of the European Union (Kelstrup et al., 2012, p.423).

⁸³ The first time the Danes said *no* was in 2000 during the “great euro referendum”. In this, the Danish government took initiative to be included in the economic cooperation in order to join the single currency (Borberg, 2015, p.193)

rejecting EU-related issues. As a comprehensive political and institutional framework the EU does no longer have the same legitimacy amongst its member states. The Danes have over the years been having a rather pragmatic attitude towards the European integration (Kelstrup et al., 2012, p. 416). However, it is assumed Denmark's referendums have a deeper concern about the direction and pace of the European integration. As a result, this article will provide explanatory potentials in order to explore and understand the perception of democracy and political culture that hampers the European integration.

2. Methods

Social science disciplines have over the years established several new institutional directions. The various logics are difficult to clarify since institutions often consist of complex phenomena. However, there is a tendency to identify institutional convergence in political, legal, social and economic fields, which supports the epistemological course of this article (Nielsen, 2005). Denmark is often seen as a frontrunner in implementing legal acts from the EU; what is more, Danes had a pragmatic approach to European integration acknowledging its economic advantages (Baron et al., 2015, p. 91). On the other hand, the Danes have on several public referendums turned their back to the EU. The aim of the study is to explain the historical EU skepticism in Danish political-legal culture and concept of democracy, and to illustrate what is hampering the European integration in Britain and the Nordic countries, too.

This article's endeavor is to understand when and why governments of EU's member states prefer to handle EU-related judicial disputes without involving a supranational institution like European Court of Justice. For example, Denmark has no tradition of judicial review by courts which can be seen by looking into the political-legal culture and concept of democracy. The article explores in particular Denmark's attitude to the EU cooperation, but is not entirely restricted to Denmark's conception of Democracy. The analysis might provide an analytical framework to understand an upcoming "Brexit". The analysis follows brief descriptions of the American philosopher Ronald Dworkin's book *Freedom's Law* (1996). Historical developments have in many respects exposed that there is a deeper skepticism amongst the Danes. The analytical distinction provided by Dworkin on *majoritarian* versus *constitutional* democracies can be useful while understanding this historical development; moreover, explain why majoritarian democracies articulate their skepticism towards supranational institutions. This provides an institutional framework to understand why culture hampers European integration.

Empirical data and methodological triangulation reveal overlapping periods which provide a holistic understanding for institutional conditions that hamper EU cooperation. The statements throughout the paper are based on empirical data collected as part of a newly conducted research project at Copenhagen Business School, Centre for the Study of Europe. The interpretation of the empirical support is combined with an institutional-hermeneutical approach by means of methods and gives an understanding for Denmark's skeptical attitude to European integration.

3. Two Political Understandings of Democracy

A common feature of all EU member states and their constitutions is the legal framework specifying the limits of governmental power. Though, looking at different European constitutions it is noticeable that EU's member states have different attitudes to their constitutional framework. This hampers European integration since different understandings influence EU member states attitudes to political doings and role of EU's supranational

institutions (Baron and Herslund, 2011, p. 35). According to Ronald Dworkin, a government tackles its citizen's rights and personal freedom. He differentiates between two political understandings of democracy - *constitutional democracy* and *majoritarian democracy* (Dworkin, 1996).

The *constitutional democracy* is based on the idea that supreme sovereign authority is the people, whose rights are protected by the constitution and a special institution in the form of a court, which monitors their fulfilling. The court oversees that legislators do not usurp too much power and pass laws contrary to the Constitution at the detriment of citizens' rights. This is frequent in EU member states with newer constitutional democracies because their constitutional framework stands for a breach from the past (Herslund et. al., 2011, p. 76). The best known representative of observing courts might be the German Constitutional Court in Karlsruhe. That it is in Germany we can see the most noticeable Constitutional Court seems understandable since Germany has learned its lessons from the Weimar Republic, and so, modern Germany unifies the constitution and democracy in common values (Baron and Herslund, 2011, p. 63). The legislator's roles are often bounded by an upper house or Senate and in some cases by a powerful President. This can be exemplified by the former Italian President Carlo Azeglio Ciampi (1999-2006). That is, the former President has on several occasions rejected legal proposals from the former Berlusconi government to avoid proposals beneficial to Berlusconi himself and thereby circumventing the constitution. Two other examples can be found in Spain and France. In the Spanish case, it is the *Tribunal Constitucional* that denotes the supreme authority and handles constitutional disputes. In France the French National Assembly are being observed by the *Conseil Constitutionnel* and by the directly elected President (Baron and Herslund, 2011, p. 66-71).

In the course of this study of culture hampering European integration, it is easy to see the Danish concept of democracy denotes a typical example of *majoritarian democracy*. While observing the term majoritarian democracy it seems clear that legitimacy of power is carried out when a majority of the nation's elected politicians is represented within an elected parliament, but what does that exactly imply for Denmark's EU cooperation? In particular, this can somehow be summarized by the Danish former politician Viggo Hørup's famous phrase "*none above and none besides the Folketing*" (Parliament) from 1878. Recent research, however, shows that this particular phrase has been receiving almost a dogmatic status in Danish politics:

"*This means that democracy means something different for us Danes than it does in other countries in Europe, which have different master narratives. In Denmark we place a high level of trust in our democratically elected politicians*" [...]. *Significantly there's only one single instance since the constitution was introduced in 1849 of the Danish Supreme Court declaring an act of parliament to be in violation of constitutional law*" (Copenhagen Business School [online], 2015).

Danish democracy deviates from constitutional democracy. When the elected parliamentarians have taken their seats, it is the parliamentary majority that governs with sovereignty. In other words, the Danish Parliament is not restricted by a chamber or a senate that can restrain or modify Danish Parliament's law equal to European countries favoring the constitutional democracy (Baron and Herslund, 2012). The Head of State (the Danish Queen) does not wield any real influence; moreover, there is no tradition of courts

interfering in Parliamentary legislation⁸⁴. A similar attitude can be seen from the British “*The Sovereignty of Parliament*”. That is, high levels of trust to the democratically elected politicians who govern and no control or interference from a monitoring court as in the constitutional democracy (Baron and Herslund, 2011, p. 58). Accordingly, a majority in the parliament may be unchallenged making laws even if they may be to detriment to Danish citizens. As such, the Constitution has in this particular matter no more than a symbolic or advisory role to the Parliament.

Having this in mind, it is two entirely different political cultures that influence European cooperation. By looking at previous exemplifications and the following quotation by Danish researchers that signifies the European integration, it becomes clear that Central- and Southern EU member states favor constitutional democracies and therefore are more compatible with the EU’s institutional architecture:

“When the EU presents itself as a democratic project, it’s in the continental sense, the doctrine being that the people are sovereign and a constitutional court permanently monitors the representatives elected by the people. The Danes aren’t on board with that” [...]“But we’re forgetting that the EU doesn’t exist as a separate entity. The EU consists of 28 member states and Denmark is one of them. Here in Denmark the EU is perceived as a separate and self-contained entity that rules over us – a notion we find intolerable as it clashes with our independent national identity” (Copenhagen Business School [online], 2015).

4. Denmark’s Skeptical Attitude towards EU Cooperation

There is a considerable difference between the EU’s constitutional and the Danish majoritarian democracy. As already mentioned, this can be seen from Danish politicians’ practice, but it is also believed in the wider public that Danish sovereignty is best safeguarded by the Danish Parliament (Kelstrup et al., 2012, p. 269-270). Many Danes would hold that foreign bodies such as the European Commission or the European Court of Justice should not interfere:

“The fact that we in Denmark are not keen on the EU’s continental idea of democracy gives rise not only to criticism of the Court of Justice of the European Union, but also to the “us and them” rhetoric apparent in phrases such as “down in the EU” or “the EU can’t dictate to us” (Copenhagen Business School [online], 2015).

There seems to be a fundamental difference between Denmark and the EU. Accordingly, this hampers European integration because the Danes do not identify themselves with the EU. The Metock-case⁸⁵ from 2008 illustrates the skeptical approach to EU, but also the Danish blurred attitude to European integration. The Danes have negotiated and voted in favor of the Court of Justice of the European Union; moreover, supported a directive (Directive 2004/38) saying freedom of movement was inviolable. Accordingly, the

⁸⁴ The Danes only have one example of parliamentary interference by the Supreme Court. In 1996, state subsidy for some private schools (Tvind schools) was removed after the Parliament adopted the so-called “Tvind” Act. The law contained provisions making it conditional that funding of schools was free and independent. In 1999, the Supreme Court declared parts of the law unconstitutional (Wikipedia [online], 2016).

⁸⁵ The Metock case gave rise to tensions between the Liberal government and its parliamentary coalition partner Danish People’s Party. The two governing parties were in favor of limited numbers of family reunification in Denmark, but also keen in complying with EU rules. The Danish People’s Party was opposed to the EU rules, and at the party’s national convention in September 2008, several of its Parliamentarian members stated Denmark should leave the EU (Wikipedia [online], 2016).

persistent skepticism therefore seems a bit ambiguous because the Danes are saying yes and no to EU cooperation. The quotation also draws attention to a lack of identification with the EU. This hampers the European integration because missing identification forms a center-periphery between EU and Denmark (Baron et al., 2015, p. 91). In particular, the EU' supranational institutions stand for a center where political decisions are carried out for all EU's citizens. The Danish opt-out leaves Denmark in the periphery subject to the center. And so, this illustrates how culture hampers European integration and Denmark's cooperation with the EU.

Denmark's skeptical attitude to the EU cooperation can also be seen from Court of Justice of the European Union. The monitoring of the fundamental rights done by the a supranational institution such as the Court of Justice of the European Union, and not by the Danes themselves, stands for a threat to national sovereignty. This denotes a major difference between two political cultures. Having the Danish majoritarian democracy and political culture in mind, it seems inevitable that the outcome of the referendum 3 December 2015 confirmed the Danish opt-out. This issue hampers not only Denmark's European integration. Similar institutional setups can be seen in the other Nordic countries and Britain. In this, parliament is not used to be monitored or share its power with others, which gives the impression the country's sovereignty is been being threatened. This clash of cultures is linked to fundamental differences in political cultures, based on the two basic conceptions of democracy. And what is more, this particular difference is essential to be realized for obtaining a deeper understanding for not only Denmark's, but also Britain's and the other Nordic countries' place in the EU cooperation.

5. Conclusion

This article has examined Denmark's skeptical attitude towards the EU cooperation; moreover, it has illustrated when and why culture hampers European integration. Denmark has been an EU member state for more than forty years; however, the membership continues to be in conflict with EU-related issues. Thus, the Danes have turned their back on the EU several times and most recently on 3 December 2015 confirming their skeptical attitude to EU cooperation. The article has explored two different perceptions of democracy: *majoritarian democracy and constitutional democracy*. That is, two disparate approaches to parliamentary practice and national sovereignty are hampering Denmark's European integration because Denmark favors majoritarian democracy. It has been shown how Denmark's majoritarian democracy and political-legal culture deviates from EU's continental understanding of democracy. In addition, it has been exemplified when Denmark's confrontation with the EU and its supranational institutions such as the Court of Justice of the European Union takes place. This supports the perception of EU being separate and a self-contained entity ruling over Denmark. Unlike constitutional democracy that emphasizes a court monitoring and interfering when legislators usurp too much power, it is in opposition with Denmark's independent national identity. As it has been illustrated, this is not only restricted to Denmark, but also challenges EU member states such as Britain and the Nordic countries. Therefore, differences in parliamentary practice can illustrate why some EU member states choose another approach to EU-related issues. The article therefore concludes that Denmark's majoritarian democracy provides a political culture incompatible with the EU's constitutional democracy and this can explain why Denmark is so reserved when it comes to EU cooperation.

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Regional State Aid and Its Impact on the Competitiveness of the EU Member States

Piotr Podsiadlo

Cracow University of Economics
Department of Local Government Finance
Rakowicka 27
Cracow, Poland
e-mail: piotr.podsiadlo@uek.krakow.pl

Abstract

The subject of the article is to present the conditions of admissibility of State aid in the European Union, taking into account the rules applicable to the regional aid to undertakings. National regional aid consists of aid for investment and, in certain limited circumstances, operating aid granted to large undertakings which is targeted on specific regions in order to redress regional disparities. The qualitative analysis of State aid granted by the Member States was carried out under the provisions of the Treaty on the functioning of the European Union and the European Commission guidelines on regional State aid. Statistical analysis was carried out based on the linear regression model. The response variable (dependent variable Y) was the size of GDP per capita, and explanatory variable (independent variable X) was the expenditure on State aid for regional development.

Keywords: *Regional Aid, Competition Policy, European Union, Legal Regulation, Competitiveness*

JEL Classification: *E62, K20, K33*

1. Introduction

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 C 326, 26.10.2012) 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.

Regional aid is aid which is restricted to, or targeted at, certain geographical areas within a Member State. The purpose of this article is to analyze the conditions of admissibility of regional State aid. This should lead to verify the hypothesis of the influence of State aid on the

size of the GDP *per capita* in the Member States, which have provided regional aid to enterprises in the years 2000-2014. The positive correlation of GDP *per capita* with the amount of expenditure on State aid for regional development would mean that with increasing amount of regional aid to enterprises their competitiveness measured in terms of GDP *per capita* should increase, and thus the competitiveness of national economies and the competitiveness of the EU economy ought to increase.

1.1 Regional Aid

The Treaty provides, in Article 107 par. 3 (a) and (c) TFEU, for exceptions for regional aid from the general prohibition of aid under Article 107 par. 1 TFEU. Regional State aid is aid to enterprises which is supposed to enable development of the most disadvantaged regions through the promotion of investments and the creation of jobs. It is supposed to target specific areas and is reserved for the development of geographically defined disadvantaged regions. The concept laid down in Article 107 par. 3 (a) and (c) TFEU requires a balancing of the distortion of competition resulting from the aid measure and the advantages of the aid for regional development of a disadvantaged region. That means the aid measures must be necessary for the development of the disadvantaged region (C-169/95, para 20).

Disadvantaged regions are areas with developmental problems in relation to the European Union or to another Member State (C-248/84, para 19). Article 107 par. 3 TFEU differentiates between two types of assisted regions. Assisted regions pursuant to Article 107 par. 3 (a) TFEU are regions with abnormally low standard of living or serious underemployment in relation to the European Union, not national averages (730/79, para 25). These regions receive preferential treatment.

Assisted regions pursuant to Article 107 par. 3 (c) TFEU are regions with general developmental problems. In that case, the intensity of the economic disadvantage can be comparatively low. The disadvantage is initially determined in comparison with other regions of the Member State (in addition the European Union average is considered) (C-248/84, para 19).

According to the wording of Article 107 par. 3 TFEU, the basic difference between the two provisions is that aid may only be granted pursuant to (c) if it does not change trade conditions in a manner contrary to the Internal Market. Such a requirement does not exist according to (a). However, for aid pursuant to (a), the European Commission also has to investigate the effects in the case of aid schemes for assisted regions and prevent the establishment of a sectoral distortion of competition on the European Union level which outweighs the original regional problems (T-380/94, para 54).

1.1.1 Legal Basis – Guidelines, Frameworks and GBERs

Until the late 1990s, regional State aid was not assessed in a systematic manner. In the 1970s and early 1980s Commission policy was developed on the basis of published "principles", which set out how the Commission proposed to interpret Article 107 par. 3 TFEU. These formed the basis for Commission intervention as regards the geographic coverage of assisted areas, award values and forms of aid. However, there was no detailed rationale for the principles, which were often unclear and which were applied inconsistently, leading to growing resentment among national policy makers (Bacon, 2009, pp. 410-411). This, together with a number of inter-related developments, notably enlargement to include Spain and Portugal, the Single European Act and moves to complete the internal market by 1992, put

pressure on the Commission for a more transparent approach, culminating in the publication of the 1988 Communication on regional aid (European Commission, 1988).

In the course of the early 1990s, the Commission had been informally piloting an approach to controlling the geographical coverage of Article 107 par. 3 (c) regions, using percentage population coverage as a benchmark and providing the Member States with greater flexibility in the actual choice of areas (Merola, 2010). The guidelines on national regional aid of 1998 formalized this practice as well as replacing and consolidating the large number existing documents relating to regional aid (European Commission, 1998a). In addition, the Commission published a multi-sectoral framework on regional aid for large investments projects for the first time in 1997, which takes into account the characteristics of large projects and established different assessment criteria for these (European Commission, 1998b). Then the Commission adopted guidelines on national regional aid for 2007-2013, which have replaced both the old guidelines as well as the multi-sectoral framework on regional aid for large investments projects (European Commission, 2006). At the present, guidelines on regional State aid for 2014-2020 apply (European Commission, 2013). The time periods of 2007-2013 and 2014-2020 correspond to the program planning time period of the EU structural funds (Nicolaidis, 2013).

Many cases of regional aid fall under the General Block Exemption Regulation (GBER), which allows certain types of aid to be granted without notification to the Commission (**OJ L 214/3, 9.8.2008; OJ 187/1, 26.6.2014**). Aid not falling under the GBER must be submitted for approval by the Commission before it may be implemented. In most cases, however, where prior approval is necessary, regional aid is offered under aid schemes or programmes which are approved as a whole, thereby avoiding the need for approval of each individual award on a case-by-case basis.

2. Problem Formulation and Methodology

The European Union's prosperity is dependent on her capacity to compete in the global market (Citi, 2015). For this reason, we need to measure EU economy's positions in terms of competitiveness. Competitiveness creates the necessary conditions for sustainable development, for the creation of new production activities and new jobs - and for a better quality of life. But when we talk about competitiveness, what do we really mean? If we refer to business competitiveness, then we mean market success and the acquisition of new market shares. The European quest for competitiveness is qualified: it should be compatible with the European dream (Rifkin, 2004). Europeans value quality of life higher than the accumulation of wealth and have a vision of the society they want to live in as a society that values solidarity, the well being, and the personal development of her citizens; that respects the environment, the less favoured individuals and the less developed countries (Bakker, de Vreese, 2016). Broad understanding of competitiveness can also be found in studies of Organization for Economic Cooperation and Development (OECD). In terms of this organization the competition is: "the degree to which, under open market conditions, a country can produce goods and services that meet the test of foreign competition, while simultaneously maintaining and expanding domestic real income" (OECD, 1992). For such a definition of competitiveness positively relate, inter alia: Jan Fagerberg, Martin Srholec and Mark Knell, Norwegian economists, who add that "the concept usually has a double meaning, it relates both to the economic well-being of its citizens, normally measured through GDP per capita, and the trade performance of the country" (Fagerberg, Srholec, Knell, 2007, p. 1595).

In terms of the European Union development strategies – of Lisbon Strategy implemented till 2010 and the currently implemented "Europe 2020" - the competitiveness of the European Union is a potential competitiveness in the ten-year term. In so-called pyramid of competitiveness proposed by the European Commission in 1997 a set of factors was presented on which it is possible to build models of competitiveness in not only macroeconomic but microeconomic term (Zielińska-Głębocka, 2000, p. 14). At the top of this pyramid as the main factor of competitiveness there was the standard of living, which synthetic measure is GDP *per capita*. In turn two factors, i.e., the employment rate and productivity have the impact on quality of life. Further decomposition of the pyramid allows for the identification of more precise determinants characterizing the level of employment and productivity, so factors affecting the overall level of competitiveness. One of them is the economic policy of the State, which is carried out, among others, through the instruments of State aid, having a substantial impact on both the competitiveness of the economy as a whole and on particular enterprises operating within it. Beside human, capital, and natural resources and the international environment the State intervention is undoubtedly one of the most significant determinants characterizing the competitiveness of the national economy.

According to the definition used by the European Commission, the competitiveness is defined as "the ability of the economy to provide residents with high and rising standard of living and a high level of employment and productivity, based on a solid basis" (European Commission, 2001). The measure of competitiveness is here the indicator determining the size of the GDP *per capita*. The size of GDP *per capita* in relation both to the entire EU and individual Member States determines the standard of living and level of economic development. The higher is the value of GDP *per capita* the higher the country competitiveness. At this point, it seems reasonable, therefore, to conduct a comprehensive analysis of the relationship between the EU Member States expenditure on State aid for regional development and the size of GDP *per capita*. The response variable (dependent variable Y) is the GDP *per capita*, and the explanatory variable (independent variable X) is the expenditure on regional State aid.

Statistical analysis will be carried out based on two source tables. The first table shows the calculations for the linear regression model concerning respectively the slope parameter (directional factor β).

t Stat is a test of linear relationship occurrence between expenditure on State aid for regional development and the size of the GDP *per capita*. This statistical test allows to verify the authenticity of the so-called null hypothesis that the parameter of the regression function I type β is equal to zero, with 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 the parameter $\beta = 0$ would mean that the increase in the value of expenditure on State aid by € 1 million will not cause any changes in the size of the GDP *per capita* which means the lack of any relationship between expenditure on State aid and the size of the GDP *per capita*. In other words, the acceptance of the null hypothesis means the lack of the influence of the State aid for regional development provided by the Member States of the European Union on the size of their GDP *per capita*. From the perspective taken in this paper it will be essential to reject the null hypothesis in favor of the alternative hypothesis which states that between the studied phenomena - expenditure on State aid and the size of the GDP *per capita* - there is a significant statistical relationship. From the tables of critical values of t-Student it is seen that $\pm t_{\alpha/2} = \pm 2.1604$ for $\alpha = 0.05$ and $n - 2 = 13$ degrees of freedom. The null hypothesis can be rejected in favor of the alternative hypothesis only when $t_b < t_{\alpha/2}$ or $t_b > t_{\alpha/2}$, that is when $-t_b < -2.1604$ or $+t_b > +2.1604$.

The second table contains regression statistics. Among the regression statistics are: the correlation coefficient, determination coefficient, standard error and the parameters of F test, that is the value of F-test and the probability of making type I error, when the hypothesis is verified concerning the lack of impact of expenditure on State aid on the size of the GDP *per capita* (irrelevance of State aid expenditure in the regression model). F-test, similarly as described above t-test, is used for testing the significance of linear regression coefficient β evaluation. The checking of this test is a statistic F having F-Snedecor distribution of k_1 and k_2 freedom degrees. When rejecting the null hypothesis $F > F_\alpha$ of no relation between expenditure on State aid and the size of the GDP *per capita* 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 $k_2 = n - 2 = 13$ degrees of freedom and $\alpha = 0.05$ we read $F_{0,05} = 4.67$. Thus, the alternative hypothesis can be adopted only when $F > 4.67$.

2.1 Model and Data

National regional aid consists of aid for investments and operating aid granted to large undertakings which is targeted on specific regions in order to redress regional disparities (Busemeyer, Tober, 2015). National regional investment aid is designed to assist the development of the most disadvantaged regions by supporting investment and job creation (Otter, Glavanovits, 2014). Increased levels of investment aid for small and medium-sized enterprises (SMEs) located within assisted areas over and above the levels of aid generally allowable to SMEs is also considered as regional aid. It promotes the expansion and diversification of the economic activities of enterprises located in the less-favoured regions, in particular by encouraging firms to set up new establishments there.

Member States granted aid earmarked for regional development of about € 188.1 billion in 2000-2014, which includes € 50.6 billion granted using a block exemption (Eurostat, 2016). This represents 0.1% of EU-28 GDP. Regional State aid was granted mainly by: Germany (€ 52,2 billion, which represents 0.13% of GDP), France (€ 37 billion, which represents 0.12% of GDP), Italy (€ 18,5 billion, which represents 0.07% of GDP), Spain (€ 16,9 billion, which represents 0.11% of GDP) and Greece (€ 14,6 billion, which represents 0.49% of GDP). In the so-called group of countries of "new-thirteen", which have provided this kind of support to domestic entrepreneurs in the greatest amount there should be indication on: Poland (€ 8,6 billion, which represents 0.17% of GDP), Czech Republic (€ 6,1 billion, which represents 0.28% of GDP), Hungary (€ 4,5 billion, which represents 0.31% of GDP) and Slovakia (€ 2 billion, which represents 0.23% of GDP).

Does the regional aid provided by Member States to enterprises have an adverse effect on the condition of their competitiveness, leading to a decrease in the PKB *per capita*? Or does such aid not have any impact on the PKB *per capita*? Answers to these questions will be provided by the regression analysis.

2.1.1 Model Calibration

The most essential statistical test in a simple regression analysis is a test of whether the regression coefficient equals zero. If in a particular case a conclusion can be drawn that the slope coefficient of the true regression line in the population equals zero, it will mean that between expenditures on State aid to enterprises in difficulty and the size of the *general government* sector debt there is no linear relationship, or expenditures on aid and the size of the *general government* sector debt are not linearly dependent. Therefore, it is needed to test

the occurrence of linear relationship between expenditures on State aid for rescuing and restructuring undertakings in difficulty in the Member States and the size of the *general government* sector debt. The statistics on this test are shown in table 1.

Table 1: The Ssize of Regional State Aid and the GDP Per Capita – the Analysis of Variance: the Line "Variable X"

EU Member States	Regression coefficient <i>b</i>	Standard error <i>S_b</i>	<i>t</i> Stat <i>tb</i>	<i>p</i> -value	Lower 95%	Upper 95%
Austria	-1,3E-05	1,14E-05	-1,18335	0,257857	-3,8E-05	1,11E-05
Belgium	-5,3E-06	1,25E-06	-4,19331	0,0010	-8E-06	-2,5E-06
Bulgaria	5,55E-06	4,58E-06	1,210093	0,247787	-4,4E-06	1,54E-05
Croatia	-	-	-	-	-	-
Cyprus	-3E-05	3,96E-05	-0,75727	0,462393	-0,00012	5,56E-05
Czech Republic	3,64E-06	6,38E-07	5,702149	7,27E-05	2,26E-06	5,01E-06
Denmark	-9,6E-05	6,79E-05	-1,41915	0,179384	-0,00024	5,03E-05
Estonia	7,04E-05	3,62E-05	1,945139	0,073711	-7,8E-06	0,000149
Finland	-4,4E-05	3,18E-05	-1,37982	0,190912	-0,00011	2,48E-05
France	3,27E-07	1,11E-07	2,959429	0,011069	8,84E-08	5,66E-07
Germany	-8,1E-07	4,54E-07	-1,785	0,097601	-1,8E-06	1,7E-07
Greece	-8,4E-07	6,17E-07	-1,3602	0,196887	-2,2E-06	4,94E-07
Hungary	1,98E-06	1,07E-06	1,858851	0,08583	-3,2E-07	4,28E-06
Ireland	4,45E-06	5,2E-06	0,855237	0,407906	-6,8E-06	1,57E-05
Italy	7,36E-07	4,07E-07	1,806993	0,093952	-1,4E-07	1,62E-06
Latvia	2,37E-05	1,16E-05	2,039769	0,062233	-1,4E-06	4,87E-05
Lithuania	2,78E-05	1,01E-05	2,74549	0,016681	5,93E-06	4,97E-05
Luxembourg	-0,00014	5,45E-05	-2,57956	0,022876	-0,00026	-2,3E-05
Malta	-	-	-	-	-	-
Netherlands	-1,7E-05	4,84E-06	-3,56397	0,003463	-2,8E-05	-6,8E-06
Poland	1,75E-06	5,84E-07	3,004075	0,010159	4,92E-07	3,01E-06
Portugal	-5,4E-07	4,85E-07	-1,1111	0,286652	-1,6E-06	5,09E-07
Romania	-4,3E-07	2,22E-06	-0,19512	0,848317	-5,2E-06	4,37E-06
Slovakia	-9,2E-06	8,42E-06	-1,09475	0,293493	-2,7E-05	8,98E-06
Slovenia	2,02E-05	5,98E-06	3,37847	0,004943	7,29E-06	3,31E-05
Spain	1,35E-06	5,79E-07	2,33131	0,036474	9,9E-08	2,6E-06
Sweden	2,12E-05	1,12E-05	1,898383	0,080069	-2,9E-06	4,54E-05
United Kingdom	-8,7E-07	1,8E-06	-0,48039	0,638935	-4,8E-06	3,03E-06
EU 28	2,04E-07	1,21E-07	1,679729	0,116868	-5,8E-08	4,65E-07

Source: Own calculations

On the basis of the calculations in table 1, it can be concluded that in the case of six Member States (Czech Republic, France, Lithuania, Poland, Slovenia and Spain), the regression coefficient takes a positive value. Consequently, the increase in expenditure on regional State aid by €1 million is accompanied by an increase in GDP *per capita* by average: €3.64, €0.33, €27.80, €1.75, €20.21, €1.35. Margin of error is: €0.64, €0.11; €10.13, €0.58, €5.98, €0.58. Bearing in mind however the confidence interval for the regression coefficient, it can be with a probability of 95% said that the increase of granted State aid for regional development by €1 million will cause an increase of GDP *per capita* of: Czech Republic from €2.26 to €5.01,

France from €0.09 to €0.57, Lithuania from €5.93 to €49.68, Poland from €0.49 to €3.01, Slovenia from €7.29 to €33.15 and Spain from €0.10 to €2.60. It should also be noted that the probability of type I error (p-value), involving the rejection of a true null hypothesis that, in the case of these six countries providing regional State aid do not significantly affect the size of the GDP *per capita* of the countries, is below the accepted level of significance, i.e. 0.05. The consequence is that the result of the study in relation to these countries, may be considered important, and thus the null hypothesis can be rejected in favour of the alternative hypothesis.

Table 2: The Size of State Aid for Regional Development and the GDP Per Capita - Regression Statistics and F-test

EU Member States	Regression statistics			Test F	
	Corelation indicator	Determination coefficient	Standard error	F	Significance F
Austria	0,311838	0,097243	1608,687	1,400329	0,257857
Belgium	0,758247	0,574939	677,7973	17,58386	0,001053
Bulgaria	0,318178	0,101237	566,6108	1,464325	0,247787
Croatia	-	-	-	-	-
Cyprus	0,205545	0,042249	1109,583	0,573461	0,462393
Czech Republic	0,845208	0,714377	678,179	32,5145	7,27E-05
Denmark	0,366253	0,134141	1054,651	2,014	0,179384
Estonia	0,474798	0,225433	1304,745	3,783566	0,073711
Finland	0,357415	0,127745	1769,473	1,903906	0,190912
France	0,634448	0,402525	529,3494	8,758219	0,011069
Germany	0,443675	0,196848	1531,117	3,186218	0,097601
Greece	0,35297	0,124588	1530,029	1,850145	0,196887
Hungary	0,458238	0,209982	648,3733	3,455326	0,08583
Ireland	0,230796	0,053267	2036,706	0,73143	0,407906
Italy	0,44805	0,200749	819,2847	3,265225	0,093952
Latvia	0,492395	0,242453	1102,653	4,160657	0,062233
Lithuania	0,60582	0,367018	1255,768	7,537715	0,016681
Luxembourg	0,581861	0,338562	2882,628	6,654144	0,022876
Malta	-	-	-	-	-
Netherlands	0,702994	0,4942	982,5929	12,70187	0,003463
Poland	0,640115	0,409747	981,9346	9,024469	0,010159
Portugal	0,294498	0,086729	243,0687	1,234548	0,286652
Romania	0,054037	0,00292	793,1372	0,038071	0,848317
Slovakia	0,290533	0,08441	1458,046	1,198488	0,293493
Slovenia	0,683754	0,46752	1012,759	11,41406	0,004943
Spain	0,542973	0,29482	632,7544	5,435007	0,036474
Sweden	0,465886	0,217049	2018,141	3,603858	0,080069
United Kingdom	0,132068	0,017442	1761,011	0,230772	0,638935
EU 28	0,422295	0,178333	946,506	2,821491	0,116868

Source: Own calculations

For Belgium, Luxembourg and Netherlands the regression coefficients take negative values, which means that the expenditure on regional aid have a negative impact on GDP *per capita* of these countries. The increase in expenditure on public aid by €1 million is accompanied by a fall in GDP *per capita* - respectively – with an average of €5.26, €140.49 and €17.24.

Estimation errors are respectively €1.25, €54.46 and €4.84. On the other hand taking into account the confidence interval for the regression coefficient it can be with a probability of 95% said that the increase in expenditure for regional aid of €1 million will cause fall in GDP *per capita* by the value of the interval (€2.55; €7.96) for Belgium, (€22.83; €258.15) for Luxembourg and (€6.79; €27.69) for Netherlands. For these countries the probability of making a type I error, connecting with the rejection of a real null hypothesis concerning lack of relation between the size of the State aid and the value of GDP *per capita*, is very small and does not exceed the accepted level of significance of 0.05. Identical request as to the proposed hypothesis can be obtained by analyzing the value of F test (17.58, 6.65, 12.71), and F significance (0.001; 0.02; 0.003). F test parameters and regression statistics for the studied relationship between the size of the State aid for regional development and the value of GDP *per capita* in the European Union countries are shown in table 2.

In the case of Czech Republic, one can speak of a very strong correlation of aid granted in the form of guarantees for banks with the amount of their GDP *per capita* in a positive sense. This model has a good fit to the empirical data, as its calculated coefficient of determination is close to 0.8.

For Czech Republic determination coefficient is 0.714377. Therefore, variations in GDP *per capita* in this country were explained in 71.44% with variations in expenditure on regional State aid, while the remaining 28.56% result from the impact of other factors. If the coefficient of determination takes the values less than 0.5, the regression explains only less than 50% of the variation in GDP *per capita* and predictions based on such a regression model may be unsuccessful because the regression model explains then very little. This means that the predictions can be created basing on the Czech model, because the regression model is characterised by a good fit and is little burdened with the estimation error, which provides grounds for precise forecasting.

In the case of France, Lithuania, Poland, Slovenia and Spain, the values of the correlation coefficient are included in the interval (0.55; 0.68). These countries are characterized by weak positive relationship occurring between the amount of provided State aid and the level of their PKB *per capita*. Moreover, there can be no satisfactory adjustment of the regression line to the empirical data. The determination coefficients for these countries equal: 0.40, 0.37, 0.41, 0.47 and 0.29.

Belgium, Luxembourg and Netherlands are characterized by occurring between the amount of provided regional aid to undertakings and the level of GDP *per capita*, strong and average positive correlation - respectively 0.76, 0.58 and 0.70. In the case of Belgium, for which the determination coefficient has the highest value, the variability of GDP *per capita* was explained in 57.49% by variability of expenditure on State aid for regional development. The remaining 42.51% is the effect of random and non-random factors (other non-aid variables, imprecise fit of a straight line to the empirical data etc.). For Luxembourg and Netherlands the determination coefficient assumes lower values and amounts to 0.338562 and 0.4942 This means that there can be no satisfactory adjustment of the regression line to the empirical data.

3. Negative Effects on Competition and Trade between Member States

From the economic point of view relating to state interventionism it ought to be noted that: for the State aid to be compatible, the negative effects of the aid measure in terms of distortions of competition and impact on trade between Member States must be limited and outweighed by the positive effects in terms of contribution to the objective of common interest. Certain

situations can be identified where the negative effects manifestly outweigh any positive effects, meaning that the aid cannot be found compatible with the internal market. Two main potential distortions of competition and trade may be caused by regional aid. These are product market distortions and location effects.

One potentially harmful effect of State aid is that it prevents the market mechanism from delivering efficient outcomes by rewarding the most efficient producers and putting pressure on the least inefficient to improve, restructure or exit the market. A substantial capacity expansion induced by State aid in an underperforming market might in particular unduly distort competition, as the creation or maintenance of overcapacity could lead to a squeeze on profit margins, a reduction of competitors' investments or even the exit of competitors from the market (Wishlade, 2013). This might lead to a situation where competitors that would otherwise be able to stay on the market are forced out of the market. It may also prevent undertakings from entering or expanding in the market and it may weaken incentives for competitors to innovate (Jansson, Kalimo, 2014). This results in inefficient market structures which are also harmful to consumers in the long run. Further, the availability of aid may induce complacent or unduly risky behaviour on the part of potential beneficiaries. The long term run effect on the overall performance of the sector is likely to be negative.

Apart from distortions on the product markets, regional aid by nature also affects the location of economic activity. Where one area attracts an investment due to the aid, another area loses out on that opportunity. These negative effects in the areas adversely affected by aid may be felt through lost economic activity and lost jobs including those at the level of subcontractors. It may also be felt in a loss of positive externalities - for example, clustering effect, knowledge spillovers, education and training.

4. Conclusion

The origins of competition policy control of regional aids date back to the 1960s. They were closely linked with two concerns: first, the extent of regional disparities in the European Community and the potential role for a common policy to address this; and second, competitive outbidding for mobile investments projects. These factors have been important in the evolution of regional aid discipline. The European Commission views regional aid control as a complement to EU Cohesion policy, a common policy which now accounts for over one-third of the EU budget. The criteria applied by the Commission when examining the compatibility of regional aid have been progressively codified in guidelines, most recently those adopted in 2013 to cover period 2014-2020.

Regional aid can only play an effective role if it is used sparingly and proportionately and is concentrated on the most disadvantaged regions of the European Union. In particular, the permissible aid ceilings should reflect the relative seriousness of the problems affecting the development of the regions concerned. Furthermore, the advantages of the aid in terms of the development of a less-favoured region must outweigh the resulting distortions of competition. The weight given to the positive effects of the aid is likely to vary according to the applied derogation of Article 107 par. 3 TFEU, so that a greater distortion of competition can be accepted in the case of the most disadvantaged regions covered by Article 107 par. 3(a) than in those covered by Article 107 par. 3(c).

Leading currently consideration within the structure and conditions of admissibility of State aid it should be noted that the geographical specificity of regional aid distinguishes it from other forms of State aid. It is a particular characteristic of regional aid that it is intended to

influence the choice made by investors about where to locate investment projects. When regional aid off-sets the additional costs stemming from the regional handicaps and supports additional investment in assisted areas without attracting it away from other assisted areas, it contributes not only to the development of the region, but also to cohesion and ultimately benefits the whole Union.

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Modelling European Socio-economic-political Issues: The Spanish Mortgage Market

Elena De la Poza-Plaza¹, Lucas Jódar²

Universitat Politècnica de València^{1,2}

Centro de Ingeniería Económica¹, Instituto de Matemática Multidisciplinar²

Camino de Vera s/n 46022

Valencia, Spain

e-mail: elpopla@esp.upv.es, ljodar@imm.upv.es

Abstract

Spanish homeownership rate is higher than in most western countries. This fact linked to an excessive indebtedness of the Spanish population previous to the financial crash explains the increasing risk of the Spanish banking system. For the particular case of Spain, the level of unemployment rose to 25%. Obviously, there is a positive correlation between the mortgage default and the unemployment rates. In this paper, we propose a behavioural-economic population model to estimate the default and foreclosure rates of the Spanish mortgages market in the next years. As a result, the expected Spanish default and foreclosure rates are forecasted by an appropriate classification of the mortgages, taking into account several economic and social indicators.

Keywords: *Economic Scenario, Forecast, Foreclosure, Mortgage, Spain*

JEL Classification: *R210, C30, C630*

1. Introduction

The Spanish housing market is characterized by a historical high level of ownership versus the renting level (due to cultural variables such as low geographical mobility) but also by the fiscal advantages of real estate investments promoted by Governments, (Manrique and Ojah, 2003; Ayala and Navarro, 2007; Garriga, 2010; Ortega, *et al.*, 2011), what explains the Spanish real estate boom from 2000 until 2008, and the crash from 2008 until the present time.

The boom of the real estate sector brought changes in the Spanish mortgage market, particularly in terms of the increasing amount of the debt volume (explained by average annual increases about 15% of housing prices; King, 2011), but also the increase of the maturity of the loans.

The size of the Spanish foreclosures problem is so considerable, that produces many people become homeless (Hryshko, *et al.*, 2010) and also for the Spanish State since they have to subsidize the banks in order to assure the credibility of the financial system and avoid the escape of capitals from the saving units and investors. This cause has increased considerably the public debt what involves a deterioration of the welfare system (health services co-payment, delay and reduction of citizens' pensions and an increase of the taxes), the increase of crime (Immergluck and Smith, 2006) but also the fall of governments and the loss of credibility of the political system (Conley and Gifford, 2006; Chen, 2010; Dolling and Horsewood, 2011). Furthermore, the mortgage business of the banks has almost disappeared because of the lack of credit (Gunther, 2009) combined with the high level of unemployment;

at the same time banks increase their commissions and warranties to their borrowers in order to cover the market risk while interest rates fall down in an attempt to promote the housing market (Bayar and Neilson, 2011). Also, the decline of housing market lowers the consumption demand. This produces an increase of the unemployment level reaching an average rate of 25% in 2012, from which more than 50% are young people (INE, 2011).

In this context, the financing of a mortgage is usually conditioned to a third party agreement that plays the role of guarantor (mainly a relative of the mortgage holder) that in case of mortgage default may become a second foreclosure victim of the mortgage, producing a domino effect. The spread of the social Spanish problem is so relevant (example of this it is the sharp increase of the historically low Spanish suicide rate (Gili *et al.*, 2012), that the almost impossible agreement between policymakers (the two main Spanish political parties: the conservative and the socialist party) achieved an agreement on the reform of the mortgage law in Spain in 2013.

The Spanish mortgage system traditionally based on the mortgage payback through the constant annuity method is at present time allowing grace periods for the mortgage holders strongly affected by the economic crisis. (Mayer *et al.*, 2012).

Other indicator of the dimension of the Spanish problem is the growing rate of Spanish immigrating to third countries and how the immigrants arrived to Spain looking for a job at the end of the 90's while at the early XXI century they go back to their countries for losing their job, (Madsen, 2012). This produces a decrease of consumption demand, while unemployment increases, (Bayar and Neilson, 2011). The end of the foreclosures can be the beginning of the credit fluidity what can propel the economy. Until the foreclosures crisis is not solved the Spanish economy will not start growing.

The purpose of this paper is to explain the end of the foreclosure problem coming from the mortgage contracts signed before the crisis started in 2008 throughout a behavioral-economic population model. We do not mean that this solves the banking problems coming from their large portfolios of real estate properties (due to mortgages became foreclosures) but the model is a useful tool to set up in the time horizon when the problem brakes down.

The paper is structured as follows; section 2 shows the hypotheses, foundations and development of the behavioral-economic model, by splitting the Spanish mortgage holders into three categories according to their default risk level. Then, the dynamic transit between mortgage categories is computed after solving a nonlinear difference equation system. In section 3 results and simulations are shown; finally, section 4 includes the main conclusions of the study.

2. Foundations and Hypothesis of the Model

The aim of this section is to introduce the mathematical model that is going to be constructed in the following. We focus our attention in the number of alive, default and foreclosure housing mortgages at year n according to the risk of unemployment.

Thus, the dynamic behaviour of these populations will forecast the evolution and approximated end of the mortgage crisis in Spain.

The mathematical model used to describe this dynamic is a system of difference equations whose unknowns are:

$N(n)$ = number of alive mortgages at year n ,

$D(n)$ = number default mortgages at year n ,

$F(n)$ = number of foreclosure mortgages at year n .

For the sake of clarity it is convenient to point out that according to the Spanish laws the default occurs when the mortgage holder has unpaid three consecutive months.

The dynamic of the model is based on the transaction between these subpopulations explained by coefficients that need to be modeled according to economic, socio-demographic, and legal influences.

The main causes of mortgage defaulting in Spain are the combination of high unemployment rate together with heavily non-negotiable indebtedness (Mayer, *et al.*, 2009), high rates of divorces and separations (Duato and Jódar, 2011) and local fiscal policies. These reasons must be aggregated to non-rigorous unsuitable credit strategies of the Spanish banks, as well as the fact that house prices became triplicate in the decade 1997-2007, (Saurina, 2009).

The period of study starts in 2004, some years before of the blast of the real estate bubble. From 2004 until the end of 2011 the data come from the Bank of Spain (Bover, 2004; 2008; 2011), the Spanish Supreme Court (Muñiz, 2012) and the Spanish Institute of Statistics (INE), the Organization for Economic Cooperation and Development (OECD) and the Spanish Saving Bank Foundation (FUNCAS).

Since 2011 the forward economic forecast data are taken from the Organization for Economic Cooperation and Development (OECD). Further, we consider the variation of subpopulations N , D and F in the interval $[n, n+1]$.

Thus, the variation of alive mortgages depends on the new mortgaged houses, the amortized ones and the shift of a proportion of mortgages $N(n)$ to the class $D(n)$ due to the unpayment mainly motivated by unemployment. Hence,

$$N(n+1) - N(n) = \alpha(n)N(n) - \beta(n)N(n) - A(n)N(n) \quad (1)$$

where

$A(n)$: annual mortgage amortization rate at year n

$\alpha(n)$: annual new mortgage holder rate at year n

$\beta(n)$: annual defaulting mortgage rate at year n

Coefficient $\alpha(n)$ measures the annual new mortgage holder rate at year n , which depends on several factors such as the credit access, unemployment, house prices, interest rates and others. Taking into account the size of the country, there is a natural increase of new mortgages.

Spanish characteristics of highly volatile unemployment and high home ownership rates, suggest to model coefficient $\alpha(n)$ as a perturbation of an average behaviour of it plus a yearly variable part which is going to depend of the difference between the annual unemployment rate one estimated at the blast of the real estate bubble.

Available data between 2004 and 2011 are matched according to the expression

$$\alpha(n) = 0.055 - \frac{(\ell(n) - 0.098)}{3}, \quad 2005 \leq n \leq 2007$$

$$\alpha(n) = 0.055 - \frac{(\ell(n) - 0.098)}{4}, \quad 2007 < n \leq 2012 \quad (2)$$

where

$\ell(n)$ = annual unemployment rate at year n

0.098 = optimal Spanish unemployment rate

0.055 = average rate of new mortgageholders

The optimal unemployment rate was considered at the time of highest growth of the Spanish GDP during the blooming years of the Spanish economy.

Since Spanish unemployment rates in the following years remains higher than 17% what suggests.

$$\alpha(n) = 0.055 - (\ell(n) - 9,8) \quad n > 2012 \tag{3}$$

$\beta(n) = \beta(n, N(n))$ is the annual rate of defaulting mortgage. This rate depends of a long enough period of unemployment suffered by the mortgage holders. In addition, this rate is also dependent of both the mortgaged population density and the divorce population density due to the social and economic instability of the family unit.

Finally, the defaulting mortgage rate is influenced by the constraint of credit from the financial system. Since 2004 until 2008, when the blast of the real estate bubble emerged, data of annual rate of defaulting mortgage are available from the Spanish Supreme Court. From 2008 to 2012 data of defaulting rate are matched by the expression:

$$\beta(n) = (\ell(n-1) + \frac{\ell(n)}{6}) \frac{N(n)}{G(n)} \varphi(n) + \frac{Dv(n)}{12N(n)}; \quad 2008 \leq n < 2012 \tag{4}$$

where

$\beta(n)$ = is the annual mortgage rate that evolves to default credit for three consecutive months unpaid

$\ell(n)$ = is the annual unemployment rate in year n .

$N(n)$ = is the number of alive mortgages in the year n .

$G(n)$ = is the population registered in Spain in the age interval [25,54]

$\varphi(n)$ = measures for each year the credit flow of the financial system to potential mortgageholders

$D(n)$ = is the annual number of divorces in Spain just considering those the husband's age is in the interval [25,54]

Since 2012 and for the following years, as the Spanish Population $G(n)$ decreases because of the emigration of residents without a job, we assume that for each 1% of unemployment, 10,000 Spanish residents emigrate, 7,500 of them Spanish.

With respect to the future population $D(n)$ after 2012, we assume that the rate of divorce remains constant although relatively decreases as it occurs with the general Spanish population.

Coefficient $A(n)$ that means the annual mortgage amortization rate for year n between 2008 and 2012 is computed by the expression:

$$\Delta N(n) = N(n+1) - N(n) = NM(n) - AN(n)$$

$$A(n) = 1 + \frac{NM(n)}{N(n)} - \frac{N(n+1)}{N(n)}, \quad 2008 \leq n \leq 2012 \tag{5}$$

where $NM(n+1)$ means the new mortgages signed at year $n+1$ and $AN(n)$ is the number of mortgages paid off.

For the next years, we assume that $A(n)$ is the average of the value of the last 5 years:

$$A(n) = \frac{1}{5} \sum_{i=2008}^{2012} A(i), 2012 \leq n \leq 2016 \quad (6)$$

At this point, we address to model the variation of the default population in the period $[n, n+1]$. This population depends mainly of the economy taken into account throughout the change of unemployment as well as of the demographic change, recent in Spain, due to the high rate of unemployment that moves a proportion of long term unemployed people to search for jobs abroad. A proportion of immigrants come back also to their original countries due to the lack of jobs in Spain.

In the decade 1998-2008, house prices in Spain grew up over 300% what motivates huge mortgages debts and long periods of amortization.

Even more, the bank lender sometimes asks for additional guarantees that in many cases involve third parties who could lose their real estate properties in case of guaranteed foreclosure.

This fact combined with very high unemployment rates makes almost impossible the recovery of a default mortgage process once this starts. Hence, the practical totality of the default mortgages moves to foreclosure apart from the small percentage of householders that after emigrating and finding a job abroad are able to pay their mortgages. Thus, the default dynamics in period $[n, n+1]$ is modeled by

$$D(n+1) - D(n) = -\gamma(n)D(n) + \beta(n)N(n) - F(n) \quad (7)$$

$\gamma(n)$: annual recovery foreclosure rate

According to the data provided by INE during the period 2004-2011, the Spanish average mortgaging rate is approximately twice the one of foreigners' residents in Spain. We assume that these rates remain constant during our study period.

$$\gamma(n) = eE(n) + iI(n), 2004 \leq n \leq 2016 \quad (8)$$

where

$E(n)$ = Spanish population [25,54] years old who emigrating for a job

e = 0.08 mortgaging rate of Spanish population.

$I(n)$ = Foreigners leaving Spain

i = 0.04 mortgaging rate of foreigners

Foreclosure dynamics is closely related to the one of defaults commented above. Apart from the few cases of recovery defaults coming from Spanish householders who emigrate and find a job, all the defaults $D(n)$ at year n , move to foreclosure one year later. In fact, in Spain a default mortgage becomes a foreclosure after approximately one-year since the bank lender initiated the legal procedure. Thus, the foreclosure dynamics is expressed by:

$$F(n+1) - F(n) = \rho(n)D(n) - \gamma(n)D(n), 2004 \leq n \leq 2016 \quad (9)$$

Where $\rho(n)$ is the annual guarantor victim rate at year n . This coefficient explains the additional rate of external foreclosures produced by the accomplished default risk of the guarantor. Summarizing, the nonlinear equations of the model take the form:

$$\begin{aligned}
 N(n+1) &= (I + \alpha(n) - \beta(n, N(n)) - A(n))N(n) \\
 D(n+1) &= (I - \gamma(n))D(n) + \beta(n, N(n))N(n) - F(n) \\
 F(n+1) &= F(n) + (\rho(n) - \gamma(n))D(n)
 \end{aligned}
 \tag{10}$$

$$2004 \leq n \leq 2016$$

with the initial condition

$$N(2004) = 2,115,120; D(2004) = 6,448; F(2004) = 14,346.$$

3. Simulations and Results

The mathematical model (10) allows us to compute easily and quickly the subpopulations $N(n)$, $D(n)$, and $F(n)$ for any time n .

Table 1: Mortgage Holders Forecast by Categories

Year	N	D	F
2004	2,115,120	6,448	14,346
2005	2,846,360	10,723	15,411
2006	3,490,633	13,000	17,622
2007	3,972,860	24,112	25,943
2008	4,177,467	83,438	58,688
2009	4,165,033	108,472	93,319
2010	4,216,327	95,342	93,636
2011	4,167,393	110,223	77,854
2012	3,395,713	133,044	61,130
2013	2,715,478	134,399	45,100
2014	2,125,344	128,369	26,270
2015	1,708,005	125,752	8,770
2016	1,394,311	128,639	-8,030

Source: author’s calculations

The simulation shows that at the end of the year 2016, foreclosures become negative; at any case, this means that during 2016 foreclosures will disappear. The reason that explains the difference between the volume of default and foreclosure mortgaged among 2015-2016 is due to the fact the default process is delayed one year but also the fact that there is an extra amount of defaults mortgages coming from the number of guarantor victims losing their houses, non-necessarily mortgaged but linked to the default throughout guarantees asked by the bank lenders. Apart from this fact the explanation becomes completed taking into account the annual number of recovered mortgages coming from the Spanish emigrants who find a job abroad. It is remarkable that the number of mortgages has decreased about 30% since 2004, motivated by the lack of credit concession and the non-recovery of the job market.

4. Conclusion

Spanish foreclosures will end in 2016; however, without any new policy the problem will become worse due to the insolvency of mortgage holders and the increasing volume of houses owned by banks. Consequences will bring social and economic collateral costs (Gili *et al.*, 2012) as it is already occurring in other European countries (Barr, 2012).

On contrast, Molloy and Shan (2012), conclude in their study those American households affected by foreclosures during the period 1991-2010 did not show high reductions in their

house consumption, probably due to the fact former borrowers found a job by the second year after an unemployment-induced foreclosure what doubtfully could happen any time soon in Spain, where the unemployment rate was above 25% at the end of 2012.

Actually, the access to the mortgage market is reduced to almost exclusively public servants (granted job) due to the lack of credit liquidity and expectations of future incomes.

In the short future, Spanish culture of ownership will be transformed into a high proportion of renters; however, it is highly uncertain at this point Dolling and Horsewood (2011) findings about a trade-off between house ownership and state spending in older people could apply to Spain due to its large national indebtedness.

Consequently, the myth that real estate properties prices increase over time and the strategy of buying properties as an investment (instead of pension plans) has disappeared in Spain for a long time.

In short, the robustness of the model will be tested. Future research will study and quantify the demographic, economic and cultural variables, the model will be applied to other European country.

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International Economic Integration: Realities and Perspectives (the case of Eurasian Economic Union (EEU))

Maxim Pridachuk¹, Marina Tolstel²

Volgograd Branch of the Russian Presidential Academy of National Economy and Public Administration¹, Volgograd State University²
Chair of Economics and Finance¹, Corporate Finance and Banking Chair, Institute of World Economy and Finance²
Gagarin Street, 8¹, Prospekt Universitetski, 100²
Volgograd, Russia
e-mail: pridachuk@yandex.ru, marina-tolstel@yandex.ru

Abstract

The hypothesis about new type's economic integration processes in the world (case of Eurasian Economic Union (EEU)) is made, the essence and distinctive peculiarities of these processes are determined. Economic studies show that EEU members don't receive economic benefits from international integration because of many reasons, especially due to dependent on restrictions, exceptions and insufficient national structural reforms. Also economic and political instability makes barriers for future prosperity of EEU. The aim of the paper is to evaluate position of EEU members in the globalized world economy with respect to its main economic and social consequences. The authors created methodological approach to the study of international economic integration influence on development of EEU members based on reaching of target indexes of international movement of goods, services and factors of production. The presented methodological approach allows to define and early diagnose problem areas and to choose from a variety of management solutions for its improvement.

Keywords: *International Economic Integration, Eurasian Economic Union (EEU), Restrictions and Exceptions, Economic Development, Globalization*

JEL Classification: *C18, F02, F15, F36, F63*

1. Introduction

In modern conditions the international integration processes act as pledge of a sustainable development of the states, activation 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. The modern economic science is not yet able to determine the full effect of the integration processes implementation at the regional level. This is due not to the complexity of calculation results of integration and multiplicity of the process effects in time and space.

The analysis methods for assessing the effects of the international economic integration (Bergeijk, Brakman (2010), Blomstrom, Kokko (1997), Kepaptsoglou, Karlaftis, Tsamboulas (2010), Michalopoulos, Tarr (1997), Plummer, Cheong, Hamanaka (2010), Zwinkels,

Beugelsdijk (2010), Vinokurov (2010)) shows that none of them alone doesn't allow a comprehensive assessment of the regional integration effects. Therefore, in the presence of statistical and other relevant information necessary to use the methods of quantitative analysis in the complex, taking into account their strengths and weaknesses, opportunities and constraints.

Thus, the purpose of the study is to develop the theoretical foundations and development of methodology for assessing the impact of international economic integration in the socio-economic development of the participating countries (for example, the Eurasian Economic Union (EEU)).

1.1 The Basic Principles of the Eurasian Economic Union Functioning

International economic integration (IEI) is an objective process of the stable relations development within individual groups of countries based on the carrying out of the agreed interstate politics. Economic integration can take different forms depending on what goals set its members. Most authors after B. Balassa (Balassa, 1961) considered a regional economic integration as a process of successive depressions passing phase such as a free trade area, customs union, common market, economic and monetary union, political union.

Under the conditions of macroeconomic instability observed transformation of the economic integration forms, they are complicated, have become increasingly complementary, may contain higher levels of integration elements, acquiring conglomeration form, in which a transition from regional integration groupings to supranational structures, based on the interaction of states, businesses and citizens. This is due to the growing understanding that in terms of the impact on the economy of the elimination of trade barriers could only lead to a much smaller positive effects than deeper integration. In this context, it's necessary to examine the established Eurasian Economic Union as the integration of a new generation of cooperation form corresponding to the global trend of regionalization.

Eurasian Economic Union (EEU) – an international organization of regional economic integration, which ensures freedom of goods and services movement, capital and labor, and a coordinated and coherent policy in the sectors of the economy. The Eurasian Economic Union's members are Kazakhstan, Belarus, Armenia, Kyrgyzstan, and Russia (Table 1).

Table 1: Characteristics of the EEU Member Countries (at 01.01.2016)

Country	Population, million people	GDP, billion US dollars	GDP - per capita, thousands US dollars	Inflation rate, %	Unemployment rate, %	Current account balance, million US dollars
Russia	142.4	3471.0	23.7	15.4	4.4	61.9
Belarus	9.6	168.2	17.8	15	0.7	-3
Kazakhstan	18.2	430.5	24.7	5.3	5.1	-5.91
Kyrgyzstan	5.7	19.81	3.4	8.1	8	-1.3
Armenia	3.1	25.22	8.4	5.6	17.8	625

Source: CIA World Factbook (2016)

The EEU is established for the purpose of comprehensive modernization, cooperation and increase of national economies competitiveness and the creation of conditions for stable development in the interests of raising the population living standards through the integration of scientific-technical, production, labor and financial resources.

First at the institutional level, the distinctive features of the Eurasian integration emerged through the practices of the Customs Union that inspired the creation of a Common market of goods. The EU experience (Scharpf, 2010, Pollack, 2001, Jachtenfuchs, 2001) and other economic integration organizations has allowed in the creation of the EEU (or EurAsEC, the parent structure of integration), the Customs Union and the CES to formulate and apply a number of new methodological solutions, which include:

1. the new model of economic regulation institutions in the integration structures, effectively combining the definition of the interstate goals, supranational forms of decision-making and intergovernmental procedures for their preparation;
2. the series-parallel creation of regional economic blocs, i.e. the passage of each next phase of integration coincides with the development and adoption of normative-legal provision of subsequent and previous institutionalization;
3. the application of the multi-speed and multilevel integration mechanism, which allows each member, in consultation with partners to shape strategy participation in the integration processes, taking into account the uneven economic development of the EEU countries, complemented their economic potential.

In addition, a distinctive feature of Eurasian integration is a key role of the Russian Federation as an economically and historically dominant country. The share of Russia accounts for 87.6% of the economic potential, 78.4% of the population and 83.9% of the territory formed the Eurasian Economic Union. In the free trade zone within the CIS Russia accounts for 78.3% of total GDP, 53.2% of the population and 79.3% of the territory. This creates both advantages and difficulties in the EEU formation.

1.2 The Analysis of the Eurasian Economic Union Work: First Results

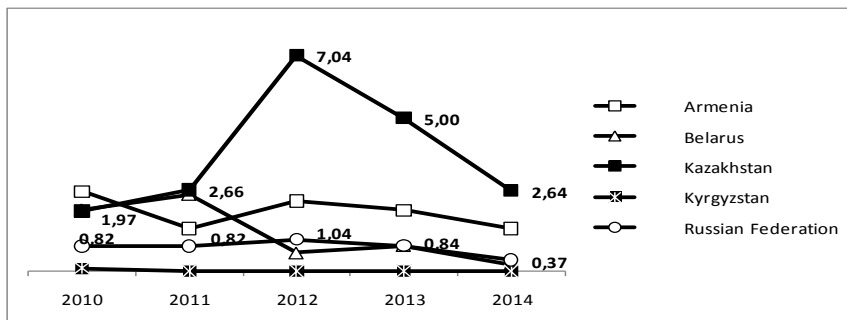
In comparison with January – December 2014 the mutual trade proportion in total foreign trade in the EEU has increased from 12.3% to 13.5%. Index of diversification all the countries of the EEU show the gap from the values of developed countries, which empirically determines the range of this index in the range 0.2–0.4, but higher values of developing countries 0.8–0.9.

Integrated the EEU market is more focused on products from other countries. In 2014, this indicator began to grow in Russia and Armenia; in Kazakhstan the level of trade factor terms remains at a low level. Thus, competitive potential of the EEU countries according to the factor conditions remains low, which shows that the inertial development of the economies of the participating countries. The cycle index confirms the high degree of dependence on external and market conditions.

Of all the countries participating in the EEU, only Russia is an investment donor since 2009, the size of its outward investment remains persistently high, outstripping volumes of incoming direct investment in the range of 12–13%. This indicates the presence of financial and investment potential to build a competitive advantage. However, these resources are leaving the national economy due to its unattractiveness and high risks. The leader of the investment proceeds were Kazakhstan and Belarus, however, after the crisis in 2010–2011 foreign direct investment in Belarus fell significantly, as the economy of this country has failed to overcome internal economic crises and negative trends. Kazakhstan continues to attract foreign investors because of its raw material industry retain its attractiveness. From the point of competitive

potential view the most successful is positive balance of direct investments to Armenia. Since 2012 in all the countries of the EEU, there is a decrease in the overall level of investments, hence the need to increase private investment (Figure 1).

Figure 1: The Ratio of Inward and Outward Investments in the EEU Countries



Source: UNCTAD (2016)

Accordingly, to the decline in investment inflows in the countries of the EEU has increased markedly negative trends related to a redirection of trade flows. Causes deterioration in the financial and investment background have become a general economic downturn, unsatisfactory structure of the national economy, the state of the currency market and reduction of financial resources due to decrease of volumes of direct investments and remittances which for some countries of the EEU (Armenia, Kyrgyzstan) have a substantial influence and determine investment background.

Thus, the level of financial and investment competitiveness of the EEU countries is not homogeneous, different levels of investment potential development (the acceptable level can be considered the Russian investment resources, provided the redirection to the domestic market or the market of the EEU partners) that predetermines the need to increase and diversify the sources of investment resources. This requires the accelerated format of the regulatory mechanisms of the common financial market of the EEU, the development of supplemental incentives to spur domestic investors. It will also contribute to the stabilization and increase of regulation efficiency of the EEU currency market.

Almost all the countries of the EEU are extremely vulnerable to external factors and are characterized by a high consumption level of imported goods, throughout which displaced domestic producers in the markets of consumer goods, therefore fluctuations in the exchange rate become an important parameter for the success and stability of the EEU economies. All the countries of the Union have weak unstable currencies, having only internal convertibility tied to the U.S. dollar or the currency basket, as Russia.

Cycles of currency fluctuations and the rate of change (i.e. volatility) are very high. The average rate of exchange rate change reaches 15–20 percentage points per year, maximum was observed in Russia in 2014 – 72%, which is reflected not only on the Russian economy, but also on the EEU economies, instantly depriving them of the products competitiveness on the price factor (Table 2). In general, for import-dependent economies, the volatility of the national currency exchange rate creates conditions of instability and uncertainty with high risk. This has a dual impact on the economy of the region of integration: on the one hand, generates a high level of inflation to the decline in sales and the sluggish economy, as well as significant reduction in the quality of products and transition to exclusively price competition and declines

in economic activity, capital flight and a significant reduction in the competitive potential of the economy.

Table 2: Dynamics of Exchange Rate Fluctuations in the EEU Countries, Percentage Points

Country	2009	2010	2011	2012	2013	2014
Armenia	1.19	1.03	1	1.08	1.01	1.17
Belarus	1.24	1.07	2.98	1.01	1.11	1.25
Kazakhstan	1.23	1.01	1	1	1.02	1.19
Kyrgyzstan	1.17	1.07	1	1.03	1.04	1.2
Russia	1.24	1.01	1.06	0.94	1.08	1.72

Source: calculated by authors according to the EEU Central Banks

However, in all EEU members, there is a high level of national economies and markets for foreign suppliers' openness that confirm the ranking of Doing Business 2016, the EEU member countries Armenia occupies the 35th place, Kazakhstan is in 41st place, Belarus – 44, Russia on the 51st, and Kyrgyzstan – on the 67th.

1.3 The Eurasian Economic Union Prospects

Signed on May 29 2014 Agreement on the Eurasian Economic Union is an institutional framework and strategy for the development of the EEU by 2025. The document contains a number of key guidelines for the development of activities within the scope of supranational competence. By 2025, it will form the core markets of the Union, which will have a significant multiplier effect on the development of all sectors of the EEU member economy.

In the short term (1–3 years) is expected to finish work on formation of legal, organizational and institutional conditions for the development of the Union. It's planned to continue systematic work on elimination of barriers, minimization of the exemptions and restrictions. Supranational regulation will be improved. As a result, an additional incentive to the development will get almost all sectors of the national economies of the EEU members, for which the value scale of the market. In addition, efforts will be made for the development of mechanisms to minimize the negative effects of mutual and external influences.

In the medium term (3–5 years) it's planned to improve the significance of synergistic projects on the agenda of cooperation and integration of the results of its implementation, including in real sector of economy, transport, infrastructure and other fields. In the medium term should manifest the effect of the complementarity of their economies, based on the competitive advantages of each member. Effective global positioning competitive advantages of the Union (territory size, market size, natural resources, transit potential, socio-cultural factor) should ensure the attractiveness of the member economies to investors, including attracting investment in potential integration projects.

In the long term (5–15 years) the growth of the EEU economies should be strengthened through the coordination of policies that create key conditions for the existence of integration effects: reducing inequalities between countries; adaptation to the integration into the global economy; improving the competitiveness of economies.

A gradual elimination of barriers within the EEU, minimization of the exemptions and restrictions will lead to growth of trade and economic cooperation between countries-partners in the common market. The implementation of shared infrastructure, industrial, and other

innovative projects will stimulate export growth and decline in the share of imports from third countries (Glazyev, Tkachuk, 2013).

In the long term, the EEU is supposed to be active cooperation and addressing global problems at the level of integration associations of the world.

2. Methodological Approach to the Study of International Economic Integration Influence on Development of EEU Members

There are a lot of theoretical and empirical works that focused on economic effects of international economic integration for member countries and the rest of the world as before (ex-ante) or after (ex-post) their entry. They examines the effect of integration on trade flows and economic growth, the availability of convergence of economic performance between member countries, determine who is the most desirable partner and what form these agreements are most effective and preferred.

2.1 Model and Data

The main methods of quantitative analysis, which can be evaluated positive negative effects of integration affecting the country, region, industry in a given country are: computable General and Partial Equilibrium models (CGE) (allow to conduct scenario-based evaluation of integration effects), gravitational econometric model (allow to calculate the impacts of integration, the potential for lack of membership), the intersectional balance model, different indexes (System of Indicators of Eurasian Integration - the SIEI EBD).

As noted in Michalopoulos and Tarr works (Michalopoulos, Tarr, 1997), the effects associated with growth, it's difficult to describe and even more difficult to measure, this is because, unlike static, dynamic effects are more complex. They arise for a number of reasons, which usually divided into two categories: 1) growth in output due to the growth of factors of production; 2) inducing the growth in total factor productivity due to the acceleration of technological progress. As sources of growth can also be a specialization, economies of scale, the income convergence of member countries, transfer of technology and other factors. All this variety of causes through which integration Association is able to affect growth of the member countries, it's hard to grasp using only one model.

At the same time, the effects of integration associations formation is not limited to the impact on trade flows and production structure; they can be associated with the growth of investment opportunities, increased competition, a deepening of specialization and cooperation, transfer of knowledge and technology migration.

The main value of the estimates of the effects of integration obtained by using Computable General equilibrium models, is not specific values, but in terms of impact on specific economic indicators. Moreover, it shows that among the economic indicators there is a clear relationship and any change in economic policy affects the elements of the economic system (Piermartini, Teh, 2005).

However, in recent years to analyze the consequences of participation in regional trade agreements dynamic General equilibrium models are increasingly used. They have a number of advantages, in particular, better assess the long term effects. At the same time, it's necessary to take into account that the dynamic model is rather complicated and not always possible to achieve acceptable quality.

In the analysis of regional economic relations and an assessment of potential of regional integration there is the System of Indicators of the Eurasian Integration (SIEI) EBD (Vinokurov, 2010) which acts as the instrument of monitoring and an assessment of integration processes in the Former Soviet Union and represents the complex system consisting of the indexes covering various aspects of economic and social integration.

3. Problem Solution

The authors propose a methodology for assessing the impact of multilevel economic integration within the Eurasian Economic Union on the socio-economic development of the participating countries on the basis of integral index, based on the identification, evaluation and prediction of the influence of factors external and internal environment on the changing economic potential of the participants of the integration association.

The basis for the evaluation of factors of economic potential became a set of indicators, divided into five groups and included in the proposed model: 1) the indicators of the factors of production; 2) the indicators of the competitive environment; 3) the indicators for assessing transboundary movement of goods and services (evaluation of external and mutual trade, the analysis of the turnover of the services (the indicators of mutual trade, which characterize quantitative and qualitative parameters of trade flows among countries of the integration group; their impact on economic development; status of the industrial sector of the countries of the EEU)); 4) the indicators of financial and investment potential; 5) the indicators of social well-being. Estimation of their values is based on the use of the index method to assess the relationship of various elements of the economic system. The calculated indices included in the aggregate model estimates the realization of the EEU countries economic potential.

The proposed model is based on the assumption that only systemic development factors and conditions of economic and social activity capable of creating a high level of economic potential development. The development of one of these components will not ensure the achievement of economic synergies in the process of Eurasian integration.

It's important to determine key performance indicators and their target values (given macroeconomic conditions, and synergy of integration association).

The level of EEU members' economic potential integral indicator (EPR) is calculated as follows:

$$EPR = \sqrt{\sum_{i=1}^n d_i (1 - p_i)^2}, \quad (1)$$

where p_i – a normalized value of i-indicator;

d_i – a weighting factor (set by expert on the basis of the influence of this indicator on economic potential integration association member).

Normalized values of indicators influencing the economic potential of the countries participating in the EEU are calculated by the formulas (2) and (3) for indicators showing respectively the direct effect (the increase in dynamics is considered as a positive trend) and reverse effect (decrease of values in dynamics – positive trend):

$$p_i = 1 - \frac{x}{x_n}, \quad (2)$$

$$p_i = 1 - \frac{x_n}{x}, \quad (3)$$

where x – an actual value of i-indicator;

- x_n – a target value of i-indicator;
 p_i – a normalized value of i-indicator.

Depending on the value of the integral indicator, the authors list the following levels of the economic potential of the countries participating in the EEU:

1. $[1,00-\infty)$ – high;
2. $[0,50-1,00)$ – average;
3. $[0,20-0,50)$ – low;
4. $[0,00-0,20)$ – critical.

The level of economic potential of the EEU countries is considered to be high in the case where their activities are characterized by stable growth of indicators of the five selected groups, optimal conditions for cross border movement of goods, services and factors of production, high level of openness of national economies of the Eurasian Economic Union, a sufficient degree of financial sources of economy growth.

The average level of the economic potential of the EEU countries presupposes stable values of the factors of production, competition and social welfare at high trade potential, but also a sufficient degree of availability of financial resources. There is a possibility of increasing the level to high due to creating competitive environment, increasing financial and investment potential. Special attention should be given to improving the indicators of social well-being. Time spent on improving the economic potential of high can be 1–3 years.

Under the low economic potential of the countries participating in the EEU is defined as the condition in which the values of the indicators of economic potential's factors don't reach their target values. If the value of the integral index is closer to the lower boundary of the interval $[0,20-0,50)$, the potential increase in the level of economic potential is not clear, the upper bound shows the existence of the possibility of its increase to the average level.

The level of economic potential of the countries participating in the EEU is regarded as critical in the case when the violated treaty, the EEU values of macroeconomic indicators determining the sustainability of economic development of EEU member.

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. He 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 EEU will cover not only market of goods but also the services market, labour and capital, which requires an appropriate institutional support.

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.

Industrial and trade policies of countries EEU must meet the basic requirements and principles of national security of each participating countries and integration associations in General. Currently not yet developed a systematic approach to this problem, there is no comprehensive picture of the industrial, trade policies and policies aimed at ensuring national, including economic, security on a consistent basis.

Practical guidance harmonization of industrial and trade policy should be to accelerate socio-economic development of the EEU member countries and to promote the improvement of national economies economic potential, which is quite achievable in the light of the harmonization of these tasks.

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Free Movement of Workers within the European Union in Terms of Private International Law

Kateřina Remsov

Masaryk University

Faculty of Law, Department of International and European Law

Veveř 70

Brno, Czech Republic

e-mail: 325618@mail.muni.cz

Abstract

Freedom of free movement of workers within the European Union besides indisputable advantages also brings some risks for an employee as the contractual weaker party. Labour law tries to balance the factual inequality of the employment relationship by granting enhanced legal protection to employee. Nevertheless, in the case of cross-border employment contracts may occur situations where this protection afforded to employee by national law may be lost. European Union law therefore grants protection to the employee by providing the special conflict rules in the ambit of individual employment contracts and the special rules on jurisdiction over individual contracts of employment. Besides protective mandatory rules, the weaker contractual position of the employee is also compensated by the overriding mandatory rules. The paper deals with the analysis of the conflict rules determined for individual employment contracts and the special rules on jurisdiction over individual contracts of employment and presents significant judgments of the Court of Justice of the European Union related to this issue.

Keywords: *Conflict Rules for Individual Employment Contracts, Cross-border Employment Contracts, Jurisdiction over Individual Employment Contracts, Protection of the Worker*

JEL Classification: *K12, K31, K33, K41*

1. Introduction

One of the consequences of deeper interdependence of individual national economies in the European Union is an increase in the number of cases with an international element in the relationship between employee and employer. Prerequisite of formation of employment relationships with the international element to the territory of Member States of the European Union is the free movement of subjects such relationships.

1.1 Freedom of Movement for Workers

Freedom of movement for workers is one of the founding principles of the European Union, it is laid down in Article 45 of the Treaty on the Functioning of the European Union and represents a fundamental right of workers. It entails the abolition of any discrimination based on nationality between workers of the Member States as regards employment, remuneration and other conditions of work and employment. It includes the right to accept offers of employment actually made, to move freely within the territory of Member States for this purpose, to stay in a Member State for the purpose of employment in accordance with the provisions govern employment of nationals of that State laid down by laws, and to remain in the territory of a Member State after having been employed in that State. The right of free

movement of workers may be limited only on grounds of public policy, public security or public health.

1.2 International Element

The international element may relate to the subject of an employment relationship, for example, if an employee is a foreign national or a person domiciled abroad or if an employer is a company incorporated under foreign law or domiciled abroad. An employment contract may also refer to foreign law due to foreign equity in the company. The international element may also consist in the object of the employment relationship or content of the employment relationship, i.e. the rights and obligations that arise out of the employment relationship, typically if the work is carried out in foreign country. The employment relationship has the international element also if the legally significant fact for formation, modification or termination of the employment relationship occurred abroad or if such fact has relationship to foreign countries, for example, where the employment contract was concluded under foreign law or abroad.

Under certain circumstances, it may occur a complicated situation with more foreign elements. If the international element is presented in an employment relationship it is necessary to determine the applicable law and jurisdiction. The mere existence of the international element does not cause the application of foreign law and jurisdiction of foreign courts. The international element must be significant enough. The aim is to prevent the application of the special legal regime in cases where it would be inappropriate due to the expectations of the parties. That criterion thus allows to protect worker as the weaker party and maintains a uniform contractual statute, respectively prevents simultaneous application of the laws of different States that could harm employee.

Labour law tries to balance the socio-economically weaker position of the employee. Nevertheless, in the case of conclusion of employment contracts with the international element may occur situations where this protection afforded to employee by national law may be lost. European Union law therefore provides the special conflict rules for individual contracts of employment and the special rules on jurisdiction over individual contracts of employment; to protect employee also serves institute of the overriding mandatory rules (See Article 9 of the Regulation (EC) No 593/2008 of the European Parliament and the Council of 17 June 2008 on the law applicable to contractual obligations (“Rome I Regulation”).). The aim of the present paper is to analyze the protective mandatory rules for individual employment contracts and the rules on jurisdiction over individual contracts of employment, including the most important case-law of the Court of Justice of the European Union (“CJEU”) on this issue.

2. Jurisdiction over Individual Contracts of Employment

Jurisdiction over individual contracts of employment is regulated in the Regulation (EU) No 1215/2012 of the European Parliament and of the Council of 12 December 2012 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (“Brussels Ibis Regulation”) at present. Brussels Ibis Regulation contains unified rules of conflict of international jurisdiction and recognition and enforcement of judgments given in Member States of the European Union. In order to further facilitate the free movement of judgments and enhance access to justice by the Brussels Ibis Regulation was recast the Council Regulation (EC) No 44/2001 of 22 December 2000 on jurisdiction and the recognition and enforcement of judgments in civil and commercial matters (“Brussels I Regulation”) whose

predecessor was the Convention of 27 September 1968 on jurisdiction and the enforcement of judgments in civil and commercial matters (“Brussels Convention”).

In Recital 34 of the Preamble to the Brussels Ibis Regulation is laid down requirement to ensure continuity of interpretation of the Brussels Convention, the Brussels I Regulation and the Brussels Ibis Regulation by the CJEU. Case-law on the Brussels Convention and the Brussels I Regulation is thus usable for interpretation of the Brussels Ibis Regulation.

Jurisdiction over individual contracts of employment is regulated in Articles 20 to 23 of the Brussels Ibis Regulation. The rules on jurisdiction over individual contracts of employment have the character of *lex specialis* to the general as well as special rules of jurisdiction (Rožehnalová et al., 2013, p. 266), thus they are preferably applicable. The aim of these rules is to protect the employee as “*party who is expected to be economically weaker and less experienced in legal matters than the other party to the contract*” (Stone, 2006, p. 113). It is also expressed in Recital 18 of the Preamble to the Brussels Ibis Regulation.

Basic features of the individual employment contracts were defined in the Case 266/85 which relates to interpretation of the Brussels Convention. The CJEU ruled that such contracts create a lasting bond which brings the worker to some extent within the organizational framework of the employer's business, and that they are linked to the place where the activities are pursued, which determines the application of mandatory rules and collective agreements. Thus the concept does not extend to a contract for professional services (Stone, 2006, p. 129).

In accordance with Article 20(2) of the Brussels Ibis Regulation where an employer is not domiciled in any Member State, but it has a branch, agency or other establishment (ancillary establishment) in a Member State, and the dispute arises out of the operations of the ancillary establishment, the employer is treated as domiciled in that Member State. The Brussels Ibis Regulation does not contain similar provision in relation to an employee (Stone, 2006, p. 114). In the Case C-154/11 the CJEU interprets notion “establishment” contained in Article 18(2) of the Brussels I Regulation⁸⁶. The CJEU held that “*an embassy of a third State situated in a Member State is an establishment within the meaning of that provision, in a dispute concerning a contract of employment concluded by the embassy on behalf of the sending State, where the functions carried out by the employee do not fall within the exercise of public powers*”.

According to Article 20(1) of the Brussels Ibis Regulation in matters relating to individual contracts of employment, jurisdiction is determined by Articles 20 to 23, without prejudice to Article 6, Article 7(5) and, in the case of proceedings brought against an employer, Article 8(1). According to Article 6 of the Brussels Ibis Regulation the jurisdiction of the courts of each Member State is determined by the law of that Member State, if the defendant is not domiciled in a Member State. Special rules on jurisdiction thus apply only when the defendant is domiciled in a Member State (Rožehnalová et al., 2013, p. 266). Article 7(5) regulates the special jurisdiction and alternatively enables to sue a person domiciled in a Member State in the courts of another Member State for the place where the ancillary establishment is situated, as regards a dispute arising out of the operations of an ancillary establishment. Article 8(1) allows to sue an employer domiciled in a Member State where he is one of a number of defendants in the courts for the place where any of them is domiciled, provided the claims are so closely connected that it is expedient to hear and determine them together to avoid the risk of irreconcilable judgments resulting from separate proceedings.

⁸⁶ Article 20(2) of the Brussels Ibis Regulation.

Brussels Ibis Regulation offers an employee as a weaker party a wide choice of forums in which to sue an employer as a stronger party, while limiting the forums in which the employer can sue the employee, and states special requirements for the conclusion of agreements on jurisdiction (Stone, 2006, p. 113).

2.1 Actions Against an Employer

In accordance with Article 21(1) of the Brussels Ibis Regulation an employee may sue an employer domiciled in a Member State in the courts of the Member State in which the employer is domiciled, or in another Member State in the courts for the place where or from where the employee habitually carries out his work or in the courts for the last place where he did so. If an employee does not or did not habitually carry out his work in any one country, the employee may also sue an employer in the courts of a Member State for the place where the business which engaged the employee is or was situated.

The CJEU interprets autonomously “place where the employee habitually carries out his work” in the Case *C-383/95* concerning the Brussels Convention. The CJEU ruled that “*the place where the employee habitually carries out his work is the place where he has established the effective centre of his working activities*”. Further, the CJEU stated that “*when identifying that place, it is necessary to take into account the fact that the employee spends most of his working time in one of the Contracting States⁸⁷ in which he has an office where he organizes his work for his employer and to which he returns after each business trip abroad*”.

The notion “place where the employee habitually carries out his work” was interpreted in the Case *C-37/00* also. The CJEU stated that if an employee carried out his work on fixed or floating installations positioned on or above the part of the continental shelf adjacent to a Member State⁸⁸, it is regarded as work carried out in the territory of that State for the purposes of applying the Brussels Convention. The CJEU further held that if the obligations arising under the contract of employment are performed in several Member States the place where the employee habitually carries out his work is the place where, or from which, he in fact performs the essential part of his duties towards his employer⁸⁹. The CJEU applied the temporal criterion and stated that “*In the case of a contract of employment under which an employee performs for his employer the same activities in more than one Contracting State, it is necessary, in principle, to take account of the whole of the duration of the employment relationship in order to identify the place where the employee habitually works. Failing other criteria, that will be the place where the employee has worked the longest.*” If the subject-matter of the dispute is more closely connected with a different place of work cannot take into account, the temporal criterion.

In the Case *C-437/00* the CJEU dealt with situation where the work was carried out for different employers under two contracts of employment. The CJEU held that “*In a dispute between an employee and a first employer, the place where the employee performs his obligations to a second employer can be regarded as the place where he habitually carries out his work when the first employer, with respect to whom the employee's contractual obligations are suspended, has, at the time of the conclusion of the second contract of employment, an interest in the performance of the service by the employee to the second employer in a place*

⁸⁷ Member States.

⁸⁸ The work was carried out on board mining vessels or on mining installations stationed over the Netherlands continental shelf and later on board a floating crane deployed in Danish territorial waters.

⁸⁹ See Case *C-125/92*.

decided on by the latter. The existence of such an interest must be determined on a comprehensive basis, taking into consideration all the circumstances of the case.”

Relevant factors include the fact that the conclusion of the second contract was envisaged when the first was being concluded, the fact that the first contract was amended on account of the conclusion of the second contract, the fact that there is an organizational or economic link between the two employers, the fact that there is an agreement between the two employers providing a framework for the coexistence of the two contracts, the fact that the first employer retains management powers in respect of the employee and that the first employer is able to decide the duration of the employee's work for the second employer (Case C-437/00).

If an employer is not domiciled in a Member State the employee may sue him under Article 21 (2) of the Brussels Ibis Regulation in a Member State in the courts for the place where or from where the employee habitually carries out his work or in the courts for the last place where he did so, or if the employee does not or did not habitually carry out his work in any one country, in the courts for the place where the business which engaged the employee is or was situated. The employee may commence proceedings also in the courts for the place of the employer's branch, agency or other establishment, regarding a dispute arising out of the operations of that establishment (Article 7(5) of the Brussels Ibis Regulation). The employee may also sue the employer on a counter-claim, in the court in which the original claim is pending under Article 8(3) of the Brussels Ibis Regulation (Grušić, 2012, p. 92).

2.2 Actions Against an Employee

In contrast, an employee may be sued only in the courts of the Member State in which he is domiciled under Article 22 (1) of the Brussels Ibis Regulation. This provision, however, does not affect the right of an employer to counterclaim (Article 8(3) of the Brussels Ibis Regulation) in the court in which the original claim by the employee is pending in accordance with Articles 20 to 23 of the Brussels Ibis Regulation. If defendant employee conferred jurisdiction upon a court by entering an appearance, the court is obliged, in accordance with Article 26(2) of the Brussels Ibis Regulation, before assuming jurisdiction, to ensure that the employee is informed of his right to contest the jurisdiction of the court and of the consequences of entering or not entering an appearance.

2.3 Agreements on Jurisdiction

Agreement on jurisdiction may be concluded also in the case of disputes arising from the individual contracts of employment according to Article 23 of the Brussels Ibis Regulation. The prorogation agreement may be concluded only after the dispute has arisen, or in a manner that allows the employee to bring proceedings in courts other than those indicated in Articles 20 to 23 of the Brussels Ibis Regulation. But the general requirements of Article 25 Brussels Ibis Regulation must also be satisfied (Grušić, 2012, p. 99). The CJEU dealt with interpretation of Article 21 of the Brussels I Regulation⁹⁰ in the Case C-154/11 and stated that *“an agreement on jurisdiction concluded before a dispute arises falls within that provision in so far as it gives the employee the possibility of bringing proceedings, not only before the courts ordinarily having jurisdiction under the special rules in Article 18 and 19 of that regulation⁹¹, but also before other courts, which may include courts outside the European Union”*.

⁹⁰ Article 23 of the Brussels Ibis Regulation.

⁹¹ Article 20 and 21 of the Brussels Ibis Regulation.

3. Conflict Rules for Individual Contracts of Employment

The law applicable to the individual contract of employment is determined under Article 8 of the Rome I Regulation. No explicit definition of such contracts is offered, but it is thought that the notion “individual contract of employment” must be given an autonomous Community meaning corresponding to that adopted by the CJEU for the purpose of the Brussels Ibis Regulation (Stone, 2010, p. 356) in the Case 266/85 (See above). *“For the purpose of Article 8 of the Rome I Regulation, an ancillary agreement between an employer and an employee, such as an agreement relating to the participation of the employee in an incentive scheme and to his not working for a competitor after leaving the employment, is treated as part of the contract of employment”* (Stone, 2010, p. 356). Article 8 of the Rome I Regulation relates to individual contracts of employment only. It does not apply to collective agreements, there are fully applicable Article 3 and 4 of the Rome I Regulation (Rožehnalová et al., 2013, p. 100).

In accordance with Article 8(1) of the Rome I Regulation, an individual employment contract is governed by the law chosen by the parties in accordance with Article 3. Such a choice of law may not, however, have the result of depriving the employee of the protection afforded to him by mandatory provisions under the law that, in the absence of choice, would have been applicable under Article 8(2) – (4) of the Rome I Regulation (See Recital 35 of the Preamble to the Rome I Regulation). The aim of this provision is to compensate for existing inequalities of the parties by using the protection of the legal system predictable for the weaker party. The protection is realized through mandatory rules which have a special purpose, the protection of employee (Rožehnalová et al., 2013, p. 96).

According to Article 8(2) of the Rome I Regulation, the individual employment contract is governed by the law of the country in or from which the employee habitually carries out his work in performance of the contract, to the extent that the law applicable to the contract has not been chosen by the parties. Situations where there are several places of work the CJEU interpreted in the context of the Brussels Convention (See above Case C-125/92; Case C-383/95; Case C-37/00). The CJEU interprets the country of habitual work also in the Case C-29/10 and Case C-384/10 (See Grušić, 2013) relating to the Convention on the law applicable to contractual obligations opened for signature in Rome on 19 June 1980 which was the predecessor of the Rome I Regulation (See Rožehnalová et al., 2013, pp. 118 – 119).

The country of habitual work remains unchanged if the employee is temporarily employed in another country. Recital 36 of the Preamble to the Rome I Regulation adds that work carried out in another country is regarded as temporary if the employee is expected to resume working in the country of origin after carrying out his tasks abroad. The conclusion of a new contract of employment with the original employer or an employer belonging to the same group of companies as the original employer should not preclude the employee from being regarded as carrying out his work in another country temporarily. This reflects the approach followed by the CJEU under the Brussels Convention (See above Case C-437/00).

Where the law applicable cannot be determined pursuant to Article 8(2) of the Rome I Regulation, the individual employment contract is governed by the law of the country where the place of business through which the employee was engaged is situated under Article 8(3). This reference to a place of business no doubt has a similar meaning to the reference to an establishment in Article 7(5) of the Brussels Ibis Regulation (Stone, 2010, p. 357). However, according to Article 8(4), where it appears from the circumstances as a whole that the contract is more closely connected with a country other than that indicated in Article 8(2) or 8(3), the law of that other country is applied.

4. Conclusion

The conflict rules for individual employment contracts ensure the application of the law of the country that is closely connected with the employment contract. The individual employment contract is governed by the law chosen by parties or by the law of the country in which an employee habitually carries out his work or by the law of the country where the place of business through which the employee was engaged is situated or by the law of a country with which such contract is more closely connected. The rules on jurisdiction over individual employment contracts ensure that disputes arising from employment contracts are decided by the courts of a Member State for the place employee's or employer's domicile resp. place where the employee habitually carries out his work or place where the business which engaged the employee is or was situated. The conflict rules for individual employment contracts and special rules on jurisdiction over such contracts are complementary and refer generally to the law and courts of one country. This ensures a high level of protection for employee as a weaker party from socio-economical view.

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Euroscepticism of Euroenthusiastss

Rafał Riedel

Institute of Political Science
University of Opole
Opole, Poland
TU Chemnitz
European Studies Institute
Chemnitz, Germany
e-mail: riedelr@icloud.com

Abstract

The author of this paper differentiates between EUROscepticism and Euroscepticism. Euroscepticism is a long-time recognized and widely researched phenomenon across Europe, most generally conceptualized as a negative attitude towards the European integration process, in particular in the form of the European Union. Whereas EUROscepticism is a much narrower category which can be defined as negative attitude towards the monetary integration on a supranational level, its deepening, participation in it, etc. As an illustrative example, here in this paper, serves Poland where we can observe an interesting paradox of an extremely pro-EU attitudes of the society combined with a strong anti-EURO sentiment. They translate into a stable position of Poland on the peripheries of the core of the EU. Based on the available public opinion reports (from the nation-state and supranational level), this paper aims at answering the question why there is so much EURO-scepticism in so Euro-optimistic society.

Keywords: *Euroscepticism, EUROscepticism, Poland, European Union*

JEL Classification: *A13, E60, H30*

1. Introduction

The key objective of this analysis is to investigate why and how is this possible that one of the most Euroenthusiastic societies in the European Union – that is the Polish (Eurobarometer 2012) – reveal so much EUROscepticism. The answer to this intriguing question is given based on the public opinion polls about various aspects of Poles' attitudes towards the European integration, Poland's place in it, with special emphasis given to the issue of participation in the supranational monetary policy.

Euroscepticism is generally understood as a negative attitude towards the European Union, European integration process in general, some of its aspects or just the idea of uniting the continent in any respect. More specifically EUROscepticism is defined as a negative attitude towards the Eurozone, monetary integration on the supranational level, some of its aspects or ideas and concepts related to it.

Such conceptualising of EUROscepticism and Euroscepticism positions these two terms in a rich scholarly literature, which became even more important in the context of the economic crisis that hit Europe in 2008. Therefore deep understanding of the phenomenon, its determinants, mechanisms, effects and side-effects is central in contemporary research on the European Union. Euroscepticism is not any longer just an aberration of the mainstream politics in the EU. It has become mainstream, at least, after the most recent elections to the European

Parliament (2014). As a result, also scientifically, it is not any more a contextual variable only, but it gained the attention as a central phenomenon to be explained.

In the case of the new member states (NMS), there is however relatively little academic reflection invested in studying Euroscepticism. In the end, it is the old member states, like Great Britain (UKIP) and France (Front National) which capture the spot light with their spectacular success of the Eurosceptics. The EU newcomers focused in the first decade of full membership on proving to be “good Europeans”. Evidence from quite successful holdings of the EU Council Rotating Presidencies, Presiding the EU Parliament and, last but not least, obtaining the President of the European Council seat proves that the NMS and their political elites feel more and more comfortable in the corridors of the EU institutions in Brussels. This does not mean however that all the new societies in the EU are unconditioned Euroenthusiasts. The Czechs, the Hungarians and many others showed their EU dissatisfaction at many different occasions. But the largest NMS, Poland has remained a stable Euro-optimist. Even in the times when it was governed by a moderate Eurosceptic coalition (2005-2007), the society proved to be among the most Euroenthusiastic in the Union.

2. Problem Formulation

Once the Republic of Poland joined the European Union in the “big bang” enlargement of 2004, it became obliged to join the final stages of the monetary integration. Actually already from the moment of ratifying the Accession Treaty (2003), Poland, just like many of the new member states (NMS) enjoys a derogation from adopting the common currency⁹². The approaches of the other new EU members states remain mixed. Seven out of the ten new member states that joined the EU on 1 May 2004 decided for a strategy of adopting the Euro as soon as possible (Latvia, Lithuania, Estonia, Malta, Cyprus, Slovenia and Slovakia). Consequently, these countries joined ERM II (second generation of the Exchange Rate Mechanism) as early as possible. However Hungary and Poland, like the Czech Republic opted to participate in ERM II only for the shortest period necessary to fulfill the exchange rate criterion and make technical preparations for the Euro. However, neither country has set such a date so far. This temporary derogation does not however exempt any member state from the obligation to adopt the Euro. The Polish Republic, like any other member state from outside of the Eurozone (however unlike the United Kingdom or Denmark, who negotiated a special status in this regard), must work towards the introduction of the Euro as soon as possible. It is also connected with fulfilling some macroeconomic criteria known as the Maastricht criteria⁹³. These criteria, in the case of Poland, have been achieved in 2015, when the EU Commission stopped the excessive deficit procedure, together with the Polish deficit dropping below 3% of DGP. All the other criteria of inflation, public debt and long-term interest rates remain at the stable level, still however the Polish government (in agreement with the Polish Central Bank, NBP – Narodowy Bank Polski) does not intend to join the Euroclub soon. This is a political decision that stems from the strong anti-Euro positions of the Polish society. This specific Polish EURO-scepticism is quite an interesting phenomenon in the context of the vitally pro-EU attitudes of the Polish society.

⁹² In the meaning of Article 122 of the Treaty establishing the European Community (EC)

⁹³ The EU new member states, besides being required to harmonize their economies in line with the convergence criteria formulated in the Maastricht Treaty, they are also expected to achieve a high degree of sustainable convergence in order to join the Euro area.

3. Problem Solution

In the context of the problematic as formulated as above, the legitimate question is: what are the sources of such an almost undisputed Euro-positive attitude and in this context why Poles belong to the most EUROsceptic camp as it comes to the potential joining the Eurozone club?

The opinion polls suggest that directly after the transformation, there was a very strong support for the European integration and Polish participation in it. This was a result of a strategic turn narrated in the public discourse as “return to Europe”. The European Union impressed the Poles as a land of economic prosperity, political stability and a promised land in general. So high expectations could only be disappointed and that is why when the EU accession negotiations started and the EU became much more a set of figures, transition periods, opt-outs, etc., the fairy-tale picture disappeared and first disappointments can be observed in the period 1998-2002. At that time however the government launched its information/promotional campaign before the accession referendum. This stimulated an up-wards trend, which continued also after the momentous 2004. The enlargement brought access to the Single Market and the “rain” of cohesion money and in 2008 the support for the EU reached its pick. Then the economic crises came to Europe (to Poland however in the lesser extend) and like in many other EU member states, the society started to afford some Euroscepticism. This downwards trend was broken again in 2014 which is correlated with the developments in Eastern and South-Eastern Ukraine. The Poles saw with their own eyes the alternative to the Western orientation. Directly after the implosion of the Soviet Union in 1991, the Polish and Ukrainian GDP were very similar. Two and a half decades later, the Polish GDP is three times higher than Ukrainian, which is a result of the Leszek Balcerowicz’s shock therapy and the strategic choices undertaken by the post-1989 governments. Poland is also the only EU member state, which has border both with Russia and Ukraine, which makes it the most exposed to the Ukrainian-Russian conflict. This problematic situation spoke to the imagination of the Polish people to such an extend that they turned back their support towards the European Union which sky-rocketed and bits the ever-records.

The economic utility theory suggests that the more the society gains from the European integration project, the more positive it is about it. In economic terms there are two strong arguments which persuade the Poles to be satisfied with the EU membership. One is the access to the Single Market which stimulated the export growth (as an emerging market, the Polish economy is very much export-dependent) and the second one is the EU funds (cohesion and structural funds) which boosts public investments in an unprecedented scale. Here it is important to notice that these two factors may disappear when Poland loses its competitive advantage (based on low labor costs⁹⁴) and when the voivodships / regions stop qualifying for the cohesion funds. Due to these two assumptions, it is legitimate to hypothesize that the Euroenthusiastic attitude will finish too. Among all the positive claims on the European integration these two seem to be the leading ones among the Poles.

The most important question that is faced by the Polish society now, is the potential access to the Eurozone. The recently published NBP⁹⁵’s report concludes that even though Poland plans to join the final stage of the Monetary and Economic Union, it is not desirable in the current situation. It is the crisis (and the accompanying turbulences inside the Eurozone) that changed the central bank’s perception. A report published before the crisis recommended joining the

⁹⁴ If alternative competitive advantages are not developed.

⁹⁵ NBP – Narodowy Bank Polski (National Bank of Poland), the Polish central bank

Eurozone at the earliest opportunity – just after fulfilling the Maastricht convergence criteria. But Marek Belka, the President of NBP, said in February 2015 during a seminar at Bruegel think tank (Brussels), that the Eurozone is “(...) of little attractiveness for Poland at the moment” (Belka 2015). He also pointed to the fact that it was the own currency that saved Poland in the times of economic crisis.

The Polish society however is EUROscetical based on somehow different set of ideas and arguments. According to the opinion polls study carried in 2013 (CBOS⁹⁶), it is the expected high prices effect that the Poles are the most afraid of. Even though the price levels in most product groups are already synchronized and there is no much difference between Poland and the Eurozone, it is this anticipated side-effect of introducing the Euro that is the most influential threat among the Polish citizens.

Surprisingly, when some more detailed questions about the monetary integration are addressed, then the Poles reveal very pro-European attitudes again. Majority (40% against 33%) claims that introducing Euro in Poland will be beneficial for the Polish companies. 68% predict that it will be beneficial for trans-border traffic (14% do not share this view).

In general however, we can observe a negative tendency in Poles opinion on the cumulative effects of joining the Eurozone - 36% of Poles think it will be good for the economy as such (40% against). Just five years ago, it was 45% for and 39% against. What is somehow paradoxical is the Poles' opinion on the expected effects of Euro introduction for those who plan to obtain a loan. Here the Poles are less positive about joining the Eurozone – 22% think it will be good and 44% not good for the potential borrowers (CBOS 2013). The last results must be a reaction to the “Swiss Franc - borrowers” problem which was so much painful in Central and Eastern Europe (especially Hungary and Poland)⁹⁷. The interest rates of European Central Bank are lower than those of the Polish central bank and as a consequence the costs of the credit are also lower in the Eurozone. This suggests that a lot of education is needed in order to have an informed and rational opinion to be formed before any eventual referendum on the Eurozone entry in Poland. Right now there is a lot of myths and arte-facts in the public discourse. At the same time the Eurozone is growing – in January 2015 another Polish neighbor, Lithuania, became a new Eurozone member. This means that all Poland's main economic partners from the European Union use Euro (except from the Czech Republic).

Another important point to be made in the public debate about the Eurozone entry is the alternative scenario analysis. In evaluating the costs and benefits of participating in the European monetary union, it should also be taken into account the balance of pros and cons of the status quo scenario. Staying with the Polish Zloty does not mean only positive effects. During the crisis it was beneficial for Poland to have its own currency, but staying outside of the Eurozone Poland is exposed to speculative attacks and other shocks that it would have been protected from inside the Euro-club.

⁹⁶ Centrum Badania Opinii Społecznych – raport z badań: Obawy i nadzieje związane z wprowadzeniem euro w Polsce. Komunikat z Badań CBOS, BS/42/2013, Warszawa, marzec 2013

⁹⁷ Where the borrowers were exposed to the exchange rate fluctuation and its costs.

4. Conclusion

The evidence from Central and Eastern Europe suggests that it is not the adoption or non-adoption of the Euro as a common currency that is the decisive for the dynamic catch-up trajectory of the post-communist economies. Both Poland and Slovakia (one Eurozone member, the other one - not) are the leaders in the GDP growth dynamics both in the last decade as well as since 1989. It suggests that the Euro is not decisive as a factor determining the economic growth in the CEE economies. Additionally, it should be noted that the historical context should act against keeping own currency in Poland. The Poles have, in their living memory, experience from 1989 and the proceeding years, when they suffered hyperinflation. The first transformation years meant rapid devaluation of Polish zloty. The currency lost approximately 500% of its value annually. The Poles lost most of their savings at the beginning of the transition⁹⁸. Now they have much more to lose, therefore the Eurozone entry decision should be taken cautiously and after building a wide consensus on the topic. The development of Eurosceptic and EUrosceptic tendencies in the EU member-state societies is a dynamic process. It requires consequently an up-dating research strategy that follows the changes, their determinants and consequences.

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⁹⁸ That is quite a different experience compared to the East Germans, whose currency was exchanged 1:1 to Deutsche Mark without much economic rationality behind. This constitutes one of the greatest differences in the short-term as well as long-term consequences of the transition in Poland and other post-communist states.

National Disparities in the European Union: Convergence or Divergence?

Dmitry Rudenko¹, Nikolay Didenko²

Tyumen State University¹, Peter the Great St. Petersburg Polytechnic University²
Finance and Economics Institute, Department of International Economics¹, Institute
of Industrial Economics and Management, Department of International Economics²
Volodarskogo 6¹, Polytehnicheskaya 29²
Tyumen¹, St. Petersburg², Russia
e-mail: drudenko@inbox.ru, didenko.nikolay@mail.ru

Abstract

Deepening in the European Union (EU) integration process has enhanced the question of economic disparities at all levels. There is a profound differentiation among the EU member states in terms of economic development (the share of the five richest EU countries accounted for 67.7 per cent of total GDP, 61 per cent of all export volume, as well as 58.3 per cent of all inward FDI stock). The disparities among 276 NUTS-2 regions are much higher. In this paper we test the hypotheses of sigma, beta and club convergence presence using the official World Bank data for 2004-2014. The assessment has been based on min-max ratio, quartile and percentile ratio, coefficient of variation as well as Gini index. The goal of the paper is to assess the convergence within the EU, as well as within the EU and six EU-candidate countries. We pose significant problems for the theoretical assumptions of further integration process deepening especially at the expense of less developed Serbia, Montenegro, Macedonia, Turkey or even much poorer countries of the Eastern Partnership.

Keywords: European Union, Uneven Development, Convergence, Cross-country Growth

JEL Classification: O11, O47, F15, F47, E60

1. Introduction

Sustainability is particularly important in the development of integration associations, which suggests stability, the achievement of set goals, the ability to implement its commitments to the countries, creditors, population. Uneven development leads to the fact that the integration of the country, not only can overcome the action of the general laws of development of the world economy, but, on the contrary, fully obey them, which makes the group unstable.

So far, economic theory does not give a clear answer to these questions: How integration affects the dynamics of regional disparities and, on the other hand, how regional disparities affect the dynamics of integration? Theorists are divided into those who believe that integration enhances inter-regional and cross-country differences and support the theory of divergence, and those who believe that integration reduces these differences. Integration largely stimulates the problem of uneven development, but it is not the key to solving it. What they get for the integration association depends on the countries themselves – will they be a financial burden or the locomotive of development.

At the present stage of development of the European Union there is a profound differentiation among the member countries in socio-economic development. In terms of GDP per capita at

PPP, the leading countries and losing countries differ in 5.6 times, the volume of exports per capita – in 54 times, the unemployment rate – in 5.29 times, the level of inward FDI per capita stock – in 220.9 times. Such unevenness inevitably leads to the formation of pockets of poverty, quality of human development decrease, the preservation of a significant level of unemployment, the growth of inter-regional conflicts, exacerbate social tensions. Avoiding excessive differentiation of the EU member countries in terms of socio-economic development, the maintenance of the necessary territorial and structural proportions in the economy are a condition for sustainable development of Europe.

The issue of uneven development has been actively studied by the means of different techniques: simple statistical approach, regression analysis (with cross-section and panel data), time series analysis etc. Kyjonková (2014) dealt with factors of economic development of regions in Central Europe and compared NUTS 2 regions by GDP per capita. Kulhánek (2014) using sigma and beta convergence stated that the EU-New member countries had converged to the EU-15 average. Burian and Brčák (2014) assessed the character of the convergence process in the European Union during the period 2002-2012 using cluster analysis and claimed that there was no permanent significant club convergence process in the EU. Battisti and Di Vaio (2008) applied a mixture regression approach to the β -convergence model for the EU-25 regions and concluded that excluding a small number of regions that behaved as outliers, only a few regions had shown an appreciable rate of convergence. The contradictory results may be explained by Kurt and Andreas (2008) who believe that the reduction of the income gap is a phenomenon among the nations, and not between regions within the EU. They considered whether there was a duplication of regional development trends in the EU: general convergence on the one hand, and spatial concentration (agglomeration), on the other, using a non-parametric analysis of the regional distribution of per capita income and regression analysis of regional differences in income for 1980-2000.

The EU controls have been active in the development of regional strategies for socio-economic development. However, non-uniformity in the development of the member countries continues to grow, and the problems of formation and implementation of regional development policies remain insufficiently studied in science and developed in practice.

2. Model and Data

The academic literature has suggested a number of different approaches to test the presence of convergence, ranging from simple statistical methods (assessment of the dynamics of the standard deviation) to the use of sophisticated econometric models. We test the presence of σ -convergence and absolute β -convergence between European countries (EU-28) after the widest enlargement of European Union in 2004. Our analysis is based on the World Bank data. The period covered is 2004-2014. The dependent variable is GDP per capita at PPP (constant 2011 international dollars).

The concept of σ -convergence assumes that income differentiation between economies (countries, regions, metropolitan areas) decreases over time. Sala-i-Martin (1996) measures the cross-sectional dispersion of income (σ) by sample variance of the log of income y_{it}

$$\sigma^2 = \frac{1}{N} \sum_{i=1}^N [\log(y_{it}) - \mu_t]^2, \quad (1)$$

where N is the number of countries, μ is the sample mean of $\log(y_{it})$.

In our analysis we use coefficient of variation which is given by:

$$CV = \sigma / \bar{y}, \quad (2)$$

Where σ is standard deviation of income and \bar{y} is a mean income.

The σ -convergence takes place when the dispersion of real per capita income declines over time. The β -convergence means that less developed countries (with lower GDP per capita) tend to grow faster than more developed countries (with higher GDP per capita). We analyze β -convergence among EU-28 economies using ordinary least squares regression based on panel data (yearly GDP growth rates vs. GDP levels from the preceding year) as well as cross-sectional data (average annual GDP growth rates vs. GDP levels from the beginning of the period).

In the case of panel data, we use the specification from Vojinovic and Prochniak (2009):

$$\log y_{i,t} - \log y_{i,t-1} = \alpha + \beta \log y_{i,t-1} + \varepsilon_{i,t}, \quad (3)$$

where $\log y_{i,t}$ is the natural logarithm of GDP per capita at PPP in country i at time t , α is a constant and ε is the error term.

In the case of the cross-sectional data, we estimate regression equations of the form:

$$\log \sqrt[T]{\prod_{t=0}^T \frac{y_t}{y_{t-1}}} \times 100 = \alpha + \beta \log y_{i_0}, \quad (4)$$

where $\log y_0$ is the natural logarithm of GDP per capita at PPP in country i in the first year of the period, and T indicates the length of the period. Convergence occurs when $\beta < 0$, indicating that higher initial income level negatively affects the consequent growth rate. We analyze β -convergence for 2004-2014. Although different, the two concepts of convergence are related (Sala-i-Martin, 1996).

3. Results and Discussion

We need to identify the main statistical characteristics of GDP per capita at PPP levels in the EU countries, expressed in US dollars. The Table 1 shows main statistical indicators for 1995-2014 and includes the evolution of Gini index as well as σ -convergence coefficients, calculated as coefficients of variation for the respective data. The calculation is performed in two versions, when calculation includes Luxemburg (EU-28) and when not (EU-27). Luxemburg is the wealthiest country in the EU with GDP per capita more than twice as high as the mean income, therefore its inclusion may bring misleading results.

It can be seen that the EU maximum GDP per capita of Luxemburg or Netherlands has much lower growth, although the dynamics of a spasmodic character. The EU minimum GDP per capita of Bulgaria has risen to a much higher extent both for 1995-2014 and 2004-2014. Moreover, the data show much higher GDP per capita growth rates for new members of the EU from Central and Eastern Europe. Meanwhile the detailed analysis shows that during the financial crisis of 2008-2010 there was σ -divergence due to a sharp decline of GDP per capita in poor countries of Southern and Eastern Europe (Greece, Cyprus, Lithuania and Estonia). The evolution of Gini index confirmed the decrease of inequalities in GDP per capita in the EU between years 1995-2014.

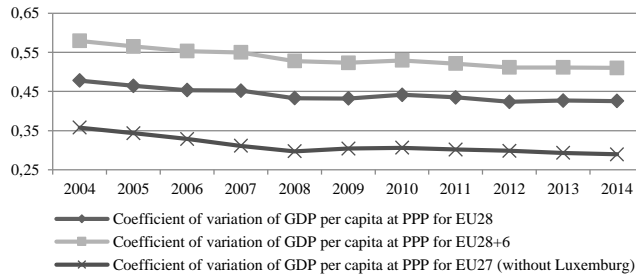
Table 1: GDP per Capita at PPP (Constant 2011 International Dollars)

Country	1995	2000	2005	2008	2010	2014
Austria	33545	38623	40954	44037	42965	43908
Belgium	32361	36901	39495	41260	40606	40823
Bulgaria	8435	8946	12531	15720	15262	16363
Croatia	12543	15644	19420	21873	19989	20033
Cyprus	26445	30005	33592	35828	33747	29673
Czech Republic	19093	21003	25571	29128	28111	28715
Denmark	36670	41693	43919	45017	42997	42758
Estonia	11069	15298	22219	25300	22199	26612
Finland	27303	34517	38700	42122	39425	38535
France	30823	34773	36393	37502	36742	37214
Germany	33850	36979	37924	41229	40665	43602
Greece	21495	25111	29821	32158	29175	24372
Hungary	15137	17766	22190	23440	22150	23735
Ireland	26002	39837	47099	47908	44684	48431
Italy	32731	36073	37130	37475	35753	33039
Latvia	8146	10991	17235	21021	17983	22076
Lithuania	9229	12023	18273	23245	20782	25813
Luxembourg	64018	80732	87590	94197	90791	91408
Malta	20720	25841	25510	27872	27906	28822
Netherlands	35006	42013	43811	47463	45843	45691
Poland	11150	14640	16987	20117	21457	23976
Portugal	21975	26147	26744	27747	27393	26184
Romania	10272	10250	14275	18558	17355	19098
Slovak Republic	12876	15242	19490	24729	24504	26471
Slovenia	18245	22494	26683	30823	28388	28153
Spain	25630	30630	33377	34657	32976	31802
Sweden	31044	36816	41184	43421	42898	44034
United Kingdom	28513	32898	36851	37751	36164	38178
SD	12171	14805	14845	15021	14641	14434
Mean	23726	28353	31963	34700	33175	33911
EU average	26928	30276	32909	35053	34031	34771
CV	0.51	0.52	0.46	0.43	0.44	0.43
CV (EU-27)	0.42	0.41	0.34	0.27	0.30	0.29
Gini	0.2686	0.2660	0.2302	0.2071	0.2120	0.2011
Max/Min	7.85	9.02	6.99	5.99	5.95	5.59
Max/Min (EU-27)	4.50	4.70	3.76	3.05	3.00	2.96
Albania	3898	5165	7046	8643	9373	10136
Macedonia, FYR	7752	8712	9460	11102	11394	12287
Serbia	7167	7740	10568	12521	12300	12716
Turkey	11530	13011	15149	16458	16634	18869
Montenegro		9896	11195	14317	13785	14534
Bosnia and Herzegovina	1793	6225	7845	9336	9170	9490
CV (EU28+6)	0.61	0.62	0.56	0.52	0.53	0.51

Source: author's calculations, <http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD>

Figure 1 presents the dynamics of σ -convergence coefficients for 2004-2014.

Figure 1: σ -convergence of GDP Per Capita at PPP in the EU and the EU-Candidates Countries

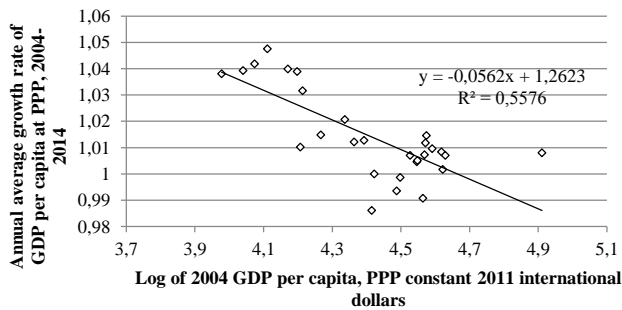


Source: author’s calculations.

Drop-down trend of the coefficient of variation reflects the presence of σ -convergence and shows a decline in inequality between the EU countries and candidate countries although the later being much poorer than the average. Thus, the dynamics of variation indicators for the EU countries taking into account candidates’ entry showed that the expansion will lead to a deterioration of development indicators, strengthening the divide within the EU. They will complement the list of recipient countries, not the donor countries, which will bring an additional burden on the overall budget. Moreover, Bulgaria and Romania have indicators similar to outside Turkey rather than the EU. The analysis of σ -convergence did not give a full picture of the development of the sample.

Figure 2 shows the relationship between the average annual growth rate of GDP per capita at PPP and the initial GDP per capita at PPP level, for 28 EU countries.

Figure 2: GDP Per Capita Growth Rate During 2004-2014 versus the 2004 GDP Per Capita Level



Source: author’s calculations.

As we can see from the figure, there is a clear negative relationship between initial GDP per capita level and the growth rate. This confirms the absolute β -convergence.

Table 2 presents results of regression equations based on cross-section and panel data. The explained variable for cross-section data is the annual average growth rate of GDP per capita whereas the explanatory variable is the GDP per capita at PPP level in 2004. For panel data

we use the annual growth rate of GDP per capita at PPP and GDP per capita at PPP in the preceding year.

Table 2: Regression Results for β -Convergence within the EU Countries, 2004-2014

Indicator	Eq. 1	Eq. 2	Eq. 3	Eq. 4	Eq. 5	Eq. 6
Const	0.122** (0.041)	0.150** (0.03)	0.094** (0.000)	0.147** (0.034)	0.062** (0.011)	0.169** (0.029)
$\log y_{i,0}$	- 0.026** (0.002)	- 0.032** (0.002)	- 0.020** (0.002)	- 0.031** (0.007)	- 0.011** (0.002)	- 0.036** (0.002)
$(\log y_{i,t} - \log y_{i,t-1})_{-1}$					0.544** (0.031)	
R-squared	0.511	0.608	0.533	0.090		0.55
Within R-squared						
Sargan test					24.213 [0.990]	
AR(1)					-3.150 [0.001]	
AR(2)					-2.261 [0.024]	
St. error	0.0050	0.0046	0.0049	0.0170	0.0102	0.0046
N	28	27	34	280	252	22

Note: * and ** denote significance at 5% and 1% levels, respectively. Heteroskedasticity-robust standard errors are used. Source: author's calculations.

Eqs. (1)-(3) assess OLS model for economic growth and the log of per capita income in 2004 for EU-28, EU-27 and EU-28 plus six candidates countries, respectively. It is worth noting that the level of GDP per capita in the initial period of time is an important factor for economic growth in the EU – the hypothesis of absolute β -convergence is confirmed. The hypothesis of the presence of β -convergence of the EU countries, taking candidates into account is also confirmed. Although, there is a decrease in the rate of convergence growth to 2%.

The results based on panel data of 28 countries and presented in Eqs. (4)-(5), yield the same conclusion as the results based on cross-sectional data. We estimated Eq. (5) using difference GMM estimation proposed by Arellano and Bover (1995), and Blundell and Bond (1998). However, p-values of first and second-order serial correlation tests indicate that the model is not adequately specified. Panel regression confirms the existence of β -convergence. Our results confirm the fact that new EU member states converged at a higher rate than the process of convergence took place in the group of old EU members that is in line with Vojinovic and Prochniak (2009).

The results of the cluster analysis allowed us to classify countries into several groups with similar features. In this context, we compared cluster analysis results for 2004 and 2014. This comparison allows us to measure whether certain changes exist in defined clusters because changes in particular clusters can be interpreted as divergence or convergence tendencies (Burian and Brčák, 2014). A theoretical background of the analysis is based on Didenko (2008) and Everitt et al. (2011).

We conducted a hierarchical cluster analysis to determine the optimal number of clusters that was equal to four. Luxembourg was a pronounced leader, which was defined in a separate

cluster, so that the country was carried out of the analysis. Figure 3 shows results of a k-means analysis to consider the cluster compounds in 2004 and 2014 in terms of GDP per capita in constant PPP prices of 2011. The first cluster can be named as the “core of the EU”, the second is the “old periphery” and the third one is the “new periphery”.

Figure 3: The Results of a K-means Cluster Analysis for 2004 and 2014

2004		2014	
the core of the EU (11)	Ireland	Ireland	the core of the EU (10)
	Sweden	Sweden	
	Netherlands	Netherlands	
	United Kingdom	United Kingdom	
	France	France	
	Finland	Finland	
	Denmark	Denmark	
	Germany	Germany	
	Belgium	Belgium	
	Austria	Austria	
	Italy	Slovenia	
the old periphery (7)	Slovenia	Italy	the old periphery (10)
	Portugal	Portugal	
	Malta	Malta	
	Spain	Spain	
	Czech Republic	Czech Republic	
	Cyprus	Cyprus	
	Greece	Lithuania	
the new periphery (9)	Lithuania	Estonia	the new periphery (7)
	Estonia	Slovak Republic	
	Slovak Republic	Greece	
	Romania	Romania	
	Poland	Poland	
	Latvia	Latvia	
	Hungary	Hungary	
	Croatia	Croatia	
	Bulgaria	Bulgaria	

Source: author’s calculations according to SPSS.

In the case of more intensive convergence, the distance among clusters should be declining over time. Generally, it is possible to claim that there is a convergence process in the EU. It should be noted that the clusters composition has not changed over the period, except for Italy and Greece, dropped from the second to the third and from the third to the fourth cluster, respectively. Lithuania, Estonia and Slovakia instead moved up from the bottom cluster to the so-called “old periphery”. Thus, for each period not only the borders have changed, but also the clusters with a decreasing tendency in cluster distances among the EU. This fact confirms the hypothesis of the presence of the club convergence. We have also excluded from the analysis six countries for which GDP per capita was above 4/3 and below 2/3 of the EU average value in 2014 (34,771 PPP international 2011 dollars): Luxembourg, Ireland, Latvia, Croatia, Romania, and Bulgaria. The results of the OLS estimation for 2004-2014 are presented in Table 2 Eq. (6). The hypothesis of the presence of absolute β -convergence in the EU countries

(28-6) was also confirmed. This finding indicates the presence of convergence clubs as the bottom stays bottom.

4. Conclusion

The main aim of this paper was to produce the analysis of the convergence process among EU-28 and EU-candidate countries. We used Gini index, coefficient of variation as well as regression and cluster analysis of economic inequalities within the EU and between the EU-28 and EU-candidate countries. The analysis pointed out mostly decreasing disparities and convergence among the EU. We can state that the EU-candidate countries converge to the EU-28 average, but the convergence rate is lower than the speed of convergence of the EU member states as whole. The hypothesis of the presence of the club convergence within the EU was also confirmed. The uneven territorial development creates problems for decision-making system within the EU, which is guided by the principles of democracy. The EU, seeking to create and instill a European identity, to prevent a possible resuscitation of the national-state conflicts, cannot allow the conflict between rich and poor countries to escalate and it's possible transfer to the institutions of decision-making in the EU.

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Green Jobs

Małgorzata Rutkowska-Podolowska¹, Adam Sulich², Nina Szczygiel³

Wrocław University of Technology^{1,2}, University of Aveiro³

Faculty of Computer Science and Management¹, Department of Infrastructure of Management², Department of Economics, Management, Industrial Engineering and Tourism³

ul. Wybrzeże Wyspiańskiego 27^{1,2}, Campus Universitário de Santiago³
Wrocław, Poland^{1,2}, Aveiro, Portugal³

e-mail: malgorzata.rutkowska@pwr.edu.pl, adam.sulich@pwr.edu.pl,
nina.szczygiel@ua.pt

Abstract

Green jobs are places of employment that contribute to preserve or restore the environment, applied in traditional sectors such as manufacturing and construction, or in new, emerging sectors such as renewable energy and energy efficiency. Green jobs are a solution for young, unemployed people, who not only can find employment but can become entrepreneurs in this sector of economy. Green jobs can also influence the European integration by programmes of international cooperation and knowledge exchange which aim to reduce youth unemployment and protect the environment. One of the examples of such programs is the Danube-Oder-Elbe (DOE) water corridor project. The article analyses the current situation of young people in the green jobs sector of labour markets in Poland, Austria, Czech Republic and Germany. The aim of article is to discuss the potential future of youth unemployment in the European integration context in these four chosen countries after having concluded the DOE water corridor project.

Keywords: *Green Places of Employment, Sustainable Development, Water Corridor Project, Youth Unemployment*

JEL Classification: *F22, J42, N34*

1. Introduction

The European integration, as other processes of integration, needs a real action which enhance the whole society's involvement in international cooperation in transport and mobility fields. An example of such actions is development of inland waterways as a part of European policy (EC [online], 2016a) and formation of green jobs related to the water infrastructure facilities used in transportation. A good transport infrastructure is vital to maintaining competitiveness of the European Union (EU). This infrastructure allows also to focus on the European integration by developing green and integrated transport (EC [online], 2016a). The European Commission formed two key programmes, Connecting Europe Facility (CEF) and Horizon 2020, to promote economic growth, jobs creation and competitiveness through targeted infrastructure investments at the European level. Although Horizon 2020 is the EU main programme for the research area, it implements the Innovation Union, the Europe 2020 flagship initiative aimed at securing Europe global competitiveness (i.e. smart green and integrated transport) (EC [online], 2016a).

The Czech Republic is the only country in all 28 states of the European Union which is neither directly nor by the good quality inland waterway connected to the sea. It is assumed that product prices comprising 40% to 60% of the transportation cost indicate an increasing fall into economic isolation within the EU (DOE [online], 2016) and building a water corridor would have a positive impact to social change and employment structure in traditional economy sectors of two most endangered by unemployment regions of Poland and the Czech Republic. Naturally, an expected impact of related to the water corridor created green jobs is large, as well as to all sectors of the economy of the Czech Republic and countries actively involved in development of the waterway communication.

One of the most important projects for the Czech Republic (and its neighbour countries, Poland and Austria) is the Danube-Oder-Elbe (DOE) water corridor project. Other countries, such as Germany, Slovakia and Ukraine, are also interested in the project participation (DOE [online], 2016). Although plans to construct a DOE canal are hundreds of years old, they have not yet been successful (Janak et al. [online], 2003). Therefore, a project conclusion seems very beneficial for economies of involved countries and the European context as a whole because the DOE water corridor is a missing link of the interconnected network of European waterways (Stasko, 1999). The corridor is a multi-functional water supply scheme of major importance for the Czech Republic and Europe. It is also an excellent example of possible green jobs creation in project leading directly to stronger European integration and fulfilling the ideas of freedom of movement, trade and brotherhood without borders – the most important values of the European integration. The project has already been included in the EU plans for the network of transport corridors for Europe, the Trans-European Network for Transport (TEN-T), which foresees the canal linking two waterways: the E20, from Germany to Austria (HamburgMagdeburg-Pardubice-PřerovDanube), and the E30, from Poland to Austria (SzczecinWrocław-Kozle-Ostrava-Přerov-Danube) (EC [online], 2016a).

The aim of this paper is to analyse the impact of green jobs creation related to the DOE project. The essence of green job has been presented in the first part of the paper. Further, the project of the water corridor and its benefits have been discussed. In the next part of the study, young people situation in the selected countries, Czech Republic, Austria and Poland (as the main participants of project) and Germany (Pys, 2013) have been discussed in the context of the DOE water corridor project.

The study is of descriptive nature. It was based on the analysis of available literature and databases from official sources of the EU countries and public statistics from the Eurostat comprising timespan of 2010-2014.

2. Definition of Green Jobs

Green activities are key actions of policy makers in countries and regions across the world that can be created in almost all economy sectors which help in sustainable development leading to *greening the economy* and are an important tool in counteraction to unemployment. From several definitions of green jobs available in literature, Table 1 presents some of them. A progress toward goals defined by green jobs can be measured by a wide range of indicators, such as better integration, poverty reduction or reduction in CO₂ emission.

Table 1: A Selection of Definitions of Green Jobs

Source	Definition
Eurostat: The Eurostat methodology for the Environmental Goods and Services Sector (EGSS) does not define – ‘green jobs’, but measures employment in the EGSS	The EGSS is a heterogeneous set of producers of technologies, goods and services that prevent or minimise pollution and minimise the use of natural resources. Thus, environmental activities are divided into two broad segments: environmental protection and resource management. Only those technologies, goods and services are considered that have an environmental protection or resources management purpose as their prime production objective (i.e. ‘environmental purpose’), hence excluding goods and services that are not provided mainly for environmental purposes.
International Trade Union Confederation (ITUC)	A green jobs reduces environmental impacts of enterprises and economic sectors, while providing decent working and living conditions to all those involved in production and ensuring workers’ and labour rights are respected
United Nations Environment Programme, UNEP	Green jobs are “work in agricultural, manufacturing, research and development R&D), administrative, and service activities that contribute substantially to preserving or restoring environmental quality. Specifically, but non-exclusively, this includes jobs that help to protect ecosystems and biodiversity; reduce energy, material and water consumption through high-efficiency strategies; decarbonise the economy and minimize or altogether avoid the generation of all forms of waste and pollution”.
International Labour Office, ILO	Green 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.

Sources: (UNEP [online], 2008; ILO, 2008; ITUC [online], 2010, IDEA, 2010; Eurostat [online], 2015b)

Green jobs should be understood as decent jobs that contribute to preserve or restore the environment, both in traditional sectors such as manufacturing and construction and new, emerging sectors such as renewable energy and energy efficiency (ILO, 2008). A green job is any job or self-employment that *genuinely* contributes to a more sustainable world. At the enterprise level, green jobs can produce goods or provide services that benefit the environment, for example green buildings or clean transportation. For persons beginning the professional career, the meaning and potential of green places for employment is very high.

Green jobs idea is an evolving concept and therefore it is difficult to give a strict definition. This dynamic concept is based on the fact that each new product, service or technology might evolve in a more efficient replacement in terms of energy and material consumption, emission and other particle pollution emissions. Therefore, it is fairly complicated to define with clear boundaries what can be considered as a green sector, an eco-industry or green jobs (Hess, 2012). The green jobs approach in the economy offers enormous opportunities for job creation (Hess, 2012), many of which are already part of the European green economy. These opportunities range from sectors traditionally associated to the environmental content, such a renewable energies or recycling, to other activities that represent emerging sectors in green jobs, such as sustainable mobility, and to activities in sectors which have a potential for conversion into sustainable activities. A possible job creation allows not only for solving young people unemployment problem, but also for focusing more on the environment protection issues. These common actions, expressed in the Danube-Oder-Elbe (DOE) water corridor project, can lead to better European integration. Moreover, green economies and growth are associated to a promising shift from environmental protection into original and innovative resource-saving technologies (Jänicke, 2012).

The number of green jobs is constantly rising in the EU. According to the Eurostat estimates, employment in the EU-28 environmental economy raised from 2.9 million full-time equivalents in 2000 to 4.3 million full-time equivalents in 2012. The environmental economy in the EU-28 generated EUR 671 billion with EUR 271 billion of value added in 2012 (Eurostat [online], 2015a). With the exception of 2006, between 2000 and 2012 the environmental economy consistently outperformed the overall economy in terms of the employment growth. Therefore, green jobs create a desirable capacity to involve young people in the labour market. With its multidimensional impact to the economy and employment enhancement capacity the DOE project has an interesting potential for the green society development in the context of the European integration.

3. The Danube-Oder-Elbe (DOE) Water Corridor Project

The aim of the DOE water corridor project is to create a channel connecting three main rivers of the Danube-Oder-Elbe region with three neighbour countries. The DOE water corridor uses extraordinary advantages of the Czech Republic territory, with the lowest point of the European watershed between the Danube and the Oder rivers (the Moravian Gate) (DOE [online], 2016a). Although the project would be mainly ongoing in the Czech Republic it can influence the economy of all regions. In the European integration context this project is important because it builds missing cross-border connections, promotes modal integration and interoperability, furthermore, it offers green transport solutions (EC [online], 2016b). The DOE project is interesting by connecting through the water corridor two most populated and industrialised regions of Poland and Czech Republic, Silesia and the Moravian-Silesian region, with the Baltic Sea.

The project of the Danube-Oder-Elbe water corridor is seen as an important anti-crisis long-term investment giving considerable contribution to the employment rise both in the construction and operational phase (DOE [online], 2016a). As specified, it may relate directly to jobs such as (DOE [online], 2016a):

- providing basic documentation arising from the urgent need for processing documents;
- research and development in particular geological and hydro geological surveys, environmental and biological research and to ensure comparable data on biodiversity

- (as a basis for future impact assessment on the environment and nature), hydro technical research, urban studies, etc.;
- jobs with investors and screening to ensure their implementation;
 - jobs in construction to the relevant oriented construction companies, also jobs related with flood protection or water balance;
 - jobs resulting from the multiplier effect. These have the greatest extent as known from the experience with the construction of highways. They include jobs in construction companies subcontractors, suppliers of machines, energy, water, building materials and other needs, providers of transport and other services, etc.;
 - jobs from the operationalisation of the DOE water corridor which occur in a number of sectors (agriculture, industry and tourism) in the territory adjacent to the DOE water corridor.

The multipurpose Danube-Oder-Elbe water corridor offers several advantages and opportunities. It combines advantages such as providing water balance and stability of the territory - offsetting potential impacts of the global climate change, flood protection, water management regimes for overcome long-term drought, environmental protection - restoration of wet habitat, increase of biodiversity, use of renewable energy, increase of the energy stability system, green transport, diversification of supply of strategic materials and thus the increase of energy and transport security. It promises substantial benefits for business and industry in the nearby of the waterway. Having reached its end, the project shall help generate a wide range of benefits that meaningfully contribute to economic development and improve quality of life in the neighbourhood of the DOE corridor (DOE [online], 2016a).

The positive impact to employment related to the DOE project has not been a subject of a considerable scientific interest, focusing in this regard mainly on the collapse of inland navigation and degradation of the waterway network in Central Europe (Kulczyk et al., 2013).

Undoubtedly, construction works for the DOE canal create a number of temporary jobs in the region. However, it is disputable whether the DOE would lead to sustainable job opportunities in the long-term (Janak et al. [online], 2003) bearing in mind the current overall depression in inland navigation throughout Europe (Kulczyk et al., 2013). Therefore, a proper cost-benefit analysis, including assessment of the number of long-term jobs created in relation to public money spent is an absolute requirement. Furthermore, a still potential DOE route, due to its consideration by regional spatial development plans of the Czech Republic, hampers other investments and overall development of some of regions along the channel. This situation impacts surrounding villages and towns and does not foster job creation in the affected regions (Janak et al. [online], 2003). This is a serious issue because development of the wider neighbourhood of the potential DOE corridor is determined by these development limits.

4. Green Jobs as a Solution of the Young People Unemployment Problem

An approach to involve young people in green jobs sector and enhance economy growth based on green activities is innovative for countries facing new challenges on their labour markets, such as extremely high young people unemployment. There is an ongoing programme which uses green jobs in Tunisia (UNOPS [online], 2015). This initiative aims to give young, unemployed graduates access to jobs while simultaneously developing green growth in the country (UNOPS [online], 2015). This innovative project can be helpful also in Europe experiencing high numbers of young graduates and high rates of youth unemployment (Eurostat [online], 2016a).

Unemployment is still a serious problem for the economies in the region. In 2014, Poland faced the highest unemployment rate of 9.0% among the countries under consideration (Austria - 5.6%, Germany - 5.0%, Czech Republic - 6.1%) (Eurostat [online], 2016b) (Table 2). A situation of young people in the labour market in the EU-28 varies because of educational model and efficiency in the transition process from school to work. Some authors (Fic, 2015) argue also that the reason of young people unemployment is the competency gap. As pointed out by Eurostat ([online], 2012), all EU-28 countries can be divided into five groups from which the leading one is characterised by high levels of young people attendance both in employment and in education but almost no unemployment among young people in education. Germany and Austria are positioned in this group (Eurostat, 2012). They both have established internship systems or vocational training in the secondary education, what can partially explain the high number of young people who study and work at the same time (Eurostat, 2012; Bobakova and Chylkova, 2014; Fic, 2015). Cooperation between countries which use combined work-education model can influence countries with higher unemployment rate among youth.

Table 2: Youth (Age 15-24) Unemployment among Chosen Countries in 2010-2014 (%)

	2010	2011	2012	2013	2014
Austria	9,2	8,9	9,4	9,6	10,3
Germany	9,8	8,5	8,0	7,8	7,7
Czech Republic	18,4	18,0	19,4	18,9	15,8
Poland	23,7	25,8	26,5	27,3	23,9

Source: Authors' own calculations based on Eurostat ([online], 2016c)

In Austria, one of the participants of the DOE project, youth unemployment is growing (Table 2). Although the country is referred as an example of a model education (together with Germany) supporting the transition to the labour market, it is still endangered by youth unemployment problem. The DOE water corridor can be an interesting solution for future challenges in the regional labour market.

Table 3 compares unemployment rates of two most involved regions (Silesia and the Moravian-Silesian region) in the DOE project. The unemployment in the Silesia region is lower than the average unemployment rate for Poland in contrary to the Moravian-Silesian region of which the unemployment rate since 2010 has been remaining higher than in the whole Czech Republic (Eurostat [online], 2016c). For these two regions (and countries), the highest unemployment was recorded in 2013, and it was related to economic crisis and progressive isolation of the regions, especially the Moravian-Silesian, and a collapse of heavy industry in the regions.

Table 3: Unemployment Rate for Age (25-65) in Chosen Regions in 2010-2014 (%)

	2010	2011	2012	2013	2014
Czech Republic	6,4	5,8	6,0	6,1	5,4
Moravian-Silesian region	10,2	9,3	9,5	9,9	8,6
Poland	8,0	8,0	8,5	8,8	7,6
Silesia	9,2	9,2	9,4	9,7	8,6

Source: Authors' own calculations based on Eurostat ([online], 2016c)

Green jobs formed during the DOE project realisation can positively influence to whole society. New job places can help in integration of not only two endangered by high

unemployment regions. Integration caused by realisation of the DOE project can reach more dimensions because of know-how and experience exchange with the countries with lowest unemployment rates involved in project.

5. Conclusion

The article points out the economic importance of green jobs as a relevant category in the economic practice presenting a review of green jobs definitions. These are necessary for understanding the rationale behind the Danube-Oder-Elbe water corridor project from the sustainable development and labour market perspective.

Nowadays, the transfer of economic resources toward environment-friendly activities is an essential and skilful combination of the economic, social and environmental policies. Greening the modern economy is vital to increase decent employment opportunities for young people. This approach can enhance the use of effective resources and labour productivity, and can support poverty reduction and social inclusion.

A successful conclusion of the DOE project would be a great milestone in the European integration which lays on free trade and free movement of capital and labour, based on development of communication infrastructure that ensures mobility and sustainable development.

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Bancassurance as a Source of Financing Eco-investments: The Polish Case within the European Context

Małgorzata Rutkowska-Podolowska¹, Nina Szczygiel²

Wrocław University of Technology¹, University of Aveiro²

Faculty of Computer Science and Management¹, Department of Infrastructure of Management¹, Department of Economics, Management², Industrial Engineering and Tourism²

Wybrzeże Wyspiańskiego 27¹, Campus Universitário de Santiago 3810-193 Aveiro²
Wrocław, Poland¹, Aveiro, Portugal²

e-mail: malgorzata.rutkowska@pwr.edu.pl, nina.szczygiel@ua.pt

Abstract

From the time the human activity brought the degradation of the environment to the limit, the need of its preservation or restoration has become unquestionable. On the other hand, investments are critical as a driving force for the economy and investing in the environment has been seen as a way to stimulate economic growth and employment while promoting sustainability. This paper presents bancassurance as one of the sources of financing eco-investments which have been increasingly gaining the interest of policy makers, and discusses its utility for concrete bancassurance products with the perspectives for the evolution of the bancassurance channel in the European context bearing in mind the advances in the functioning of financial institutions resulting from the European integration process.

Keywords: Bancassurance, Bancassurance Models, Eco-investments, European Union, Poland

JEL Classification: G2, Q01, Q55

1. Introduction

Eco-investments are commitment of capital in companies from 'green' economy sectors such as clean energy, water management or recycling, and as any project raises a question of its insurance. Insurance protects the bank and the client, from eventual losses resulting from unpaid loans and an event covered by insurance, respectively. An increased meaning is hence given to a complete product offered to a customer and an example of such product is bancassurance.

Bancassurance constitutes a group of financial services that combine features of traditional products offered individually by banks and insurance companies. The accelerated competition has reduced margins obliging banks to seek other sources of revenue. Taking advantage of the substitutable character of their products, insurers use bank sales channels to sell their products to the banks client base. Thus, cooperation between banks and insurance companies means providing banking and insurance products to the clients of both (BikBrokers [online], 2006) resulting in mixed bank-insurance products (Śliperski, 2002), but, importantly, has a potential of spreading the customer portfolio through an increasing collaborative environment.

The potential underlying bancassurance has been argued in theory supported by market and practice in itself, however, scientific studies on bancassurance have been to a larger extent

more of a descriptive than an empirical nature (Chen et al., 2009). Science lacks empirical studies challenging aspects of costs and revenues distribution and synergies, studies bringing actual evidence capable to confirm bancassurance efficiency.

Together with the movement around environmental concerns, the importance of the involvement of banks in the financing investments related to environment appears clear. As the central actors in the financial sector, commercial banks can play a key role in financing eco-investments and supporting the construction of the future green economy (Khaliun, 2015). A greater engagement of commercial banks in financing eco-investments has been observed especially after the accession of the Central and Eastern European countries to the European Union (EU). The long-term perspective onto European integration has simplified the procedures of the workflow and capital mobility facilitating the business climate.

In fact, the European structures provide specifically intended means for environmental protection of which the Phare (initially PHARE) program was the largest supporting instrument in the pre-accession period, refined later into more specific instruments with ISPA (Instrument for Structural Policies for Pre-Accession) prioritizing transportation and environment. In its understanding, the countries should provide each other support, especially in terms of cross-border water protection and water management. Achieving positive results in environmental protection is largely dependent on effective, integrated funding system.

2. Problem Formulation and Methodology

The European Union interest in the efficient functioning of the financial system bases on promoting a stable, secure and smooth transmission of the monetary policy throughout the euro area, and well-functioning payment structures with financial integration considered one of key phases of the EU integration strategy. One of relevant aspects toward financial integration was establishing the banking union and implementing non-standard monetary policy actions (European Central Bank [online], 2015). The markets of financial products are distinctive as highly influenced by country-specific settings deriving from legal and tax conditions, business climate and consumer behavior patterns. In this perspective, we intended to study the application of a specific financial instrument, engaging institutions from the banking and the insurance sector, for financing environmental investments.

We initiated the work with an extensive literature review of the bancassurance concept and its development seeking existing models and differences in their adoption focusing in particular on financing eco-investments. We searched international and national publications, databases, official reports and working papers. The paper has a form of a narrative review with the first part of discussion focused on bancassurance typologies existing in literature and applied in the European context also for financing environmental investments.

In the second step, we conducted an exhaustive Polish bancassurance market study with an objective to get a general vision of its dimension and diversity. Thus, the second part of the paper focuses specifically on the Polish market and its particularity, presenting the findings of the current situation of the bancassurance market for eco-investments we found the most remarkable and supported by existing norms.

3. Problem Solution

Bancassurance products, substitutable and complementary at the same time, may bring advantages for banks and insurance companies as well as for other participants of the financial market (Rutkowska, 2009). Głodek (2006) indicates that the bank benefits for example from

additional non-interest income, reduction of capital requirements associated with the business risk, and revenue from increased customer satisfaction and loyalty, and for the insurance company the benefits include reduction of the cost of product distribution through the use of the extensive network of bank branches, revenue growth by reaching new customers, diversification of product range and capacity to offer additional products which would not make sense without the cooperation with the bank, a higher public trust through cooperation with a well-established bank. For a customer, bancassurance constitutes an opportunity of receiving a comprehensive service at a reduced price (Rutkowska, 2009).

Another option involves the 'all finance' offer with a range of different, integrated and personalized products offered by financial conglomerates. The EU specifies a conglomerate concept in the Directive 87/2002/CE according to the significant involvement in both, banking and insurance activity through the total assets or capital requirements as a reference point (Sorina, 2012). In light of this act, institutions offering bancassurance products are under specific attention and the European regulations.

3.1 The European Models of Bancassurance

No officially recognized typology exists as the one the best reflecting characteristics of the widespread models. However, a number of classifications has been stabilizing, despite appearance and disappearance of some. Nowadays, several forms of bancassurance can be observed, considering solely Europe, and those can be divided into three groups, as identified in literature (Hoschka, 1994; Van der Berghe and Verweire, 2001; Staikouras, 2006).

Hence, it is assumed that bancassurance has developed on basis of three main models or that existing models, under different designations, take several features from the following typology: (a) a simple commercial agreement between the bank and the insurance company defining the conditions of the final product distribution; (b) a joint venture between the bank and the insurer supported by the agreement of the exclusive product distribution, with a potential of reaching synergy effects concerning scope economies, know-how and cross-selling as long as such interest is shared by both partners; and (c) the fully integrated model based on the assumption that the bank completely owns the insurance company using it to create the bancassurance product whenever and however it desires. The bank either buys already existing insurance company or eventually creates a new subsidiary entirely dedicated in its activity to the insurance purposes.

European countries have implemented two predominant models of bancassurance, adopting them to the country-setting, conditions and legislation. The southern model has been adopted mainly in Portugal, Spain, Italy, Belgium and France and is characterized by a close cooperation of the bank and the insurance company in the development of specific products (Chevalier et al., 2005). A key factor in this model is a strong position of the banking sector together with a well-developed bank branches network throughout the country. A share of banks in the insurance distribution is high (from around 60% in France and Italy) and very high (around 80% in Portugal and Spain). Permanent capital ties between banks and insurers are common. The banking institution usually owns the insurer or a joint-venture is created. Any of these solutions considerably lowers the operational and administrative costs. One of the most relevant determinants for the development of the southern model were favorable macro, especially legal and fiscal, conditions. The regulatory factors can well explain differences in the implementation of bancassurance practices among countries (Chevalier et al., 2005; Ghimire, 2013).

Another model is characteristic for Scandinavia, Germany, the UK and the Netherlands. Relationship capital of the bank and the insurance company are present much less frequently comparing to the southern model, with the participation of banks in insurance sales of around 20%. On the other hand, distribution agreements between the parties are common. Insurance products are sold through agents or specialized consultants cooperating with bank branches, to which customers interested in buying insurance are directed, in contrary to the southern model solution which allows purchasing the insurance product directly from the banking institution.

3.2 Implementation of the Bancassurance Products in the European Markets

The choice of the model is determined by several factors. A very interesting result from an empirical study is of Chen and colleagues (2009) and comprised 71 banks from 28 developed and developing countries, which were engaged in bancassurance activity. Its findings indicate that size of the national bank industry, inflation rate, size of the company, reduction in company risk, reduction in company costs, increase of revenues, and level of financial deregulation within the country are relevant constituents of the bancassurance system influencing its direction. Fiordelisi and Ricci (2011) point out aspects such as economic factors, internal institutional factors, type of business or objectives of the company. Teunissen (2008) goes further and argues that the model to be chosen is also related with aspects external to the proper entity that is, predominantly, socio-economic, environmental and cultural, the market infrastructure or customer preferences. With all these, the final voice belongs to the company. That said, a variety of models of bancassurance may exist within a country while one of them will be predominant as the most preferable (Teunissen, 2008). The typology applied by the involved entities will generally depend on the country and its specificity.

The most developed insurance market in Europe exists in France, where the existing banking-insurance networks have around 50% share in the European bancassurance market and 50% of the gross premium is taken by five largest banking insurance companies. The French bancassurance offer is attractive due to simplicity of products, mainly of its pension and saving character. Products from the bancassurance offer reach around 15-20% of bank customers and are also directed to more wealthy customers for whom special offers of assets management services combined with insurance are developed (Śliperski, 2002). Bancassurance distribution channel share for life insurance products reaches 63% and for non-life insurance products 12% (European Insurance in Figures [online], 2014).

Cooperation between banks and insurance companies on the German financial services market has a long tradition. Most banks distribute insurance policies of the insurance companies with which have long-term relationships. Individual branches and subsidiaries of insurance companies act as distributors of both, their own and bank financial products. Bancassurance distribution channel share for life insurance products reaches 18% and for non-life insurance products 6.9% (European Insurance in Figures [online], 2014).

A well-rooted bancassurance system in the Netherlands led two from three leading Dutch banks, i.e. ING and Rabobank carry on insurance activity. ING decided to establish for this purpose one administrative board for banking and insurance. Rabobank on the other hand plays a role of a central bank for a group of cooperative banks. The system has been experiencing interesting changes affecting the bancassurance market and its share in last years.

3.3 The Polish Case of Bancassurance Applied for Eco-investments

The concept of bancassurance was implemented by Bank PeKaO S.A. together with its German partner Allianz TU (Barańska, 2003). Statistics point out that the most popular bancassurance products in Poland are life and accidents insurance. These products are offered to holders of a personal account or a term deposit. Moreover, as part of credit activities, credit holder insurance – including life insurance, accidents insurance, and credit object insurance, i.e. property insurance, can be offered within bancassurance products.

The recent market research has revealed that the Polish environmental technologies market is only in its early stage of evolution (Szpor and Śniegocki, 2012), and this might be particularly caused by educational and financial barriers. On the other hand, there is an increasing institutional support for eco-innovation, in which the sector of renewable energy sources is considered to have the biggest potential as it is growing the most rapidly. The challenge that needs to be acknowledged is the common belief that, while wind, solar, water and geothermal sources are the most friendly to the environment, only the wealthiest countries can afford them (Szewrański, 2012). Planning and carrying on environmental investments and business activities in an eco-friendly way is means to sustainable development (Fura, 2010).

Bancassurance is advantageous for entrepreneurs who intend to construct or purchase a property. Within several typologies of eco-investments, direct investments assume construction of new facilities and equipment within a broader infrastructure, while indirect investments focus on technological modernization of production equipment, machines, and processes. They are not mutually exclusive. A construction or purchase of a building is usually financed through a mortgage. Instead of charging a commission of granted mortgage, banks often propose insurance, whether from loss of property value, loss of employment, fire, or professional liability. Such solution is in fact beneficial for the bank as part of credit risk is shifted onto the insurer. For the client, the benefit is that insured mortgage enables a faster start-up while in a regular situation financial resources for the construction or purchase might be blocked until the official validation of mortgage. The business sector, while still a long way from approaching some other European partners, can count on formal, institutional support, projects and programs under implementation, such as the National Action Plan, the GreenEvo Green Technology Accelerator Project introduced by the Ministry of Environment and the Operational Programs, strategic programs of the National Center for Research and Development, among others (The Ministry of Environment, 2007; Szpor and Śniegocki, 2012), opening the door for the Polish bancassurance use for environmental purposes.

For particulars, bancassurance products related to eco-investments are uncommon. Our results indicate the BOŚ EKOsistem product offered by Bank Ochrony Środowiska (BOŚ). According to the bank mission and strategy, BOŚ is actively engaged in financing environmental investment projects. The amount of pro-ecological loans has been steadily increasing accounting for 25.6% of the total of bank loans balance in 2014 comparing with 23.1% in 2013. Those loans were predominantly directed to a corporate customer (89.4% of the balance of pro-ecological loans) (BOŚ [online], 2015). The eco-investments in more than 80% support projects related with energy efficiency and renewable energy sources (Gazeta Ubezpieczeniowa [online], 2014).

Moving toward the client, the BOŚ EKOsistem was launched in 2014 as first product directed to an individual client. The target market of the product are households interested in investments in house renewable energy sources installations. The product includes installation insurance and house insurance, and covers an eventual decrease of assumed efficiency of

photovoltaic installation (Gazeta Ubezpieczeniowa [online], 2014). The system has the ability to remotely control and continuously monitor the savings or potential profits using mobile device with the Android operating system.

In practical terms, the BOŚ EKOsystem constitutes a product concerned with the environment and supporting acquisition of a household while investing in renewable energy sources. The latter in this case includes equipping the house in renewable energy installation with an objective to minimize costs of heating and warming up. The experts estimate the increase of GDP as a direct effect of 0.4% with an annual decrease of production costs of the ‘green’ energy’ of about PLN 2 milliards⁹⁹ (BOŚ EKOsystem [online], 2014).

4. Conclusion

The origins of the European environmental policy reach 1972 and the first discussion of the ecologic crisis. The formal consideration of the environmental protection as one of the objectives of the European Economic Community (EEC) took place in 1987 guaranteeing its position in further European policies.

Bancassurance as a complete product is beneficial to a customer and is becoming increasingly important as means for development of environmental investments. In its beginning, the success of bancassurance was based on gaining the customer trust. Relatively few advanced products were sold in order to create a positive image of a company and used as a basis for further and more profitable business relations. In its global aspect, it seems bancassurance is gradually putting down what the traditional definitions of a bank and an insurer product specified. Cooperation of the bank with the insurance company allows from one hand for providing the optimal insurance for a given product, and for enabling the insurance companies to distribute insurance policies within the banking network, on the other. Given an increasing competition in the financial market deriving partially from the deregulation and liberalization of the law, decreasing margins, which have been the traditional source of revenue for banks, and changing patterns of the customer behavior, who turn price-sensitive, more interested in market opportunities, aware of the market situation and demanding higher service quality, bancassurance services have evolved in order to meet market requirements.

Bancassurance has been so far implemented in a number of European countries, under different forms and with different operational patterns, with a potential of further business recognition. The differences of the banking and insurance markets cooperation between Poland and Western European countries have to do with the time discrepancy. The market development in Poland dates in 1990s while other European countries initiated that process around four decades earlier. The beginning of the 1990s in Poland was marked by profound structural changes in the national economy and the financial market started experiencing intense increase of intra-sector competition accompanied by changing customer preferences obliging a response through an extended range of products and services including combined, integrated products.

The implementation of the BOŚ EKOsystem product in Poland has revolutionized the bancassurance market of eco-investments. It is expected to bring significant long-term savings to the State budget, ecological benefits and result in the GDP growth. A proper preparation of both, banks and insurers to cooperate within bancassurance activity can bring tangible benefits

⁹⁹ Equivalent to EUR 465 749 618.62 as for the official exchange rate from 13 March 2016.

to both sides, as well as for their customers. That is the reason why it is important to develop cooperation in the field of bancassurance within the framework of the European integration.

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Comparison of the V4 Economies According to International Competitiveness Indices and the Basic Pillars of the Knowledge Economy

Viera Ružeková, Elena Kašťáková, Matúš Žatko

University of Economics in Bratislava

Faculty of Commerce, Department of International Trade

Dolnozemska cesta 1, 852 35

Bratislava, Slovakia

e-mail: ruzekova@euba.sk, elena.kastakova@euba.sk, zatko.matus@gmail.com

Abstract

Globalization of the world economy is putting increasingly stronger pressure on economic entities operating in it. Pressure to increase competitiveness is growing not only in terms of the corporate level, but more and more strongly from the point of view of macroeconomic and the government administration, which has a direct impact on setting up an efficient and competitive business environment. Simultaneously, during recent decades a phenomenon of intensifying and accelerating of R&D knowledge and technological innovations has come into this issue as a basic determinant of quality source of competitive advantage. This submission responds to such development and with the help of international multi-criteria indices, tries to assess the current state of competitiveness of the countries of the Visegrad Group, which on their way to build a market economy and integrate into the EU structures had a similar starting position. To compare their competitiveness, the multi-criteria indexes (GCI, WCI, DBI) were used in this paper.

Keywords: *Competitiveness, Comparative Advantages, Visegrad Goup, Multi-criteria Indices of Competitiveness*

JEL Classification: *F14, F19, F23, F29, F43*

1. Introduction

Turbulent changes in the development of the global economy cause that the concept of competitiveness comes to the fore increasingly not only in the economic literature but also into the academic field as well. It can be pointed out that since the times of Adam Smith and D. Ricardo, the renaissance of this term, of course, under the new conditions and a broader context, has begun during recent decades. In early 80s of the last century, competitiveness was perceived from the level of companies. However, changing conditions of the world economy, associated with extensive liberalization of markets and the ubiquitous globalization meant that already in the late 80s when it came to vigorous movement of perception of competitiveness from the enterprise level through supra-departmental up to the national level. These facts made it necessary to modify the concept of "competitiveness" itself and look at its assessment. Recently, the concept of competitiveness assessment at the whole-economy level (from the macroeconomic point of view) has increasingly been getting to the fore. It must be understood as a complex phenomenon involving features of micro and macroeconomics (Williams, Balaz, Zajaz, 1998).

In consideration of the diversity in the perception of competitiveness, the authors of the submitted paper assess the competitiveness of the Visegrad countries (Poland, the Czech Republic, the Slovak Republic and Hungary) which on the way to build a market economy and integration into the EU structures had a similar starting position. Until the late 90s of the 20th century, these countries had been under a strong influence and control of the Soviet Union, with a centrally planned economy significantly influencing not only their political, but also economic direction. Political changes in these countries have generated broad economic changes whereby their main goal was to integrate themselves into the EU single market, which was successfully completed by the year 2004. However, this was only beginning of their journey. Globalization of the world economy, accompanied by massive trade liberalization generates an enormous pressure on increasing the competitiveness of individual economies in the world. They are especially those ones with quite a small domestic market and their progress being primarily drawn by external demand, which requires successful participation in the international division of labour. That is an unquestionable axiom even in the Visegrad countries.

2. Problem Formulation and Methodology

The aim of this submission is to examine and compare the current state of competitiveness of the Visegrad Four countries through multi-criteria indicators processed by supranational organizations.

To achieve the objective, used were several theoretical methods in the form of general methods (abstraction, analysis, synthesis, deduction and induction), empirical methods (GCI, WCI, DB) and comparison for confrontation of the results achieved. To streamline the data on foreign trade, special methods such as mathematical, descriptive analysis and graphical representation were used.

In general, one or more factorial indicators can be applied for the assessment of competitiveness. Following Table 1 shows a basic review of indicators.

Table 1: Indicators for Evaluation of Economy Competitiveness

Multi-factorial indicators	One-factorial indicators
Global competitiveness index (GCI)	Export development
World competitiveness index (WCI)	The development pace of export growth
Doing business index (DBI)	Share on national export (commodity structure of

Source: Processed by the authors

For the purposes of our submission, we focused on the assessment of the competitiveness indicators by multi-factorial indicators including standard and unified set criteria of international institutions. By doing this, we are going to assess the competitiveness of individual national economies of the Visegrad Four.

For a relatively long time, it seemed that the economic theory had "an explicit view" on the importance of competitiveness and its impact on international business. The matter, in which individual theoretical schools ceased to agree on, was a distinction of its level and achieved parameters. Until the late 80s of the 20th century, many economists considered competitiveness as a phenomenon that had justification only at the level of companies, particularly arguing with reducing of the state's role in the globalization process in the world economy (Porter, 1990; Reich, 1990; Krugman, 1994) (Outrata, 2009). Such a view, however,

had increasingly become a subject to criticism of economists who argued that such a measure absents some alternative frame that would make it possible to confront the competitiveness of companies with a macroeconomic performance of competitiveness (Hatzichronoglou, 1996), i.e. at the level of economy as a whole, at the *national level*. The national level makes it possible to identify the level of competitiveness in the international comparison, providing detailed insight into the structure of the competitiveness of an economy and its key determinants. Competitiveness of companies normally does not correspond with the one that is assessed at the level of an economy as a whole (Balaz, Hamar Sopková, 2015).

The concept of competitiveness is the best definable at the level of a company and simplified, we could say that *"the main objective of the companies in terms of competitiveness is to "survive" in the arena of global competition. "Survive" basically means to sell their products and services at domestic and foreign markets and make profit or gain a certain adequate market position."* Massive internationalization of the economy at the global level has also brought a different view on the definition of competitiveness, bringing an international dimension. For example, an important economist in the field of competitiveness, S. Garelli (2007) states that competition is *"the achievement of such an economic level of a country, at which can, under the conditions of free and fair competition, produce goods and services that satisfy the preferences of international markets while simultaneously ensures and extends real income of its citizens."* World Economic Forum (WEF) briefly states that it is *"a country's ability to achieve high and sustainable GDP p.c growth rate"* (Balaz, Hamar Sopková, 2015). There are many other definitions while none of them is ambiguous. That's because each of them assesses the competitiveness through the prism of several factors that have a stronger or weaker influence on single definitions. In our submission we examine this issue at the national economic level, because the analyses processed in this manner have a number of recent positives (Boltho, 1996):

- Making it possible to identify the level of competitiveness of an economy in international comparison (international benchmarking);
- Providing detailed insight into the structure of the competitiveness of the economy (commodity, regional) as well as its main determinants;
- Defining the activities of the government (and cannot be realized only at the company level), which bind to market failures (i.e. creating conditions to maintain sufficient competition in the domestic market, improving institutional quality, construction of transport and communication infrastructure, targeted strategic support for the creation dynamic competitive advantages, etc.).

Several world institutions measure the competitiveness of national economies regularly. Rankings of the countries are created on their bases. Extent of objectivity of these analyzes varies in dependence on the relationship between the statistical data and information obtained on the basis of questionnaires, on the selection of observed variables and of course on the point of view. These facts therefore largely depend on the subjective observation of the creators of such issue. Then the rank of countries according to various indices is different. The highest informative values have those processed by the World Economic Forum, the World Bank, and the Swiss Institute for Management Development and the American organization The Heritage Foundation in cooperation with the Wall Street Journal.

3. Problem Solution

Economic development and direction of the Visegrad Four countries (the Czech Republic, the Slovak Republic, Hungary and Poland, further V4) had been for a long time influenced and

shaped by many common historical ties. They were part of the former socialist centrally planned economy with its narrow, although not voluntary links within the Council for Mutual Economic Assistance (CMEA) to the Soviet economy. These facts determined their political and economic development for a long time. Significant changes in the overall economic direction brought the dissolution of the CMEA and the subsequent fundamental political and economic changes in the 80s and 90s of the last century. The transition of these countries to a market economy and promotion of economic reforms increased the international credibility of these countries. In 2004, their full integration into the EU structures was completed. These facts significantly influenced not only the dislocation of their productive base and production-consumption linkages and transport infrastructure, but also their overall technical - technological and socio-political level (Balkyte, Tvaronavičiene, 2010).

These countries can be, with the exception of Poland, classified as smaller economies, for which proceeds that "*the smaller economic dimension the country has, the more it has to, if it wants to increase its economic prosperity, be involved in the international division of labour*". The extent of involvement in international economic structures is particularly important for these countries, as they are "set" so as to compensate for their lower economic strength and weaker facilities of necessary production factors with a higher degree of production specialization (Capik, Drahokoupil, 2011).

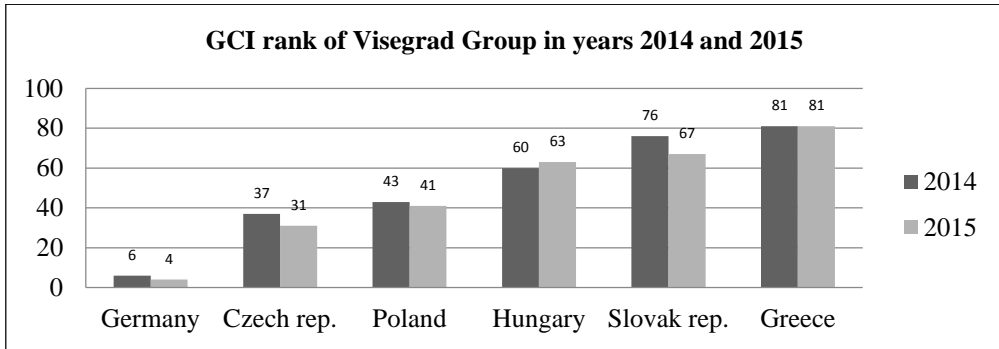
Competitiveness assessment of the V4 countries in this paper was made on the basis of the so-called multi-factorial indicators, with which mainly deal the World Economic Forum (WEF), the Swiss institute IMD, World Bank and the organisation of The Heritage Foundation. Although, used methodologies are usually quite different and the organizations employ different principles of assessment, their connection is a high presence of multi-criteria. Their common denominator is the conception of national competitiveness in terms of the conditions for business that can state create compared to the other states (Membere, Workie a kol, 2006).

3.1 Assessment by the Global Competitiveness Index (World Economic Forum)

GCI, which assesses the ability of countries to provide their citizens with a high standard of living and, at the same time shows how effectively can a country use its available economic resources, is the first index we used to assess the competitiveness of the V4 countries. Rating scale ranges from 1 (worst) - 7 (best). For comparison and more information value of the figure below, we added the data of Germany besides the V4 data. Germany achieved the highest degree of competitiveness among the EU countries (score 5.53) with the 4th place in the world in 2015. Figure is also enriched with Greece ranking the worst among the EU - up to 81 positions (score 4.02). Overall standings of top 10 economies by GCI for 2015 are presented in the footnote.¹⁰⁰

¹⁰⁰ Ranking according GCI in 2015: 1. Switzerland (5,76), 2. Singapore (5,68), 3. USA (5,61), 4. Germany, 5. Netherlands, 6. Japan, 7. Hong-kong SAR, 8. Finland, 9. Sweden, 10. United Kingdom. Notice of the authors.

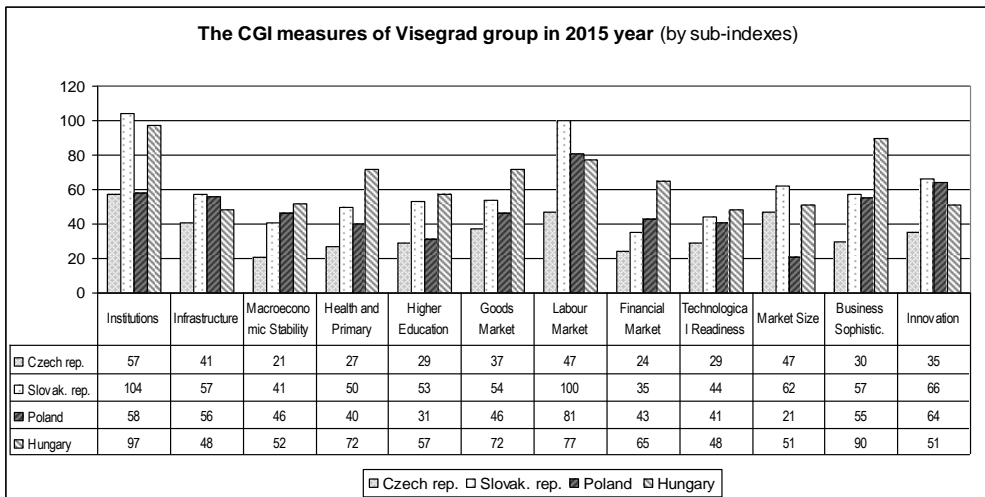
Figure 1: GCI Rank of Visegrad Group States in 2014 and 2015



Source: World Economic Forum, 2016. The Global Competitiveness Report 2015-2016

The best rank among the examined countries reached the Czech Republic (score 4.69) which, compared to the previous year improved its position by 6 places. The second was Poland, which achieved a score of 4.49 in 2015. The third was Hungary (score 4.25), which lagged behind the first two countries more significantly and as the only country of the V4 worsened its position. Although the Slovak Republic placed worst among the V4 (score 4.02), the positive is, that it improved its position the most significantly compared to previous year, jumping eight places above to the 67th place. All V4 countries ranked in the first half of the overall ranking. For a more detailed comparison of the performance of the economies of the V4 we also formed Figure 2, which compares the GCI according to the above-defined twelve sub-indexes of the model.

Figure 2: GCI Measures of Visegrad States in 2015 (by Sub-index)



Source: World Economic Forum, 2016. The Global Competitiveness Report 2015-2016

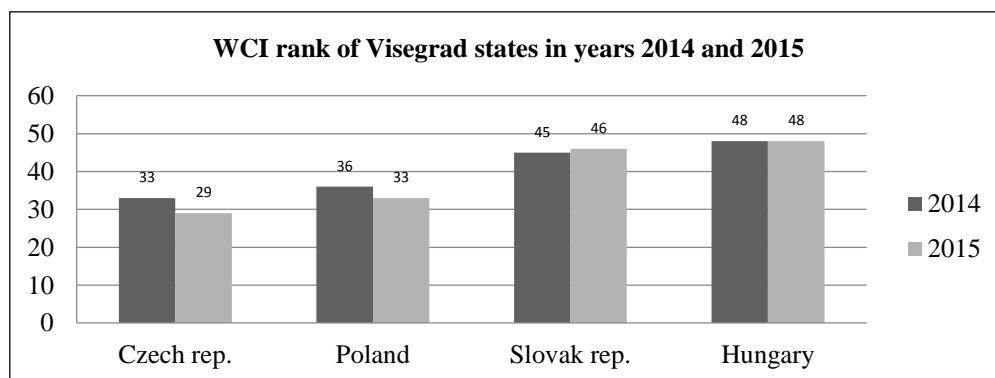
Apart from the "market size" indicator, which cannot be influenced, worth mentioning is the fact that Slovakia and Hungary have relatively weak representation indicators of the first pillar - the functionality and efficiency of public and private institutions in the country and corresponding indicators, such as the efficiency of governance spending, the functioning of

the judicial system and the waste of public resources. All these factors create economic costs and slow down the economic development and are a direct result of activities and flexibility of government institutions. Unflattering are also indicators of "the efficiency of the labour market" sub-index, particularly in the case of the Slovak Republic, Poland and Hungary. Especially in the case of Hungary, it is also the "business sophistication" sub-index. In terms of measuring the knowledge economy sub-index of innovation - the best rank among the analyzed countries achieved the Czech Republic. This index plays an important role in economic growth, increased export performance and overall competitiveness of the state. It is also closely related to the single-factor Knowledge economy index of the state, which is discussed in the next part.

3.2 Assessment by the World Competitiveness Index (Swiss Institute IMD)

The World Competitiveness Index (the WCI), is also widely used index for assessment of the competitiveness of the countries, analyzing the facts and policies that shape the country's ability to create and maintain an environment which keeps a higher value creation for its enterprises and more prosperity for its citizens by four main factors and twenty sub-factors. The following Figure 3 illustrates the results achieved by the Visegrad Four countries in 2014 and 2015 according to the WCI (IMD, 2015).

Figure 3: The WCI of the Visegrad States in the Years 2014-2015 (IMD)



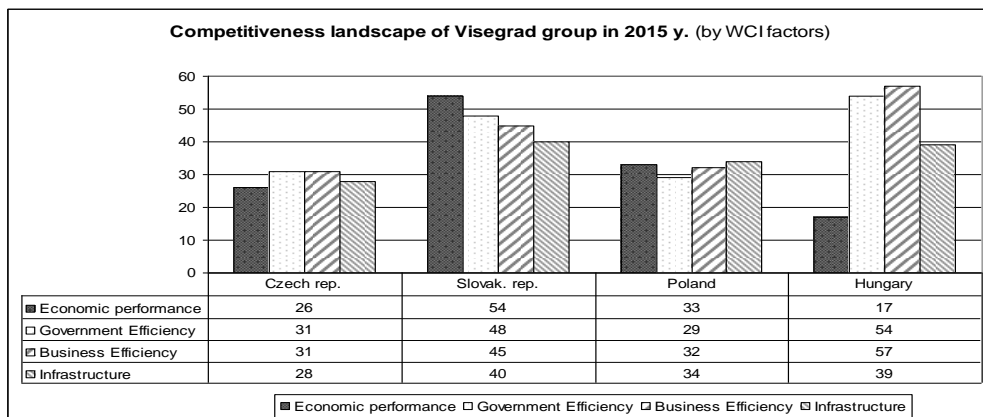
Source: IMD, World Competitiveness online 2015

The results in Figure 3 demonstrate that the development of competitiveness of the V4 countries according to WCI is very much different compared to the results by GCI. This is the consequence of different methodologies and processed data. The best position gained the Czech Republic while Hungary was the worst. In 2015, overall position of the V4 countries was not the most favourable. With the exception of the Czech Republic, all the other countries of V4 were located in the second half.¹⁰¹

Justification of such state requires a closer analysis. Figure 4 provides the data illustrating the results of examined countries by individual WCI factors - Economic performance, Government Efficiency, Business efficiency and Infrastructure.

¹⁰¹ Ranking according to WCI 2015: 1. USA, 2. China Hong Kong, 3. Singapore, 4. Switzerland, 5. Canada, 6. Luxemburg, 7. Norway, 8. Denmark. Among the EU countries, in top 10 ranked only Sweden (9.) and Germany (10.). Notice of the authors

Figure 4: Competitiveness Landscape of Visegrad Group in 2015 (by WCI)



Source: IMD, World Competitiveness online. 2015

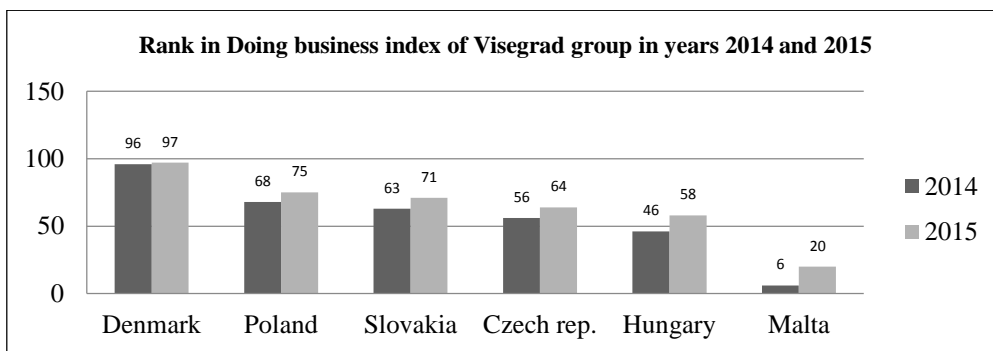
In the first factor "economic performance", the Slovak republic achieved negative results. The largest weaknesses of Slovakia consist of the threat of relocation of production capacities, a lack of volume and structure of FDI, poor diversification of the economy and relatively high unemployment. In the second assessed factor "effectiveness of governments", the worst results were achieved by Hungary and Slovakia. Negatives seem to be the government subsidies, tax evasion, transparency, inefficient judiciary and clientelism. In terms of the third factor "enterprise performance", the largest reserves are in Hungary. The best rank achieved the Czech Republic. At the sight of the last assessment factor "infrastructure", which tells whether technological, scientific and human resources meet the needs of business, the Czech Republic has adapted the best to the new conditions of competition. On the contrary, Slovakia was the worst with insufficiently flexible reaction to a huge demand for labour in a technical sector as the impact of higher FDI inflow in the automotive and electronics industries. In the case of Slovakia, interesting fact is that since joining the EU and until 2008, its rank used to be around the 30th place. However, after the change of government, it fell by 16 places (!) in 2010. This fact shows that the Governance and appropriateness, respectively the inadequacy of its interventions can have a significant impact on the attractiveness of the country and its international competitiveness (Baláž, 2015).¹⁰²

3.3 Assessment by the Doing business Index (World Bank)

Assessment of the business environment by Doing Business is annually carried out by the World Bank. Its results provide information on the development of components of the competitiveness in terms of attractiveness for foreign investment (The World Bank Group, 2014).

¹⁰² The key indicators of attractiveness of Slovakia a price competitiveness, skilled labour, dynamics of economy, wirking tax system and relatively high education level. (World Competitiveness Yearbook, 2015).

Figure 5: Ranking in Doing Business Index of the Visegrad States (2014-2015)

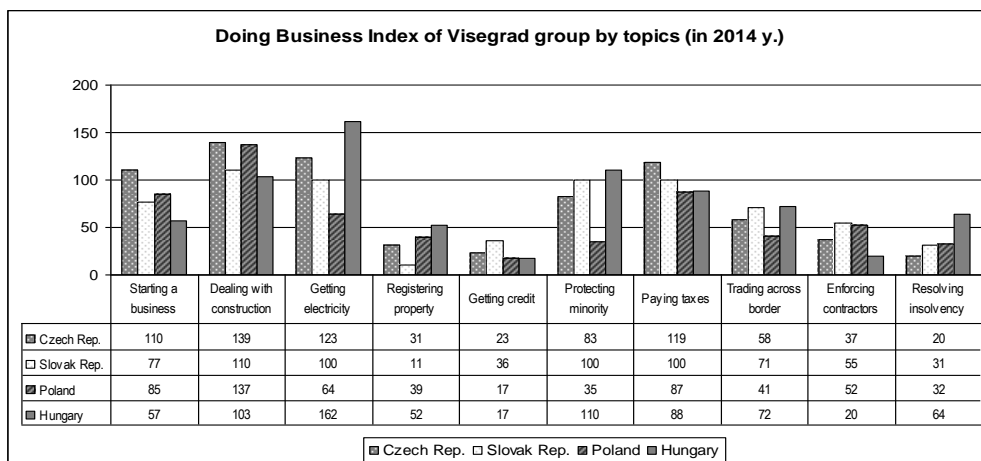


Source: World Bank Group, Doing Business, 2015

The total ranking of the World Bank in 2015 shows that among the EU countries, Denmark is the country with the best quality business environment followed by the United Kingdom, Finland and Sweden. Malta has the worst position. In the final overall ranking of countries, according to Doing business index (referred to in a footnote), some parallels with the ranking of countries according to the Global Competitiveness Index (GCI) can be observed. Up to seven countries are in the top 10 in both indices. However, in terms of the criteria set, the countries which do not belong among the top 30 according to the GCI rank among the countries with a highly competitive commercial environment according to the DB index. In our case, this applies to Poland and Slovakia. On the contrary, the Czech Republic achieved weaker results. Hungary is the weakest. Figure 5 indicates the order of the V4 countries according to the index of DB between 2014 and 2015. It is supplemented by Denmark which reached the best rank among the EU and Malta with the worst rank.

A more detailed overview of the assessment of countries according to all ten areas provides Figure 6.

Figure 6: Doing Business Index of Visegrad States by Topics (2014)



Source: World Bank Group, Doing Business, 2015

Better results are achieved by Poland and Slovakia. On the contrary, the less favourable values, achieve the Czech Republic and Hungary. In the case of the Czech Republic, the weaker results are related to the assessment in the areas of starting a business (the time required to obtain a license), licensing procedures (again - slowness of permission), access to electricity and the tax liability of companies. In the case of Hungary, the worst results were achieved in access to energy (the time required to obtain a license), protection of investors and lengthy of procedures of obtaining the license. According to the DB, the highest competitiveness reached the V4 countries in the areas of registration of property, obtaining credit, enforceability of contracts and resolving insolvency.

4. Conclusion

The country's competitiveness is a complex phenomenon which involves both areas of macroeconomics and microeconomics. Ultimately, its development is significantly affected by other factors standing between these two economic categories. New and sharpened conditions of globalizing competition are forcing us to understand the term "competitiveness" in much broader context than just as a matter of foreign trade agenda and static comparative advantages. Competitiveness is being created already in the process of production of goods and services, mainly based on the use of home created, so-called dynamic competitive advantages and transferred advanced technologies. The reason is obvious. Scientific-technical and technological knowledge is a key determinant of the production of products with higher added value (at least for some time) and simultaneously carries a sustained comparative advantage. At the same time, more and more emphasis is being placed on creation of comparative advantages that are closely related to governance activities that have a direct impact on the creation of a favourable business environment as one of the essential aspects of FDI inflows.

The research presents an analysis of the achieved level of competitiveness of the Visegrad Four countries, that after a successful integration process became members of the EU and that, in comparison to the most developed countries of the Union, were significantly exposed to international competition during the financial and economic crisis, of which consequences extend until now.

From a methodological point of view, the processed research compares the level of the current level of competitiveness of the V4 firstly on the basis of multi-criteria indicators - Global Competitiveness Index, the World Competitiveness Index and Doing Business.

By the Analysis of the achievements, we have come to the following statements:

Firstly, from the perspective of comparison of groups assessed it is clear that the best results within the assessment of competitiveness by the GCI index achieve the Czech Republic, while the worst Slovakia and Hungary. The lack of functionality and inefficiency of government, private institutions and labour market and especially in the case of Hungary, the business sophistication are considered as the biggest negatives.

Secondly, the development of competitiveness of the V4 under the WCI index, although it is largely different by methodology and data processing from the GCI, again points to the favourable rank of the Czech Republic. Weaker results again reached Hungary and Slovakia, especially in the factors of Economic performance (especially weaker volume of FDI and higher unemployment rates) and Government Efficiency (related to the inefficiency of the judiciary, cronyism and government subsidies).

Thirdly, the comparison of the assessment of the business environment by Doing Business Index carried out by the World Bank - it assesses the competitiveness of countries in terms of attractiveness for FDI. The results are different from previous indices. The best positions gained the Slovak Republic and Poland.

Based on the study results, we have concluded that the consequences arising for individual economies (and not only for economies analyzed by us) will, because of the wide range of factors of national circumstances as well as environmental influences, be always differentiated. However, it is necessary to analyze them continuously and on the basis of them to make assumptions which are essential for their further development and growth. In the case of countries assessed, it turns out that key determinant of competitiveness will be building up of a knowledge-based economy associated with expenditures on scientific and technological advance, digital transformation of the society, investment in science, research and education. These investments represent attributes that achieve remarkable growth results. Although, the share of these expenditures had increased to average 1.3% of GDP in 2014, it is still not sufficient. The V4 countries have to increase constantly this growing trend, since the objective of the EU under the adopted Strategy 2020 is to build a smart, sustainable and inclusive European economy by 2020 that sets the amount of the expenditures dedicated to R & D to 3% of GDP.

This is what should be an area in which the V4 countries should invest because of the comparatively small size of their economies, the absence of basic energy resources and a high dependence on external demand it is certain that their progress in the future will be linked to the knowledge economy and the export of goods with higher added value.

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Dispute Between Member States and the European Commission on the Extent of the Delegated Powers

Jitka Savin

Charles University
Faculty of Social Sciences
Smetanovo nábřeží 6, Praha 1
Prague, Czech Republic
e-mail: jitkasavin@seznam.cz

Abstract

The comitology system allows the EU Member States to monitor delegated decision-making. Currently, almost every single legislative act includes clauses related to the cooperation of the EU Member States and the Commission and determines rules and procedures which should guarantee the implementation of such act from the substantive and technical point of view. In practice, we are often confronted with the Commission's effort to enforce more substantial changes of the basic legal act in contrast to the non-essential changes of the basic act as defined in the primary law of the EU. This fact leads sometimes to very sharp exchange of views between the Member States representatives and the Commission when examinations of new Commission's proposals are taking place. In these situations, it is very important how well-founded arguments are presented by experts from each Member State at such meetings and how consistent, cooperative and well acquainted with the problem they are to disprove Commission's arguments and maintain the balance and control over the Commission's competence to exercise delegated power. This paper aims to illustrate how important and necessary for each Member State it is to have high-qualified, knowledgeable and well-prepared representatives which defend the interests of the Member State at the EU level.

Keywords: *Delegated Powers, Comitology, Disputes, Commission, Member States*

JEL Classification: *F15, K33, R41*

1. Introduction

The Lisbon Treaty reformed the structures and the functioning of the European Union. One of the aspects which was reformed almost completely is the nature of legal acts and more specifically the exercise of power delegated to the European Commission. Both legislators in the European Union, the European Parliament and the Council, have in practise considerable freedom to decide the choice of comitology procedure.

Therefore, in practise, we are often confronted with the Commission's effort to enforce more substantial changes of the basic legal act in contrast to the non-essential changes of the basic act as defined in the primary law of the EU. This fact leads sometimes to very sharp exchange of views between the representatives of the Member States meeting withing the Council of the EU and representatives of the Commission when examinations of new Commission's regulation proposals are taking place.

This paper aims to illustrate how important and necessary for each Member State it is to have high-qualified, knowledgeable and well-prepared representatives which defend the interests of the Member State at the EU level.

1.1 New Czech Civil Service Act and Desired Qualifications of National Experts

National experts take part in all the procedures conducted at EU level. There are two main areas where an active role of representatives of Member State is desirable and necessary at the same time – proceedings within the Council of the EU and experts meetings under the chairmanship of the Commission, particularly within the comitology procedure.

Participation of national experts in debates within the Council is always welcome. It guarantees that the technical and expert opinions are taken into account and that the legislative act reflects and/or follows the opinions and requirements defined by the sector/addressee of the provision and the responsible person for its execution. National administration is also responsible for selecting its representatives within the permanent representation of the Member State to the EU. The general requirements for national experts include a university degree, language skills as well as a more profound knowledge of a specific area of EU policies.

What limits not only Czech but mostly all new EU Member Countries are language skills of its experts mostly. The situation is slowly changing because more and more younger specialists and experts with required specialized education and language skills are covering expert positions. Due to that fact the negotiating position of a Member State becomes stronger. Representatives of Member States should take part in discussion either within the Council, or the Commission in accordance with instructions from the capital with more or less defined room for their own activity. If the representative is active, has good negotiating skills and also a required knowledge of the discussed expert topic, his/her opinion presented on behalf of the Member State is more respected and acceptable in contrast to a representative who only reproduces the opinion given to him/her by other person/expert but because of limited knowledge of the expert topic such person is unable to take a more active part in the discussion or is even unable to consider or decide immediately on the advantages and disadvantages of proposed solutions. This is the risk which the Commission occasionally uses to exercise pressure on Member States to take a decision on a presented proposal or to accept its solutions.

Almost in all EU Member States a law on civil servants exists. It should ensure that recruitment and career advancement of civil servants is not subject to political interference and also it should guarantee a further development of a merit-based career system. An expected result is a fully professional civil service staff. After a decade of postponement such Act on Civil Service (Act 2014) was finally adopted in the Czech Republic in autumn 2014 and some related implementing legislation was adopted during the spring 2015. Therefore the mentioned law could come into force on 1 July 2015. In accordance with its provisions all civil servants were obliged to ask for inclusion into the civil service and after fulfilment of legal conditions they have become civil servants. At the moment the main problem in the Czech Republic is that serious changes were made on some key positions just a few days before the entry of the act on civil servants into force. It implies that there are persons in managing positions who fulfill the legal criteria at the moment of entry into force of the act but they do not follow the general principle of being highly qualified for the positions they hold. It is obvious that these persons would be confirmed in their positions if they retain their positions in an open competition. In such a situation the risk of preserving the present state exists for a certain period of time. Also, these persons can rely on their protection against the intention to be dismissed only on basis of long-time unsuccessful management or unacceptable results of their work.

All requirements for any position in a public administration are specified in implementing legislation so there is no room left for special preferences. Unified rules for further education of civil servants were being set and a new obligation to pass an exam for becoming a civil servant was included in the law. Finally, rules related to regular evaluation of civil servants and their salaries are also covered by the law. At the same time all state authorities including ministries were obliged to establish an independent position of a State Secretary who is subordinate to the State Secretary of the Ministry of the Interior.

Today we are in a transitional period and facing the implementation of the wording of the law. Imagine the situation of an old civil servant who is a respectful expert in his/her area but has very little knowledge of foreign languages. Such person would hardly represent the interest of the Member State at the EU level, particularly within the expert groups and committees arising from comitology procedures. In the framework of comitology such expert would hardly fulfil his/her obligations. In contrast to this we can imagine a young person who has an adequate level of education, good knowledge of foreign languages but has no practical experience.

In such case it is important for Member State how all the subjects involved in the EU legislative process cooperate between each other, how the coordination process is settled and also how actively it uses the knowledge and expertise of its own national permanent representatives to the EU who also take responsibility for the right presentation of national positions reflecting national interests. In such a situation, the requirement of language skills is not the main criterion as the level of expertise prevails. If the expert is also able to take part in a debate, it is an added value. So the Member State should pay attention to the selection of its representatives. It is always well appreciated and helps to create strong Member State's position if its representatives (actively) participate in debates to support their own or other expert's opinions and show good knowledge and broader orientation in the discussed area or the context of Union legislative nature, including comitology procedures.

1.2 Comitology Procedure under the Lisbon Treaty

The Lisbon Treaty reformed the structures and the functioning of the European Union. One of the aspects which was reformed almost completely is the nature of legal acts and more specifically the exercise of power delegated to the European Commission.

Since the Lisbon Treaty has entered into force in December 2009, we are faced with a qualitatively new legislative decision-making process. The Lisbon Treaty established a new hierarchy of legal acts – legislative acts are now all acts which are adopted by the Council and European Parliament under the ordinary legislative procedure, while executive acts are all acts adopted by Commission within the frame of delegated power, or by the Council in some instances. These executive acts are newly recognised as delegated acts or implementing acts based on the Articles 290 and 291 Treaty of the Functioning of the EU (TFEU) and by their nature arising from the Lisbon Treaty they are no more considered as legislative acts. The Lisbon Treaty thus represents a new approach to delegated rule-making in the EU (Blom-Hansen, 2011, Craig 2011).

Delegated and implementing acts come both under the parliamentary control but through different mechanisms. Article 290 TFEU provides that delegated acts are of general application and amend or supplement non-essential elements of the (basic) legislative act. And the Lisbon Treaty also specifies that the mentioned parliamentary control can be exercised either by right of revocation, or by right of opposition. No comitology system is prescribed, therefore the pre-Lisbon Treaty comitology control based on the regulatory procedure with scrutiny is abandoned. In contrast to delegated acts, the comitology procedures apply to

implementing acts adopted in accordance with Article 291 TFEU and more specifically in accordance with the Regulation (EU) No 182/2011 of the European Parliament and of the Council laying down the rules and general principles concerning mechanism for control by Member States of the Commission's exercise of implementing powers, which repealed Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission, as amended by Council Decision 2006/512/EC of 17 July 2006 (Regulation (EU) 182/2011). The Lisbon Treaty also explicitly states that the Commission's exercise of implementing powers is to be controlled by the Member States.

The Regulation 182/2011 (the so-called Comitology Regulation) lays down the rules and general principles governing the mechanisms which are applied if the basic act (legally binding EU act) identifies the need for uniform conditions of implementation. And if such basic act requires that the adoption of implementing acts by the Commission be subject to the control of the Member States as stated in Article 1 of this regulation. The Commission is usually assisted by the Comitology Committee composed of the representatives of the Member States. The committee is chaired by the representative of the Commission and the chair shall not take part in the committee vote (article 3). Each Comitology Committee must adopt its own Rules of Procedure based on the proposal of its chair. Standard Rules of Procedure for Committees were published in the Official Journal (OJ) after the consultation with Member States (Standard Rules 2011). Each committee therefore decides about its operating Rules of Procedure based on these standard rules. The basic act also provides, while taking into account the nature or the impact of the implementing act, the examination or advisory procedure which should be used for the application.

The choice of the specific procedure depends on the nature of the implementing powers and is defined in the basic act. In general, the examination procedure applies when implementing act of „general scope“ or implementing act with a potentially important impact (such as environment, budget, commercial policy, taxation, safety and security of humans) should be adopted (Blom-Hansen, 2011, p. 27). Implementing acts cannot be adopted by the Commission if they are not in accordance with the Committee's opinion or when the Commission is able to review the draft implementing acts if no opinion is delivered by the Committee. When this procedure applies, the Committee must deliver its opinion with the qualified majority in accordance with the TEU/TFEU. In practise, three situations can occur only: (1) a positive opinion, (2) a negative opinion, and (3) no opinion and implications are defined in relevant Article 5. If the committee delivers a positive opinion, the Commission shall adopt the draft implementing act. If the opinion is negative, the Commission shall not adopt the draft implementing act. In that situation if it is necessary to adopt the act, the chair may either submit an amended version of the draft implementing act to the same committee within 2 months of delivery of the negative opinion, or submit the draft implementing act within 1 month of such delivery to the appeal committee for further deliberation. Where no opinion is delivered, the Commission may adopt the draft implementing act, except in the cases when it concerns taxation, financial services, the protection of the health or safety of humans, animals or plants, or definitive multilateral safeguard measures (art. 5).

The advisory procedure applies for the adoption of other implementing acts. Under this procedure the Committee must deliver its opinion. If the committee takes a vote, the opinion is delivered by a simple majority of its members (art. 4 para 1). The Commission has a discretion to decide whether or not to carry out the proposed implementing act taking into

account the conclusions drawn from the discussion within the Committee and the opinion delivered.

Therefore, just here is a leeway for the activity of Member States and their representatives. Such activity very often corresponds to the Commission's effort and pressure to make Member States' representatives listen and not to do so much. If Member States ask for a detailed debate or press the Commission to explain methods or data it relies on in its material, the intention of the Commission is not to pay so much attention to it or simply to interrupt the discussion. Minutes of such meetings, which the Commission is obliged to draft, are often concentrated and broadly comment the position of the Commission which was presented at the meeting, including positive reactions of Member States' representatives (or other stakeholders if they are also present at the meeting) to Commission's proposals. Questions and requests presented by Member States or interruption of a debate are often mentioned in general with a note that a certain topic is left for an upcoming committee's meeting. There are several examples in a number of different areas when Czech Republic's representatives asked the Commission repeatedly in committee's meetings to present the actual state of play in certain issues or to open a discussion about specific options to find appropriate solutions but there was almost no or very little attention paid to such requests and only after several years of permanent pressure and increasing support coming from other Member States the Commission has changed its position.

It is evident that a good coordination and persistence is one of the main aspects which can help to a significant extent to promote Member State's opinion or request at the EU level.

On each legislative proposal presented by the Commission a Member State drafts its national position. The national position defines problematic aspects of the presented proposal and on general level it provides guidelines for future examination of the proposal within the Council (and later reflects it also in reaction to the examination of the proposal within the European Parliament). If necessary, the national position also determines limits which are not acceptable in any case (the so-called redlines). The national position is drafted usually in close cooperation of experts from all the bodies at the national level involved. Experts who participate in drafting the national position usually also take an active part in the examination of the corresponding proposal at the EU level.

1.3 Comitology in Practise

Both EU legislators have in practise considerable freedom to make a choice of the comitology procedure. Comparing the pre-Lisbon and post-Lisbon comitology regulation (Corona, 2014), Blom-Hansen believes the choice of committee type is relatively free (Blom-Hansen, 2011). And many academics think that framework rules on the comitology system are subject to an intense inter-institutional rivalry (Blom-Hansen, 2013,), but what it implies in fact is not so exactly analysed yet (ibid.) The mistrust in the use of delegated acts, especially on the side of the Council, has in the meantime led to a reduction of the intended scope of Article 290 TFEU. Member States are often seen arguing for either implementing acts or the ordinary legislative procedure, and promote the use of sunset clauses for delegating powers to the Commission. On the implementation of Article 291 TFEU too, this tension is visible as well. Member States emphasise provisions mentioned in the recitals of the new regulation that require the Commission to go beyond the formal voting thresholds and take account of predominant positions or look for the widest possible support. In addition, Member States struggle to validate the appeal committee as a relevant appeal body of a high political level. Both instances again show a mistrust vis-à-vis the Commission and a desire to have a more formalised

approach (Christiansen, Dobbels 2013). Unfortunately, no legal rules specify the mentioned responsibility of Member States and their administrations to fulfill the obligations arising from the basic act. If they do not follow these obligations, the Commission can start an infringement procedure which nobody likes, neither the Commission nor the Member States. Maybe here is hidden the reason why the Commission finds new ways how to exercise its delegated power beyond the framework of basic acts.

1.3.1 Case Study

To support what was just said and to illustrate the battle between the Council and the Commission which Christiansen, Dobbels and many others refer to (Christiansen, 2013, Dobbels, 2013), we can briefly look at the discussion held within the Council on the Commission's proposal for Regulation of the European Parliament and of the Council on occurrence reporting in civil aviation amending Regulation (EU) No 996/2010 and repealing Directive No 2003/42/EC, Commission Regulation (EC) 1321/2007 and Commission Regulation (EC) No 1330/2007 (COM (2012) 776 final). The proposal was published in mid-December 2012 with the intention to „...contribute to the reduction of the number of aircraft accidents and related fatalities, through improvement of existing systems, both at national and European level, using civil aviation occurrences for correcting safety deficiencies and prevent them from reoccurring“ (Commission's Proposal, 2013, p. 3).

The proposal contained the following key elements: (1) better collection of information on occurrences, as the proposal aims to ensure that all occurrences which endanger or would endanger aviation safety are reported under the mandatory occurrence reporting system complemented by the establishment of a voluntary reporting system for those occurrences not captured by the mandatory system; (2) clarification of the flow of information by introducing reporting requirements for organisations which collect occurrence reports from individuals as part of their management process and which are responsible for transmitting them to competent authorities; (3) improving of quality and completeness of data through consistent and uniform integration of data into relevant databases; (4) better exchange of information by strengthening the existing rules; (5) better protection against inappropriate use of safety information and better protection of the reporter to ensure the continued availability of information; (6) improving information analysis at national and EU level and a common risk classification scheme which should be developed to support the task of classification of occurrences at national level; (7) improving transparency towards the general public by publication of annual safety reviews in respect of necessary confidentiality of certain information.

Even though within the Council Member States broadly welcomed the Commission's proposal and expressed general concerns related to potential costs or administrative burden or deadline for implementation, they also expressed serious concerns (among others) about (1) correlation of this proposal with systems of collection of required data existing at to moment at the EU and especially at the International Civil Aviation Organization (ICAO) level, (2) definition of gross-negligence which has had strong implications and interferences into the penal and labour law of Member States and (3) extension of delegated powers given to the Commission on the basis of the new comitology Regulation.

The mentioned proposal would allow the Commission to adopt by means of delegated acts updated versions of annexes to the Regulation, to define the common European risk classification scheme, or to extend or restrict the dissemination of information contained in the relevant database. Several Member States considered these issues as essential part of the basic act, asked for the involvement in such modification and therefore disagreed with

Commission's proposal on this part. Moreover, a discussion about exclusive or shared competence was on the table again, particularly when the issue of interference into the penal and labor law was touched. In this respect, it was hard to find an acceptable compromise. Many experts from different ministries and authorities were consulted and as it was a sensitive topic for all Member States, the discussion had stagnated for several weeks in finding a solution.

The same situation occurred when the issue of ICAO standards was discussed. The Commission strongly insisted on its position based on ICAO documents which were not relevant to the topic discussed at the Council working bodies. Almost at each debate, representatives of Member States asked the Commission to be concrete and to show ICAO documents to which the Commission referred to during the discussion. National experts present at the debate within the Council had been explaining their concerns about correlation with obligations arising from ICAO standards and requirements. In this situation the question of delegated powers seemed to be blocked. Only after weeks of discussions and several special meetings organized by the Commission with relevant experts dedicated to technical aspects settled in annexes only it started to be clear that a permanent pressure of Member States to clarify these aspects could lead to the acceptable solution and final compromise.

Only after clarification of technical aspects the Commission and Member States were ready to discuss the comitology issue. But again, several Member States' delegations emphasised that Annexes to the Regulation were too important to be discussed in a hurry or to allow the Commission to develop and/or update them through delegated acts; therefore, they proposed to develop the above-mentioned Annexes by means of implementing acts. They argued that such a solution would allow both the involvement of Member States' experts, and the necessary time for the development of Annexes I and II. The Commission presented its reservation on this solution but the general approach followed this solution.

It became clear afterwards that in case of this Regulation comitology had become a big issue for European Parliament and the way how the Council proposed to modify the Commission's proposal was not acceptable. The Council did not want to accept any principal change to modify the way how the problem with interference into penal and labor law was to be solved. But both sides presented their good will and were ready to find a compromise. In respect of comitology two options were specified in relation to annexes to this Regulation, either Annex 1 devoted to the list of occurrences which have to be reported mandatorily would be adopted by implementing act and requirements settled in Annex 2 would become an integral part of the normative text of the Regulation and updated by delegated act, or Annex 1 would become an integral part of the Regulation and adopted as delegated act and Annex 2 by implementing act. (The majority of Member States supported the first option.) None of these options had appeared in the adopted Regulation. Both annexes were deleted from the Regulation and new annexes which contain a list of requirements applicable to the mandatory and voluntary occurrence reporting schemes or a list of interested parties were adopted. (Occurrence Reporting Regulation, 2014)

1.3.2 Lessons Learned

In this context the importance of well-prepared representatives of Member States at each meeting of Council preparatory bodies should be stressed once again. The above-mentioned account includes only more important points of the process and does not cover the full picture of all the discussions when experts from different relevant public administrations and other authorities kept meeting almost each week in Brussels and discussed all of the partly mentioned issues. National experts must present strong skills not only in the concrete expert

level, language skills etc., but a broader general overview and overlap into other areas, including other special skills such as good knowledge of processes on which the European Union is built and developed.

In such cases, due to limited public access to documents (Grmelová, 2011) and a lack of transparency of internal procedures, academics will always be one step behind the daily practise as they try to find a general rule how things are done. In practise, Member States' administrations and Union institutions must cooperate and find a joint compromise on a daily basis. And when they are not able to find the „common language“ within the settled framework, they try to find new ways how to achieve the required balance and an acceptable level of common cooperation for all the actors involved.

There are of course other areas where differences appear from time to time and sometimes can only be solved by judgements or opinions given by the Court of Justice of the European Union. Another controversial issue is the extent of competence exercised by European Union exclusively or together with Member States.

4. Conclusion

The comitology system allows the EU Member States to monitor delegated decision-making. Currently, almost every single legislative act contains clauses related to the cooperation of the EU Member States and the Commission and determines rules and procedures which should guarantee the implementation of such act from the substantive and technical point of view. In practise, we are often confronted with the Commission's effort to enforce more substantial changes of the basic legal act in contrast to the non-essential changes of the basic act as defined in the primary law of the EU. This fact leads sometimes to very sharp exchange of views between the representatives of the Member States meeting within the Council of the EU and representatives of the Commission when examinations of new Commission's proposals are taking place. In these situations it is really very important how well-founded arguments by experts from each Member State presented at such meetings are and how consistent, cooperative and well acquainted with the problem they are to disprove the Commission arguments and maintain the balance and control over the Commission's competence to exercise delegated power.

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Factors Differentiating the Level of Innovation of the Visegrad Group Countries

Monika Sipa, Anna Lemańska-Majdzik, Małgorzata Okręglicka

Czestochowa University of Technology

Faculty of Management

Armii Krajowej 19b St.

Częstochowa, Poland

e-mail: monikasipa@gmail.com, lemanska@zim.pcz.pl, m.okreglicka@wp.pl

Abstract

Innovation of the Member States is one of the priorities of the EU policy and the European integration. What is of particular importance in this field is the European cohesion policy, which enabled the former Eastern Bloc countries to successfully implement a number of changes, some of which entailed increasing their innovation level and building a competitive position in the international market. The primary objective of the following study is to identify the similarities and differences between selected innovation factors of the Visegrad Group economies. The paper discusses only selected determinants, focusing on R&D expenditure, R&D employment, and public access to the Internet. It also identifies the strength of the relationship between these factors and the number of patent applications submitted to the EPO.

Keywords: Innovation, R&D Activities, Visegrad Group

JEL Classification: O3, O11, O38

1. Introduction

Contemporary economic development is based on the broadly defined innovation. The level of innovation determines the competitive position of individual economies, unions of states (EU) and their constituent regions, and business entities operating within them. High complexity of economic processes is associated with the economy based on knowledge and innovative solutions, and enterprises strive for continuous improvement in various areas of their business (Gorzeń-Mitka, 2013; Smolarek, Dzieńdziora, 2011).

These trends are also noticeable in the actions undertaken by the European Union. Its policy lays great emphasis on increasing the innovation of individual Member States' economies. This is reflected in numerous documents, including the objectives of the Lisbon Strategy from 2000, the Europe 2020 plan, the Horizon 2020 programme, and a number of other programmes supporting innovation in various areas. Reinforcing innovation and building a suitable innovation capacity have become the priority objectives of EU economies. The European integration is the supporting development cross-border mobility, public-private collaboration, increasing the open access to research results, and participation in EU's research and innovation programs. This will make it easier for researchers to conduct their research in Europe. (Krajňáková, Vojtovič, 2012).

With the European integration and the EU's cohesion policy, the opportunity for rapid growth was also given to the economies of the countries whose socio-economic transformation began

in the early 1990s. They were finally able to make up for the years of developmental neglect and to reduce the disparities between their individual regions.

The countries which have benefited from this opportunity include, among others, the Visegrad Group states: Poland, Slovakia, the Czech Republic, and Hungary. These are the countries of the “former Eastern Bloc;” they completed the accession process in the same year and have been members of the European Union since 2004. Despite these similarities, they are marked by different economic potentials and levels of innovation, which is reflected in e.g. the value of the Summary Innovation Index (SII).

In light of the above, the primary aim of this article is to present the similarities and differences between selected determinants of innovation of the Czech, Polish, Slovak, and Hungarian economies. The paper assumes that innovative activity is determined predominantly by: a) the amount of R&D expenditure in total, per capita, and as a percentage of the GDP of individual states; b) human resources performing tasks in the R&D sector; c) submitted patent applications; and d) the Internet access. The analysis covered the years from the moment of the EU accession of the Visegrad countries.

2. Some Theoretical Remarks

As Niedzielski (2005, p.74) states, innovation is the feature of businesses entities or economies which means the ability to create and innovate as well as to absorb innovative solutions and which entails active participation in innovative processes and taking measures in this direction. It also means involvement in the acquisition of resources and skills required to take part in these processes. Innovations are believed to boost productivity and improve living conditions. As pointed out by Laforet (2013), they give new jobs, generate income, and make people’s lives better by creating useful products and services. Teece (1996) emphasizes that innovation should not be considered as a one-off event but as an ongoing process, a continuous interaction between science, technology, and production. Innovative activity in a company is an interactive process characterized by technological interrelationships between various subsystems. It may entail: the production, adoption, implementation, and introduction of new ideas and practices in the company (van de Ven et al., 1989). Innovative activity affects the development of business entities, constituting an important foundation of the success and market competitiveness of each business (Kijek 2012; Sipa, Skibiński 2015).

Innovation is the result of feedback between technical capabilities and needs, as well as the interaction between technology, science, and implementation activities within a company (Tödting, Tripl, 2005). However, undertaking innovative actions entails a high risk and substantial financial expenditures which often exceed the capabilities of some enterprises, particularly the small-sized ones (Gorzeń-Mitka, 2013; Okręglicka, 2016). Determinants of success or failure may belong to a number of areas of an organisation, such as: strategies, IT technologies, skills, knowledge, or organisational culture, etc. (Lemańska, Okręglicka, 2015). Therefore, increasing innovation calls for two things: a) an environment conducive to innovative activity; and b) an adequate potential in the form of highly skilled staff and vast financial resources, which can contribute to the development of more efficient technologies (Navickas, Kontautiene, 2013). As highlighted by Kotey (2014), the company’s environment can be a source of all kinds of restrictions as well as of many opportunities.

What is important in this context is the EU’s cohesion policy. The support received as part of the cohesion policy has significantly contributed to the growth of the former Eastern Bloc economies. One of the manifestations of the desire to eliminate the differences between the

regions is the development of R&D, raising the level of innovation, and strengthening the competitive edge. All these activities enable the above economies to build a stable market position based on implemented innovations. They also allow for a flexible response to emerging economic shocks in supply and demand. Countries which dynamically increase their knowledge resources and introduce innovations boost their innovative capacity and reinforce their competitive position, aiming for the leading position on the international market. The level of innovation of individual states is significantly influenced by both their potential and their government's decisions on activating the research and development profile of individual entities that make up the economy. Innovation is therefore a vital building block of the competitiveness of the economy; it is an element of constant and sustainable economic growth.

3. Method

The main objective of the paper is to identify the changes in and the differences and similarities between selected determinants of innovation of the Visegrad Group economies. It was assumed that the innovation of economies is primarily determined by the following factors:

- gross domestic expenditure on research and development (GERD) and *business enterprise expenditure* on research and development (BERD);
- human resources performing tasks in the R&D sector;
- submitted patent applications;
- number of entities in the high-tech sector;
- Internet access.

In the case of larger aggregates, such as countries, there is a strong correlation between the amount of R&D expenditure and the number of patents (Żebrowski, Waćkowski, 2011, pp.26-27). Hence, an attempt was made to determine the strength of the relationship between the number of patents submitted by the Visegrad Group states and the aforementioned factors characterizing these economies. The deliberations are complemented with the analyses of complex innovation indicators and trends in this field. The paper also presents the positions of individual countries in the international ranking of innovation.

The analysis covered the secondary data published by the OECD, and Eurostat in the years 2004-2014. Also, based on the collected data, the correlation coefficients were calculated. The Pearson correlation coefficient was used in order to determine the correlation between the variables. The probability value of $p < 0.05$ was deemed significant, while the probability value of $p < 0.01$ was considered extremely significant. The analysis of the results was carried out with the IBM SPSS 19 statistics software package.

4. Selected Factors Determining the Level of Innovation of the Visegrad Group Countries

The Visegrad Group countries differ in terms of area, population, GDP, and GDP per capita. It may be noted that there is a significant difference between Poland and the rest of the Visegrad Group states when it comes to size, population, and GDP. Area- and population-wise, Slovakia is the smallest country in the Group. Its surface area constitutes 16% of Poland's size, and its population represents 14% of the Polish population. Furthermore, it is a country with the lowest GDP – 18.64% of the GDP of Poland. However, the situation is different in the case of national income per capita. The leading countries include: the Czech Republic, with 14.6 thousand euro per capita, and Slovakia, with 13.2 thousand euro per capita. The lowest value of this indicator is observed in Hungary – 9.8 thousand euro per capita. Despite the

apparent advantage the Polish economy has over other Visegrad countries in terms of the above indicators, Poland is not at the forefront innovation-wise (Eurostat [online], 2016).

Given the value of the Summary Innovation Index (SII)¹⁰³ it can also be observed that there are differences in the level of innovation between said economies. Over the years 2004-2014, the value closest to the EU average was achieved in the Czech Republic, whose SII values were higher than those in the rest of the Visegrad states even as early as the time of EU accession. In Poland, Slovakia, and Hungary, the values of this index were similar. From 2006 onwards, there were positive changes in the SII in Hungary, and no positive changes or even an SII drop in Poland, particularly after 2012. Improved results were observed for the Slovak economy, especially after 2011. Furthermore, it can be noted that during all the years covered by the study, the SII values achieved by the Polish economy were the furthest from the EU average in the entire Group (European Commission [online], 2012-2015). All the Visegrad states are among the countries referred to as “moderate innovators.” It should be noted, however, that the value of the innovation indicator for the Czech economy ranks among the top values in the entire Group – close to the EU average, while Poland is next to last among the “moderate innovators,” followed by only one country – Lithuania.

4.1 The Innovation Determinants of the Visegrad Group Countries

One of the factors shaping innovation is access to the Internet. Comparing the data on the number of Internet users per 1,000 people, it should be noted that all four countries had higher values than the world average, which was 407 in 2014. Over the years 2004-2014, Slovakia ranked first, closely followed by the Czech Republic and Hungary, which in 2014 came much closer to the values presented by Slovakia. In this category, Poland came out the worst. From 2006, it ranked fourth and kept its distance from the other three countries. In 2004-2014, the highest growth rate was observed in Hungary and amounted to 174.3%. Interestingly, in 2004, the biggest gap was between Slovakia and Hungary (a difference of 252 Internet users per 1,000 people), while ten years later this gap applied to Slovakia and Poland – it was 134 Internet users.

What plays a crucial role in strengthening the innovation of economies is the research and development sector, including R&D expenditure and the number of people employed in R&D. When considering the number of people working in R&D, all the human resources should be taken into account, because they all contribute to improvements in innovative capacity. Of all the Visegrad states, Poland had the biggest number of people working in the R&D sector – 145,635, while Slovakia had the lowest number – 27,823 people. However, when analysing the dynamics of changes over the years 2004-2013, it can be observed that Poland recorded the lowest increase among said countries (14.4%). Slovakia ranks second, with the 25.2% growth, and Hungary, with an increase of 17.4%, ranks third. The biggest changes apply to the Czech Republic, where employment in the R&D sector grew by 54.1% (Eurostat [online], 2016). In the case of the “employment in the R&D sector per 1,000 employees” indicator, the situation is far different. In 2014, the highest value of this indicator was recorded for the Czech Republic (12.61 people), and it exceeded the average value for the EU-28 (12.16 people). The figures for the other three countries diverge significantly from these values (Slovakia – 7.91 people employed, Hungary – 8.82 people), with the lowest value reserved for Poland (6.64). At the time of the EU accession of said countries, the value of this indicator was similar for all

¹⁰³ The data for the years 2008-2012 are not comparable with earlier data due to certain methodological changes (changes in the construction of the SII). Years 2002-2006 – the average for EU-25; 2007-2012 – the average for EU-27.

of them, fluctuating between 5.45 and 6.97 people per 1,000 employees. Given the dynamics of changes, it is worth emphasizing the tremendous progress the Czech Republic made in this area by having boosted this indicator by 111.6% from 2004.

In terms of the amount of research and development expenditure (GERD), there was a steady increase; however, the rate of change varied from country to country. During the years 2004-2007, the R&D spending in Poland and the Czech Republic was similar, but after 2007 there occurred a dynamic growth of this type of expenditure incurred by Poland. In 2007, R&D expenditure in Poland was higher by USD 35 million in comparison with the Czech Republic, while in 2014 this difference already totalled USD 2,474 million in Poland's favour. The lowest R&D expenditure was incurred by Slovakia. In 2004, the country spent approx. USD 2,366 million less than Poland, about USD 2,052 million less than the Czech Republic, and about USD 1,034 million less than Hungary. Unfortunately, over the studied years, this disparity more than tripled compared with Poland (3.24), more than doubled compared with the Czech Republic (2.09), and increased by 70% compared with Hungary (OECD [online], 2016).

The situation is somewhat different if R&D expenditure is presented as a percentage of GDP. In this case, the Czech Republic was the leader of the Group from as early as 2004. Despite the decline in the share of R&D spending in 2008 and 2009, such outlays amounted to 2.00% of GDP in 2014. This figure is close to the average indicator value for the EU-28 and close to the value of 3% of GDP adopted by the European Union in the Lisbon Strategy and the Europe 2020 programme. Major changes in this area also occurred in Hungary. The country increased its R&D expenditure to 1.38% of GDP. Unfortunately, despite the successive increases, R&D spending did not account for even 1% of GDP in Poland or in Slovakia during the examined period (they are slowly approaching this level). It was Slovakia which displayed the greatest growth dynamics of this indicator over the 10 years in question (174.5).

Given the business enterprise R&D expenditure (BERD), there was a significant increase in this type of expenditure in all the Visegrad countries. Compared with 2004, the dynamics of change is higher than the average value for the EU-28. The biggest post-EU-accession BERD increase was observed in the Polish economy. In 2014, it amounted to EUR 1,428.602 million. These expenditures increased more than fivefold, exceeding the BERD value of the Czech Republic, which for many years had remained the highest among the Visegrad economies. A significant (more than threefold) increase was recorded in Slovakia, and an almost threefold boost in Hungary (dynamics of 286.3).

4.2 Applications Submitted to the EPO

The innovation of economies and their business entities may be expressed in a number of patent applications. In the studied group of countries, a growing advantage of Poland was observed from 2007 in terms of the number of patent applications filed to the European Patent Office (EPO). The dynamics of change in the number of applications submitted over the years 2004-2013 was 222.0 for the Czech Republic and 163.36 for Hungary. The smallest number of applications was submitted by Slovakia, although the country raised this number more than three times compared with 2004. The biggest shift applies to Poland, which recorded a nearly fourfold increase in the number of EPO applications during the years covered by the study (388.09) (Eurostat [online], 2016). Considering the number of patents filed per 1 million inhabitants, slightly different results can be observed. Within the Visegrad group, Hungary is the leader, closely followed by the Czech Republic. Despite the almost threefold increase in the value of this indicator for Poland and Slovakia (in 2004-2013), these are still the economies

that diverge significantly from the Hungarian and Czech level. In 2013, the number of patents filed per one million inhabitants amounted to 12.67 in Poland and 12.82 in Slovakia. This is twice less than in the other two countries of the Group. The patents submitted as a result of R&D activity are strongly linked to the R&D expenditure as well as the number of R&D employees and access to the Internet. A very strong positive correlation was found between expenditure and the number of inventions submitted for patent protection. For all the four countries, the Pearson correlation coefficient for this relationship was high, with the significance level of $p=0.01$. This means that the surge in the number of EPO patent applications was conditioned by the increase of funds for R&D, both domestic funds and those coming from the enterprise sector. In the case of national outlays, the strongest correlation was found for Poland and Hungary, while in the case of corporate R&D expenditure, the strongest relationship was observed in the Czech economy. Details are presented in the table 1.

Table 1: Pearson Correlation Coefficients for the Number of EPO Patent Applications and Selected Innovation Factors

EPO patent applications versus:		VISEGRAD COUNTRIES			
		Slovakia	Poland	Czech Republic	Hungary
Total R&D personnel	Pearson correlation coefficients	0.779	-0.571	0.931	0.893
	<i>p</i>	0.013	0.066	0.000	0.001
	N	10	11	10	9
Researchers	Pearson correlation coefficients	0.782	0.876	0.947	0.935
	<i>p</i>	0.0127	0.002	0.000	0.000
	N	9	9	9	9
Enterprises in high-tech sectors	Pearson correlation coefficients	0.884	0.828	-0.029	0.202
	<i>p</i>	0.0007	0.003	0.937	0.576
	N	10	10	10	10
GERD mln EURO	Pearson correlation coefficients	0.919	0.969	0.896	0.963
	<i>p</i>	0.0005	0.000	0.000	0.000
	N	9	11	10	9
GERD % GDP	Pearson correlation coefficients	0.888	0.954	0.812	0.921
	<i>p</i>	0.0006	0.000	0.004	0.000
	N	10	11	10	10
BERD mln EURO	Pearson correlation coefficients	0.917	0.898	0.978	0.941
	<i>p</i>	0,0002	0.000	0.000	0.000
	N	10	11	10	10
Internet users per 1000 population	Pearson correlation coefficients	0.800	0.862	0.942	0.871
	<i>p</i>	0.0054	0.001	0.000	0.001
	N	10	11	10	10

Source: own elaboration

As for the relationship between R&D employees and the number of inventions submitted for patent protection, a strong positive correlation was observed for the Czech Republic. The Pearson correlation coefficient for this country totalled 0.931 ($p=0.01$). For Poland, this factor turned out to be statistically insignificant.

The analysis also found that the number of patent applications submitted to the EPO was influenced by the number of researchers working in the research and development sector. It is a positively correlated statistically significant ($p<0.05$) factor for Slovakia and a positively correlated extremely statistically significant ($p <0.01$) factor for the rest of the Visegrad group.

The correlation analysis also included the number of companies operating in the high-tech sector and access to the Internet. A very strong positive correlation between the number of patent applications and the number of high-tech enterprises was noted only in Poland and Slovakia. The Pearson correlation coefficient for this relationship was 0.828 ($p<0.01$) for Poland and 0.884 for Slovakia ($p<0.01$). In the case of Hungary and the Czech Republic, this determinant proved to be statistically insignificant.

The factor which turned out to be positively correlated and extremely statistically significant ($p<0.01$) for all the four countries was Internet access. A strong positive correlation was demonstrated for the Czech economy. The Pearson correlation coefficient for this country was 0.942. For other countries, its value ranged from 0.800 to 0.871.

5. Conclusion

In conclusion, it should be stressed that the presented analysis is only an outline of the situation concerning the innovation level of the economies in question. Nevertheless, it constitutes a springboard for further research – the research which might also focus on other determinants that could help identify certain correlations, given the apparent differences and similarities of said economies.

The above analysis indicates that the innovation of each of the Visegrad Group states is still far from the average level of innovation for the EU; however, what can be observed is a clear advantage of the Czech economy in this respect (it has the highest SII value in the entire Group). The Czech Republic is also a leader when it comes to the share of R&D expenditure in GDP. Both Poland and Slovakia rank similarly in these categories. However, when analysing this category amount-wise, Poland definitely comes to the fore.

Despite the apparent leadership of Poland in the number of patent applications submitted to the EPO, it is still not much compared with the Polish population. The correlation results indicate that the number of submitted EPO applications for all four countries is strongly dependent on the following: GERD, BERD, Internet access, and the number of researchers. The number of people employed in the entire R&D sector is significant for the Czech Republic, Hungary, and Slovakia. It is not significant for the Polish economy. Another vital innovation factor is the potential of high-tech companies. However, as indicated by the study, the size of this sector proved to be significant only for the economy of Poland and Slovakia.

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Analysis of the Structure of Primary Energy Production in Poland Against the European Union

Wioletta Skrodzka

Częstochowa University of Technology
Chair of Econometrics and Statistics, Management Faculty
Armii Krajowej 19b, 42-200 Częstochowa, Poland
Częstochowa, Poland
e-mail: w.skrodzka@op.pl

Abstract

The civilizational development is reflected in the increasing energy demand. Renewable energy sources are an alternative to fossil fuels and contribute to the reduction of greenhouse gases emission, help diversify energy supplies and minimize the dependency on unstable fossil fuels markets (particularly of oil and gas). The development of the RES sector is one of the priorities of the Polish government. According to the 2009/28/WE directive and the long-term strategy of the Commission presented in the energy action plan till the year 2050 (COM(2011) 885), the EU member countries should gradually increase the percentage of renewable energy sources in the total energy consumption in the transport sector. The main goal of the article is to assess the changes taking place in the structure of the primary energy production in Poland in the context of legislative requirements. The article will test the hypothesis that the structure of obtaining energy in Poland and the tempo of change in this respect differ from the EU average.

Keywords: Energy Policy, Primary Energy Production, Renewable Energy Sources, Similarity of Structures

JEL Classification: O13, C1, Q48, Q42

1. Introduction

The European energy sector is going through a transformation caused by the commitments to reduce the CO₂ emission, the increasing percentage of renewable sources (RES) (Commission Staff Working Document, [online], 2014), and the need for reliable and reasonably priced energy supplies. The new organization of the European energy sector is described in the project "Energy Union" worked out by the European Commission in 2015 (Energy Union Package, [online], 2015). It combines the European energy policy with the premises of the climate policy concerning emissions reduction and the decarbonization of the energy sector, as well as the Internal Energy Market (IEM) implementation (Commission Staff Working Document, [online], 15 July 2015). It is also a foundation for the future safe and low-emission energy system with a significant RES percentage, and flexible supply and demand on the energy market. The European concept of the energy market pays special attention to the energetic efficiency (Cowart, [online], 2014; Bayer, [online], 2015) and supply management. It underlines the role of the European Networks of Transmission System Operators for Electricity (ENTSO-E) and the Agency for the Cooperation of Energy Regulators (ACER), as well as the need for cooperation between the member states (Booz & Co, [online], 2013). It also

accentuates the issue of the markets liquidity and demand management and points out to the role of the demand aggregates (Abdul Muhaimin, [online], 2015).

The European Union is the leader in the renewable energy sources technology. It holds 40% of world's patents in the area of renewable energy, and produces half of the world's power from renewable sources (excluding water plants) (Scarlat, Dallemand, Monforti-Ferrario, Banja, Motola, 2015). The directive (Directive, 2009) on renewable energy sources from 23rd April 2009 stipulates that 20% of the total energy consumption in the EU in 2020 must be covered by renewable sources, and the goal is divided into sub-objectives on the level of a country with the consideration of different starting points of individual countries (Śmiech, Papież, 2014). And the Commission's long-term strategy presented in the energy plan till 2050 (COM, [online], 2011) shows that in 2030 energy from renewable sources should constitute at least 30%. The EU sets demanding standards concerning the reduction of Carbon Dioxide emission (Winchester, Reilly, 2015). The targets put forward by the Union for 2020 and 2050 are a chance for Poland to further develop new technologies, but also a threat connected with the barriers of the economic development.

The goal of the present work is to analyze the structure of the energy production in Poland in contrast to the EU and its environment and climate targets which require the member states to introduce changes into production entities.

2. Energy Production in Poland and in the European Union

Although the demand for energy in the EU has been decreasing since 2006 (Eurostat, [online], 2016), the growing percentage of renewable energy sources whose work is not continuous and unforeseeable calls for the management of production and energy demand (DG ENER, [online], 2013). Analyzing the output of the primary energy in the EU in the period 2004-2014 we observe a negative trend in the majority of energy sources, except for the renewable sources (Table 1).

Table 1: Total Production of Primary Energy in EU-28 and in Poland, 2004-2014. (Mtoe-Million Tonnes of Oil Equivalent)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
EU-28	930.1	900.2	881.6	856.5	850.7	816.0	831.6	802.9	794.3	789.7	771.6
PL	78.5	78.2	77.2	72.0	70.8	67.1	66.9	67.9	71.1	70.5	66.8

Source: Eurostat; [online] [cit.2016-02-17], Available: data codes: ten00076

The energy balances (also called energy balance sheets) are expressed in thousands of tonnes of oil equivalent (ktoe). A tonne of oil equivalent is a standardized energy unit defined as a net calorific value of 107 kilocalories (41 868 MJ), which is roughly the net energy equivalent of a tonne of crude oil.

Compared to 2013, the primary production of energy in the EU-28 dropped in 2014 by 2%. The biggest decrease was observed in the production of gas (10%), followed by the production of fossil fuels (4%) and petroleum derived products (2%). The production of energy from renewable sources, on the other hand, increased by 2%.

Table 2: Primary Energy Production, Share of Each Fuel to Total Production in EU-28 and in Poland, 2010- 2014 (Mtoe)

	Total production (Mtoe)	Solid fuels	Oil (total)	Natural gas	Nuclear energy	Renewable energy	Wastes (non ren.)
2010							
EU-28	831.6	164.0	97.1	159.8	236.6	163.0	11.1
PL	66.9	55.1	0.7	3.6	0.0	6.9	0.6
2011							
EU-28	802.9	166.6	84.8	141.7	234.0	162.2	13.6
PL	67.9	55.3	0.7	3.9	0.0	7.4	0.6
2012							
EU-28	794.6	166.1	76.7	133.2	227.7	177.4	13.6
PL	71.1	57.5	0.7	3.8	0.0	8.5	0.6
2013							
EU-28	790.3	155.8	71.6	131.8	226.3	192.8	12.0
PL	70.5	56.8	0.9	3.8	0.0	8.5	0.5
2014							
EU-28	771.7	149.3	70.0	118.0	226.1	195.9	12.4
PL	66.8	53.6	0.9	3.7	0.0	8.1	0.5

Source: Eurostat [online]; [cit.2016-02-17], Available: data codes: ten00076, ten00080 and ten00081)

The most popular sources of renewable energy in EU-28 in 2014 were: biomass combustion (63,1%), hydroelectric plants (16,5%), wind power plants (11,1%), solar energy (6,1%) and geothermal energy (3,2%).

The Polish electroenergetic system is based on sources producing energy from coal and lignite, with a modest use of RES. Recent years have seen an increase in the percentage of energy from renewable sources, particularly that coming from biomass combustion and wind farms and a drop in the percentage of lignite energy (Pask, Surma, 2014).

3. Similarity Measurement and Structural Dynamics Analysis

The topic of structure analysis has been long present in many fields of science. The comparison of structures and determination of the level of change in time is characteristic for economic and social sciences. Literally speaking, "structure" means an arrangement and the mutual relationships between its elements. A structure comparison can have either a spatial character - when the structure of two or more objects are compared, or a temporal character - when the structure of the phenomenon is analyzed in two or more periods. However, the notion of structure remains somewhat vague, which is why research on it is still carried out (Kukuła, 1996; Żwirbła, 2006). For the purpose of this work, it has been assumed with Stawicki (Stawicki, 2004), that the notion of structure can be defined twofold:

The structure of a certain population understood as a vector. Its components determine the number of the units of the population belonging to individual classes (states) created in the population division process according to a specific criterion. The sum of the vector's components is the general size of the population.

The structure of shares in a given population understood as a vector whose components present the share of individual classes (states), created in the division of the population according to a specific criterion, in the general number of the population. The sum of this vector's components equals one.

The second notion of structure corresponds with the traditional understanding of structure's vectors.

Subject literature describes many measures for comparing the similarity of structures. When it comes to the measures of dynamics the selection is narrower. One of the concepts guiding the measurement of the structure change intensity says that if the structure differs in two comparable periods, it is indicative of a change in the structure, and the greater the difference between the two periods, the higher the level of the transformation (Rutkowski, 1981). 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. 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.

$$V_{t,t+\tau}^i = \left[\sum_{j=1}^k f_{j,t+\tau}^i \left(\frac{f_{j,t+\tau}^i}{f_{j,t}^i} - 1 \right)^2 \right]^{\frac{1}{2}} \quad (1)$$

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 α 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 α 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° , 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° 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.

4. Analysis of the Changes in the Sector Structure of Primary Energy Production

The analysis of the changes in the structure of primary energy production in Poland and in EU-28 uses annual data from the Eurostat energy balances of the 2010-2014 period. The structure of primary energy production in EU-28 and in Poland is presented in tables 3-4.

Table 3: The Frequency Coefficient of the Structure of the Primary Energy in EU-28 in the 2010-2014 Period

Years	The structure of primary energy production in EU-28					
	Solid fuels	Oil (total)	Natural gas	Nuclear energy	Renewable energy	Wastes (non ren.)
2010	0,19721	0,116763	0,192159692	0,284512	0,196008	0,013348
2011	0,207498	0,105617	0,176485241	0,291444	0,202018	0,016939
2012	0,209036	0,096527	0,167631513	0,286559	0,223257	0,017116
2013	0,19714	0,090599	0,166772112	0,286347	0,243958	0,015184
2014	0,193469	0,090709	0,152909162	0,29299	0,253855	0,016068

Source: Own calculations

Comparing the sector structure of the primary energy production in EU-28, we can say that the percentage of energy from renewable sources increases in the discussed period.

In the primary production of energy in EU-28 nuclear energy holds the biggest share. In 2014 it was on the level of 29.3%, next came renewable energy (25.4%), solid fuels (19.4%), gas (15.3%), and petroleum products (9.1%).

Table 4: The Frequency Coefficient of the Structure of the Primary Energy in Poland in the 2010-2014 Period

Years	The structure of primary energy production in Poland					
	Solid fuels	Oil (total)	Natural gas	Nuclear energy	Renewable energy	Wastes (non ren.)
2010	0,823617	0,010463	0,053811659	0	0,103139	0,008969
2011	0,814433	0,010309	0,057437408	0	0,108984	0,008837
2012	0,80872	0,009845	0,053445851	0	0,11955	0,008439
2013	0,805674	0,012766	0,053900709	0	0,120567	0,007092
2014	0,802395	0,013473	0,055389222	0	0,121257	0,007485

Source: Own calculations

Production in Poland in the analyzed period is based on fossil fuels which in 2014 accounted for 80,2% of the production. There seems, however, to be an upward trend in the percentage of renewable energy. In 2014 it was on the level of 12,1%, followed by gas (5,5 %), and petroleum products (1,3%). In Poland there are no nuclear power plants.

Angle measure was used to assess the similarity of the primary energy production structure in Poland and in EU-28. The results are shown in table 5.

Table 5: The Values of the Structure Similarity Measures

Years	2010	2011	2012	2013	2014
$\cos\alpha$	0,510956	0,534324	0,271103	0,522292	0,513696

Source: Own calculations

The analysis showed a significant difference between the structures of primary energy production in Poland and in EU-28 in the discussed period, the angle between the vectors is 74°. In the other years it hovers around 58°, which suggests a moderate similarity of the structures.

In the next step we determined the intensity of the structural changes in the analyzed period using the formula (1). The values of the structural change intensity measure are presented in table 6.

Table 6: The Dynamics of the Structural Change in Primary Energy Production in Poland and in EU-28 in the Period 2011-2014

Years	Change intensity measure in comparison to the previous year	
	EU-28	Poland
2011	0.065499	0,026761
2012	0.060816	0.038192
2013	0.057232	0.036444
2014	0.041878	0.011127
2014:2010	0.184403	0.075112

Source: Own calculations

Both measures have low, similar range values, which means that the intensity of the change tempo in the analyzed structures is also low. But measures for EU-28 are higher which suggests a greater intensity of the changes in the whole European Union than in Poland. The strongest changes in the sector structure of production in EU-28 took place in 2011, and in Poland in 2012. The last line of table 6 shows the value of the measure for the first and the last year 2014:2010. Regardless of the change path and concentrating on the two boundary years, we can say that the intensity of changes in 2014 compared to 2010 was higher in the whole EU than in Poland.

5. Conclusion

Nowadays, the energy priorities are shifting. Cleaner, faster to install and better adjusted to local needs, new technologies draw attention of investors and local authorities, and are starting to compete with the centralized and monopolized energy sector (Holland, 2016). Costs are becoming less and less important in comparing different energetic options for the benefit of factors whose economic value is hard to express explicitly such as energetic independence, energy sources diversification, reliability of supplies. It is even more important in the face of potential future energy crises (Piłatowska, Włodarczyk, Zawada, 2015; Cherp, Jewell, 2014). In the article we analyzed the structure of primary energy production in Poland and compared it with the structure in the whole European Union. The similarity of the structure of primary energy production by sectors was analyzed for the period 2010-2014. The conclusion drawn

is that the discussed structures differ significantly. The Polish power industry is very different from the production structure in the European Union. In the analyzed period we observed changes in this structure but they were more intense in the whole EU-28 than in Poland.

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Changing Role of the State in Slovenian Economy: Privatisation under European and International Pressure

Miklós Somai

Centre for Economic and Regional Studies of Hungarian Academy of Sciences
Institute of World Economics, Research Group on European Integration
1535 Budapest Pf. 936
Budapest, Hungary
e-mail: somai.miklos@krtk.mta.hu

Abstract

In Slovenia, the first wave of privatisation still bore the imprint of the socio-economic heritage of the preceding communist regime, the old elite having taken prominent part in it. This ensured a degree of continuity and resulted in balanced macroeconomic development. Things began to go wrong when, during the second wave of privatization, the new elite tried to “complete” their political power with economic one, by acquiring leading positions and even ownership in State-owned enterprises, on the basis of high-risk credits lent by State-owned banks (also peopled with loyal party supporters). This “conquest” came in the worst moment and played a crucial role in Slovenian economy having, since the outbreak of the global crisis, to suffer the deepest slump in the Eurozone. Prolonged, W-shaped recession coupled with political instability strengthened the pressure from both speculative financial markets and international (of which European) institutions to get the Slovenian government to bail-out the largest State-owned banks and to undertake the third wave of privatisation.

Keywords: *Banking Bail-out, European Integration, Financial and Economic Crisis, Privatisation, Slovenia*

JEL Classification: *L33, H81, G24, H12, F02*

1. Introduction

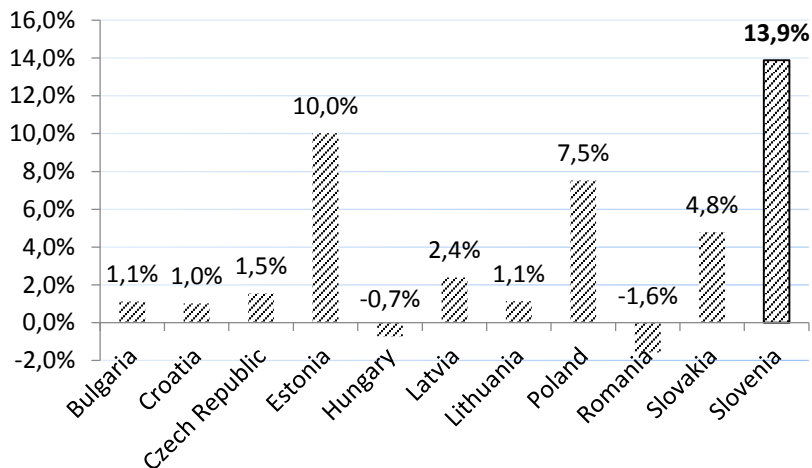
At the time of gaining its independence, Slovenia was much better placed than almost all the other transition nations of the Central and Eastern European region. Thanks to its privileged geographical situation, Slovenia was only surrounded by high or middle-income countries; its economy could draw on skilled and qualified workforce with European mentality and maintained strong trade relations with the West. Considering all this, it is not surprising if Slovenia was, at that time, not only the most developed republic of the former Yugoslavia, but took also the lead, together with the future Czech Republic, in real GDP per capita terms among the would-be EU-member states of the region (ERS [online], 2015).

Once the independence had been achieved, and following a two-year long transitional recession, Slovenia experienced an unprecedented period of unbroken economic growth that ran from 1993 until the outbreak of the 2008 crisis. These 16 years were marked by a gradual transformation from socialism to a market economy, but also from a regional to a national economy, and, first of all, from a republic of the former Yugoslavia to an independent state to become a full member of the European Union as soon as by 2004 (Mrak et al. 2004, p. ix).

Interestingly, just like the Yugoslav self-management system had been a sort of moderate version of socialist planned economy, with the business sector enjoying ample freedom in their investment, production and pricing decisions, similarly the independent Slovenia adopted the mildest possible version of capitalism, a Nordic-type market economy, with high degree of social cohesion and low levels of income inequality. The success of this socio-economic model, built on consensualism, gradualism and pragmatism, has not only enabled Slovenia to gain membership in all important international institutions (EU, NATO, OECD), but has also contributed for this small country to become the fastest growing economy and the first new EU member to introduce the euro in the former Eastern Bloc.

The Figure 1 shows how, between 1988/90 and 2006/08, Slovenia did better than any other country of the region in reducing the development gap as compared with the old member states of the EU (EU15) measured in terms of real GDP per capita.

Figure 1: Reduction of the Gap in Real Per Capita GDP Terms between the EU15 (100%) and Each of the New Member State of Central and Eastern Europe in the Period of 1988/90 to 2006/08 (in Percentage Points, based on 3-Year Averages)



Note: Slovenian real GDP per capita was 47.1% of that of the EU15 in 1988-1990 on average; in 2006-2008 it stood at 61.0%. So, the gap decreased by 13.9 percentage points.

Source: Author's calculations based on ERS (2015) statistics

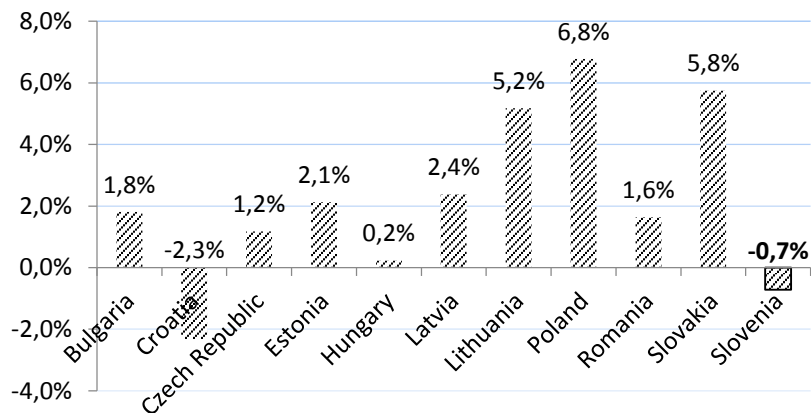
2. Problem Formulation and Methodology

At the end of 2008, the crisis abruptly put an end to this long period of fast development. The change was sudden and violent; from 2007 to 2009, the miraculous GDP growth (+6.9%) turned into a steep GDP decline (-7.8%) which was the sharpest deceleration of economic activity among the countries of the Eurozone at that time. Practically all the indicators started to follow a negative trend which, for most of them, lasted for six years; between 2008 and 2014, the rate of unemployment more than doubled, while the public debt measured in percentage of GDP grew almost four times (Eurostat [online], 2016).

Since the outbreak of the crisis, the Slovenian economy has, as several of its main export markets like Italy or Croatia, but also to a lesser extent Germany, Austria and France, experienced a W-shaped double-dip recession. As a consequence, Slovenia the once fastest

growing, most dynamic new EU member found itself at the opposite end of the ranking about bridging the development gap with the EU15, and outpaced only Croatia, the most recent EU member state to join in 2013, in that regard (see Figure 2). By early 2013, the Slovenian economy became so vulnerable that public speculation about the country's possible request for financial assistance (i.e. for being bailed out like Portugal, Ireland or Greece were) strengthened and echoed internationally (BoS, 2015 p.71).

Figure 2: Reduction of the Gap in Real Per Capita GDP Terms between the EU15 (100%) and Each of the New Member State of Central and Eastern Europe in the Period of 2006/08 to 2012/14 (in Percentage Points, based on 3-Year Averages)



Note: Slovenian real GDP per capita was 61.0% of that of the EU15 in 2006-2008 on average; in 2012-2014 it stood at 60.3%. So, the gap decreased by -0.7 percentage points
Source: Author's calculations based on ERS (2015) statistics

The main objective of this paper is to show how Slovenia got into such a desperate situation, how it could recover from it, how the Slovenian model of capitalism – and especially the role of the state – has changed during the recovery, and what internal and external forces have been driving this change. In methodological terms, the approach of explaining the whole process is to go through and present the several waves of Slovenian privatisation. The study is based primarily on qualitative analysis of the literature, documents and statistics, while empirical input derives from conference attendance, and interviews conducted with researchers and staff members of the Embassy of Slovenia in Budapest.

3. Problem Solution

In theory, there were three waves of privatisation in Slovenia – “interrupted” by such events as the gaining of independence in 1991, rehabilitations of banks first in the mid-1990s and second at the turn of 2013-2014, and the global financial and economic crisis since 2008 – but practically one can add a fourth one dating back to the 1960s. This fourth “privatisation” occurred way after the split with the Soviet Union in 1948, when the system of workers’ self-management had substituted to the centrally planned economy in Yugoslavia. In the self-management system the public ownership functions were excised through the elected workers’ council, but the latter was active only on labour and social affairs, while the strategic issues were left to the management to decide. Companies were operating in a quasi-market system in relatively independent managerial structure, and had, to a certain degree, been exposed to competition. The 1965 reform further liberalised the system by minimising the central

government leadership in managing the economy and by removing the remnants of the state control on corporate investment decisions. Managers could feel themselves like quasi owners of the companies they managed (Gulyás, 2011).

3.1 First Wave of Privatisation – Continuity Still Matters

The first wave of privatisation started at the end of the 1980s, still under the Yugoslav regime, with laws allowing workers' councils to sell their companies to private owners and, in general, a gradual transformation of socially owned companies into mixed ones (Preskovič-Sachs, 1994, p. 210). Two main conceptions had been delineated: a gradual, decentralised and commercial one, reflecting the interests of the old elite, and a mass, centralised and distributive one, reflecting the interests of the new elite. The Privatisation Law of 1992 represented a compromise between the two concepts. Apart from large, unprofitable companies to be put in the Development Fund and sold after refurbishment, and strategic ones (steel mills, utilities) to be maintained in State ownership, companies were to be sold through the following scheme: 10 per cent of the shares went to the Pension Fund, another 10 per cent to the Restitution Fund, a further 20 per cent to the Development Fund, 20 per cent were sold to the employees (in exchange for their vouchers) and the residual 40 per cent was left to the companies to decide on (Mencinger, 2007, pp. 8-9).

The variety of privatisation methods, the parallel process of restitution (mostly in kind) of the property which had been nationalised between 1945 and 1958, the existence of a significant "privatisation gap", and the managers' fence-sitting attitude of waiting for better legal framework all slowed down the whole process which ended in 1999. This first wave of mass privatisation, characterised by limited involvement of foreign and/or strategic investors, was followed by a less transparent consolidation of ownership where domestic companies, managers and funds (state, semi-state and private ones) became the key players (Böhm et al., 2001, pp. 31-32). However, this first wave of privatisation still was an organic one, as the managers who, in the communist era, had played an important role in the preparation of the whole transition process, remained heavily involved in the life of corporations.

3.1.1 Banks – Rehabilitation and Attempts at Privatisation

Parallel to the privatisation process in the corporate sector an opposite process set in motion in the financial one. At the beginning of the transformation period, the regionally organised banks, traditionally linked to their clients, were automatically privatized when their clients-companies had been (Mencinger, 2007, p. 20). But, due to the disintegration of Yugoslavia and the ensuing financial ruin of companies, the banks remained with 30 to 40 per cent of non-performing loans on the one hand, and a lot of liabilities mostly towards the London Club creditors on the other. A huge bank rehabilitation and nationalisation program was inevitable. New, 100 per cent State owned banks (like NLB and NKBM) were established, bad assets were swapped for government bonds totalling approximately EUR 1 billion. As a result, in 1997, direct and indirect control of the State over the Slovenian financial sector stood at least at 50 per cent (World Bank, 1999, pp. 62-64).

A couple years before the second wave of privatisation, there were rather unsuccessful attempts to privatise the two largest State owned banks, NLB (Nova Ljubljanska Banka) and NKBM (Nova Kreditna Banka Maribor). While the privatisation of the latter proved to be a total failure, that of the former resulted in a temporary success: in 2002, the Belgian KBC acquired 34 per cent of NLB's capital and the EBRD (European Bank for Reconstruction and Development) another 5 per cent. The Belgians bought themselves into NLB with a view of

using it as a springboard to enter the ex-Yugoslav markets. But, neither for their plan about NLB or their role in it were they able to reach agreement with the main owner of the bank, i.e. the Slovenian government. So, they divested their share ownership in the bank in two steps; in 2006, reducing it to 22% and in 2012 to 0% (WSJ and Reuters, 2012).

3.2 Second Wave of Privatisation – The Original Sin

The second wave of privatisation was a direct consequence of the reform strategy of 2004, formulated by the new centre-right government which came back to power after 12 years in opposition. Their new paradigm of development rooted in neo-liberalism and supply side economics. They called for urgent need for change and wanted to put an end to gradualism (Mencinger, 2007, p. 24). As for the assessment of this second wave of privatisation which started in 2005, opinions diverged: the government thought it to be a transparent process, opened to foreign investors, focused on companies' interests, pushing back State ownership while reconciling both big and small shareholders interests (Government of Slovenia, 2005, pp. 66-75); the opposition thought it to be a non-transparent process whereby the government behaved themselves as conquistadors. They put their loyal men into companies' managerial and supervisory boards and used the State-owned banks to finance management buy-outs, hence exposing both banks and companies to extreme risks and overheating the economy, especially in cyclically sensitive sectors like construction, real estate and financial mediation (Mencinger, 2007, pp. 29-30). Neutral experts called the process insider privatisation (Ivers, 2014, p. 29) and even the OECD drew attention on that the weak framework for the governance in State-owned banks was likely to have contributed to poor credit standards, excessive risk taking and misallocation of credit (OECD, 2013, p.9).

It has to be added that growing demand for credit, stemming from the above mentioned privatisation process, increased the competition among banks present in Slovenia. Especially, the majority foreign owned ones proved to be very aggressive in their efforts to expand their market share: on the solid basis of their financially strong parent banks, they offered much favourable terms and had been raising their LTD ratio to much riskier heights than domestic banks did (BoS, 2015, p. 17).

The coincidence of the effects of the above described insider privatisation, the mistakes committed by the left-wing government in power from 2008 to 2011 – e.g. by not retaining themselves, not even in 2009 i.e. the worst year of the crisis, from increasing public sector wages (+10%) and also minimum wage (+23%) (Stoviček, 2013, pp. 1-2) – and some other factors, like the W-shaped growth-path of the country's main export markets, made the crisis in Slovenia one of the deepest and the most long-lasting in both the region and the Eurozone.

Banks, which got used to obtain cheap and easy credit from international financial markets – especially after the country's entering the ERM2 exchange rate mechanism in June 2004 – and were expanding their lending to the private sector at an ever-increasing pace for the last three years preceding the outbreak of the global financial crisis, suddenly, in 2008, found themselves in an entirely new situation (BoS, 2015, pp. 7-13). They were obliged to tighten credit standards towards the corporate sector in two waves: first when, due to the lack of trust on the financial markets, money and capital markets completely dried up (credit crunch); second when the loans they had granted were not being serviced by the enterprises. For the latter, two big bubbles burst in tandem with the global financial crisis: a real estate price bubble and a stock market bubble. With an ever-growing number of enterprises going bankrupt, the fundamental problem for banks – especially for those State-owned, having largely been involved in the finances of the management buyouts of the new elite – came from the rapidly

rising proportion of non-performing loans, which would not only imply a deterioration of their asset quality but also a limitation of the volume of credit they could extend to new clients (BoS, 2015, pp. 26-31).

3.3 Third Wave of Privatisation – Under Pressure

As a natural consequence of the crisis, Slovenia's macroeconomic indicators quickly deteriorated. The country has been under excessive deficit procedure since 2009, but in 2013 its macroeconomic imbalance also was considered to be excessive. Since 2012, there has been an increased pressure on Slovenia's government to introduce structural reforms and go on with the privatisation process. In the spring of 2013, open speculation that Slovenia would be next to be bailed out, i.e. the next after Greece, Portugal and others, became ever stronger. European institutions (Commission, European Central Bank) together with international ones (IMF, OECD, but also credit rating agencies, especially Moody's¹⁰⁴) pushed Slovenia towards going on with privatisation and further opening its domestic market to foreign investors.

Finally when, in May 2013, the Slovenian government tabled their so-called National Reform Program and Stability Program to the Commission, both documents contained measures about taking the necessary steps to conduct a system-wide asset quality review (AQR) as well as comprehensive bottom-up stress tests in the financial sector, and going on with the privatisation process. A decision about the privatisation of 15 State-owned entities (SOEs), of which NKBM, the second largest bank and the national telecom company, was pushed in a hurry through both government and parliament. In exchange for all these concessions, Slovenia obtained a two-year extension of deadline (i.e. until the end of 2015) to bring its general deficit under 3 per cent of GDP and back the fiscal consolidation with comprehensive structural reforms (Council of the EU [online], 2013, pp. 12-13).

The AQRs were performed in the second half of 2013, and their results, as well as those of the stress tests, published on 12 December 2013. Still in December, the government decided on extraordinary measures for 5 domestic banks (of which the three biggest: NLB, NKBM and Abanka), especially on their recapitalisation amounting to EUR 3.2 billion, and the transfer of the majority of their non-performing loans to a bad bank. The bank recovery process of late 2013 and early 2014 has contributed to a significant reduction in risk in the Slovenian banking system, hence to restore the confidence in the international financial markets. Spread with German bonds returned to its previous level of around 100 basis points, the typical level since the outbreak of the global crisis (BoS [online] 2015, pp. 58-90).

The third wave of privatisation began with the nationalisation of the biggest Slovenian banks. Still in December 2013, the government committed themselves to reduce State ownership in NLB to not more than 25 per cent plus one share, and to sell their entire part in both NKBM and Abanka (BoS [online], 2013, pp. 1-2). Since then, the privatisation of 15 SOEs has been gradually set on its foot. As of mid-March 2016, half of the companies to be privatised –of which Adria Airways, Aerodrom Ljubljana or Elan– have been ticked off in the list of Slovenia Sovereign Holding's website. None of them was sold to domestic buyers (SSH [online], 2016).

¹⁰⁴ On 30 April 2013, Moody's credit rating agency downgraded Slovenia's long term sovereign bonds to junk status ('Ba1') while both Fitch and S&P maintained it at upper medium grade ('A-'). The spread of 4 notches and 2 rating categories (the intermediate category between junk and upper medium being the lower medium one) was wider than for any other OECD country. (FT [online], 2013)

4. Conclusion

Since independence, the Slovenian society has adopted a very cautious attitude about privatisation. This “tradition” has been severely damaged by the consequences of the second wave of privatisation. Undeniably, the new elite, by acquiring leading positions in SOEs, and by stuffing them with high-risk credits lent by State-owned banks (also peopled with loyal party supporters) in order to gain ownership in these SOEs, played a crucial role in Slovenian economy having, since the outbreak of the global crisis, to suffer one of the deepest slump in the Eurozone.

However, considering Slovenia’s remarkable performance as long as until the crisis – being the fastest growing economy and the best out of all new member states in reducing the development gap with the EU15, and also the first new member to join the euro zone and to hold the Presidency of the Council – and considering its commitment to European integration and ensure the financial stability of the euro area through taking full responsibility in both EFSF and ESM – not to mention of being the most exposed in the euro financial crisis in terms of bilateral loans as a share of GDP –, the price to be paid was huge: Slovenia, under external pressure, had to agree to start a new privatisation program which would involve the sale of several of its nationally important entities, the three biggest banks included.

But, even if its predecessor had to make concessions, the current government is well aware of the general feeling of the Slovenian people. Hence, it is arguing that the sale of state assets should not be an end in itself. It should be based on clear strategy in order to bolstering growth in economy. For this, a balance between desires and reality must be kept. The privatisation process should not be rushed (Škrilec, 2015).

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Brand Awareness of Mobile Phones Perceived by Generation Y in the European Context

Vojtěch Spáčil

VŠB - Technical University of Ostrava
Faculty of Economics, Department of Marketing and Business
Sokolská třída 33
Ostrava, Czech Republic
e-mail: vojtech.spacil@vsb.cz

Abstract

The paper examines the perception of key global brands on mobile phone market. Brand awareness of mobile phones is judged through brand spontaneous knowledge, brand attitude and brand ownership. The study is based on primary quantitative research which focuses on members of generation Y represented by university students. Czech students and European students of ERASMUS + program were target groups of this survey. The results reveal strong position of Apple brand and weak perception of Chinese brands among European students in comparison with Czech students. The findings also illustrate the relationship between brand knowledge and adoption categories of brand innovations.

Keywords: Brand Awareness, European Students, Generation Y, Mobile Phones Market, Perception

JEL Classification: M31, M37, C83, C40

1. Introduction

The market for mobile phones is probably the most dynamic of any in the world. The degree and rate of change in technology, market adoption and product innovation is staggering. Mobile phones have changed from being a luxury to a mass consumer market.

1.1 Market Mobile Market Characteristics

The worldwide smartphone market grew 13.0% year over year in 2015 Q2, with 341.5 million shipments, according to data from the International Data Corporation (IDC) Worldwide Quarterly Mobile Phone Tracker (IDC [online], 2016). This growth is primarily due to gains experienced in emerging markets such as APEJ (Asian Pacific except Japan) and MEA (Middle East). This quarter's shipments were slightly lower than forecast and IDC expects to see a noticeable slowdown in smartphone shipments in 2015 as China joins North America and Western Europe in a more mature growth pattern. Android dominated the market with an 82.8% share in 2015 Q2. Samsung reasserted its global leadership with a renewed focus on lower-cost smartphones.

No matter of slight slowdown in the smartphone sales the global mobile advertising market will hit two significant milestones in 2016, according to new figures from e-Marketer (e-Marketer [online], 2016), surpassing \$100 billion in spending and accounting for more than 50% of all digital ad expenditure for the first time. The \$101.37 billion to be spent on ads served to mobile phones and tablets worldwide next year represents a nearly 430% increase from 2013. Between 2016 and 2019, the last year in our forecast period, mobile ad spending

will nearly double, hitting \$195.55 billion to account for 70.1% of digital advertising spend as well as over one-quarter of total media ad spending globally. The main target of advertising spend is to strengthen brand equity of vendors for mobile phone market.

1.2 Brand Equity

It is widely recognized that branding and or brand management is one of the most important factors in operating today's international market (Berry, 2000; Kapferer, 2008; Krishnan and Hartline, 2001; Melewar and Storrie, 2001, Virutamasena, P., Wongpreedee, K. and Kumnungwuta, W., 2015).

A brand represents enormous values for a company and is a powerful tool to improve marketing productivity (Aaker, 1991). Brand value is commonly called brand equity, which is accrued gradually over time and can be derived from multiple sources (Keller, 1993).

Brand equity refers to the 'set of brand assets and liabilities linked to a brand, its name and symbol that adds to or subtracts from the value provided by a product or service to a firm and/or to that firm's customers' (Aaker, 1991, p.5). Aaker's (1991) brand equity framework includes brand name awareness, brand loyalty, perceived quality, and brand associations.

Among the four key dimensions of brand equity, brand awareness is an initial element in building strong brand. A well-known brand is more valuable than an unknown brand (Pelsmacker, Geuens, van den Bergh, 2007). Brand awareness is also necessary to penetrate the consideration set of consumers (Aaker, 1996). The more a brand is in consideration set of consumers, the greater the chance that it will be purchased and that consumers will become loyal to it (Keller, 1993). Furthermore, brand awareness leads to more interest and processing of advertising for the brand, thereby enhancing the effectiveness of marketing communications.

Marketing scholars also have pointed out the importance of brand associations in the process of building a strong brand, as they are about images and symbols associated with a brand or a brand benefits and thus can ultimately drive brand performances (He and Li, 2010; Keller, 1993; Bauer, Sauer, and Exler, 2008). Brand associations are often defined as the degree to which a specific product/service is recognized within their product/service class/category, while brand image involves the perceptions of particular brand as reflected by the brand associations held in a consumer's memory (Keller, 1993; Aaker, 1991). With the above definitions, brand associations and brand image have been used interchangeably in the literature (Arai, et al., 2014).

Communication effects can be measured through following the hierarchy-of-effect logic: awareness, knowledge, attitude and intention to buy. Top-of-mind awareness is an unaided awareness test in which consumer is asked which brand of a specific product category is the first one that comes to mind. Subsequently, the consumer is asked if he or she can name other brands in the same product category (again unaided awareness). Finally, a number of brands are mentioned, and the consumer has to indicate the ones he or she knows (prompted awareness). Also attitude change or the change of brand's image can be measured. As well as the communication effect can be tested on the basis of the intention to buy of a target group of consumers. It is important that the question on the purchase intention is related to the near future or the next purchase (Pelsmacker, Geuens, van den Bergh, 2007).

1.3 Generation Y

Members of Generation Y can be defined such as people who were born between years 1980 and 2000. Members of Generation Y were influenced by these technologies during their adolescence and later, but using these technologies during their childhood was not usual. We can expect these two generations can perceive images of brands and institutions, can have different opinion about concerns and also can have different shopping behaviour because modern information technologies influence your lives deeply (Van den Bergh and Behrer, 2011, Pawlasová, Spáčil and Valečková, 2014).

2. Problem Formulation and Methodology

Mobile phone belongs to one of the most frequent used durable products. A recent study by mobileinsurance.com has revealed that the average person spends 90 minutes a day on their phone. That figure may not sound like a lot but that amounts up to 23 days a year and 3.9 years of the average person's life is spent staring at their phone screen (mobile statistics [online], 2016).

2.1 Problem Definition

University students as Generation Y representatives spent even more time with their mobile phones. Intensive spending of mobile technology gives an opportunity for monitoring which brands and types of mobile phones are heavily bought and applied among generation Y users. Members of generation Y (reference group) disseminate information and user experience verbally (word-of-mouth) or through social media. The role of this reference group is supported by internationalization process at the European universities. More and more European students benefit from exchange programs of ERASMUS+ and spend part of their study at partner's European university. Have incoming ERASMUS students the same brand awareness and brand attitude as Czech students due to global advertising campaign of mobile phone vendors? Is brand perception of both segments different? Has the brand knowledge affected by adoption categories of smartphone brands? This contribution tries to answer these questions.

2.2 Research Methodology

Deductive logic connected with quantitative research has been utilized (Saunders, Lewis & Thornhill, 2012) for this research. The aim was to collect as much data as possible and then statistically analyze them. Survey was considered as the best option how to conduct this research. Survey is appropriate when intending to gain facts, opinions, behaviour and attitudes from large amount of respondents. It also corresponds with scientific approach as usually gives answers to concrete questions (Saunders et al., 2012 and Maylor & Blackmon, 2005). The questionnaire consisted of twenty topical questions concerning with brand equity and consumer behavior on the mobile phone market. Just the findings from three questions have been searched in this contribution. Spontaneous knowledge, adoption category and brand attitude were topics mentioned in these three questions.

Table 1: Sample Structure According to the Country Residence and Gender

	Czech students	ERASMUS students	Female	Male
absolute frequency	260	93	191	162
relative frequency	74%	26%	54%	46%

Source: author's calculations

On-line interview was chosen as a data collection method for Czech students and personal interview for ERASMUS students due to availability. Sample size was 353 students. Czech students studied at three universities (VŠB-Technical University Ostrava, University of Technology Brno, Palacký University Olomouc), ERASMUS student were contacted just at VŠB-Technical University Ostrava. Non-probability sampling was chosen as sampling approach. Quota sampling was considered as the most appropriate for this paper. Number of students from three Czech universities and number of ERASMUS students is fairly balanced (see table 1).

Data collected from both countries were firstly edited and coded. Then data were analyzed via statistical package of IBM SPSS Statistics version 23. For all three discussed questions frequency distribution was counted because all questions have been classified as closed ones. All variables obtained from questions were nominal (non-metric) so non-parametric tests were used for testing. Chi square statistic was applied to test statistical significance (see tables 3 and 6) of the observed association in cross tabulations (see tables 2, 4, 5 and 6). It assisted us in determining whether a systematic association exists between two variables. First tested variable was always the attribute of brand equity (brand awareness or brand attitude), second variable expressed either country residence of respondent or adoption category of brand innovation.

3. Problem Solution

Brand awareness and brand attitude was discussed to examine the perception of mobile phone brands by generation Y.

3.1 Brand Awareness

Samsung has scored the highest brand spontaneous knowledge from all mentioned brands no matter the students come from (see table 2). Two brands (Nokia/Microsoft and Apple) have reached the opposite results among Czech and ERASMUS students. While brand Nokia/Microsoft kept their position among Czech consumers, Apple has higher spontaneous knowledge on EU market.

Table 2: Spontaneous Knowledge of Mobile Phone Brands Based on Country

	Czech students	ERASMUS students
Samsung	88%	92%
Nokia/Microsoft	80%	59%
Apple	55%	90%
Sony/Sony Ericsson	48%	45%
HTC	43%	43%
LG	33%	31%
Huawei	32%	29%
Lenovo	0%	14%
Xiaomi	0%	9%

Source: author's calculations

These findings were confirmed by statistical tests on significance level 95% (see table 3). Knowledge of Chinese brands by Czech students was zero with exception of Huawei (see table 2). Brand Lenovo is rather famous as computer brand and Xiaomi has entered Czech market recently.

Table 3: Significance Tests for Country Differences of Spontaneous Knowledge

	Significance
Samsung	0.242
Nokia/Microsoft	0.000
Apple	0.000
Sony/Sony Ericsson	0.630
HTC	0.991
LG	0.790
Huawei	0.607
Lenovo	0.000
Xiaomi	0.000

Source: author's calculations

Has the brand adoption of innovations at the mobile phone market impact on the spontaneous knowledge? Assignment to the adoption categories was a result of self-assessment of students. Five statements have been submitted to them and they have chosen a statement which the best reflects their consumer behaviour. For instance the category of innovators was explained as "consumers who are the first willing to try a new product of technology". Early adopters were described as "those who adopting new product quickly but in careful way". Adoption process seems to be quicker in the Czech republic no matter that the share of innovators is lower than for ERASMUS students (see table 4). Czech students perceive themselves significantly different as laggards as "consumers who are really conservative, avoiding changes until the traditional alternatives are not already available".

Table 4: Adoption Categories of Brand Innovations Based on Country Residence

	Czech students	ERASMUS students
Innovators	2.7%	5.4%
Early adopters	36.9%	20.7%
Early majority	33.5%	41.3%
Late majority	6.5%	23.9%
Laggards	20.4%	8.7%

Source: author's calculations

The structure of adoption categories for mobile phone brand innovations is not very different from general structure (see table 5). Just in the case of Apple brand the structure of adoption categories differ and this variance is statistically significant.

Table 5: Spontaneous Knowledge of Brands Based on Adoption Categories

	Innovators	Early adopters	Early majority	Late majority	Laggards
Samsung	3.2%	32.7%	37.5%	10.5%	16.2%
Nokia/Microsoft	2.7%	33.8%	36.1%	9.9%	17.5%
Apple	3.5%	33.8%	36.0%	14.0%	12.7%
Sony/SE	3.0%	30.5%	39.5%	11.4%	15.6%
HTC	2.6%	36.8%	37.5%	8.6%	14.5%
LG	1.8%	31.6%	38.6%	11.4%	16.7%
Huawei	2.7%	30.9%	41.8%	9.1%	15.5%
Lenovo		38.5%	46.2%	15.4%	
Total	3.4%	32.7%	35.5%	11.1%	17.3%

Source: author's calculations

3.2 Brand Attitude

Brand attitude on the mobile phone market was measured by two questions “Which brands are likely to buy?” and “Which brands would you ever have bought?” Samsung has taken the best position among all students although attitude of ERASMUS students to the Samsung brand is extraordinary (see table 6). Just 6.5 % of ERASMUS respondents would never have bought that brand. Czech students also favour Sony/SE and Nokia/Microsoft brands. Attitude of ERASMUS students to the Chinese brands (Huawei, Lenovo) is really negative.

Table 6: Mobile Phone Brand Attitude Based on Country Residence

	Czech students			ERASMUS students			Sign.
	I probably would have bought	I would never have bought	No idea	I probably would have bought	I would never have bought	No idea	
Samsung	69.6%	18.5%	11.9%	87.1%	6.5%	6.5%	0.004
Apple	60.0%	32.7%	7.3%	61.3%	24.7%	14.0%	0.091
Sony/SE	52.7%	20.8%	26.5%	38.7%	23.7%	37.6%	0.053
Huawei	39.6%	26.2%	34.2%	15.1%	40.9%	44.1%	0.000
Nokia/Msoft	58.5%	25.8%	15.8%	36.6%	36.6%	26.9%	0.001
Lenovo	41.2%	21.9%	36.9%	15.1%	47.3%	37.6%	0.000
HTC	54.2%	20.8%	25.0%	28.0%	24.7%	47.3%	0.000

Source: author's calculations

The high share of answers “No idea” expresses low knowledge of brand attributes which prevent to make a judgement. That conclusion is really valid for Asian brands (Huawei, Lenovo, HTC). Statistically significant differences (last column of table 6) are not just observed in the case of Apple brand (slightly similar attitude) and Sony/SE brand.

4. Conclusion

The research has been primarily focused on comparison of awareness for mobile phone brands between Czech and ERASMUS students who study at VSB-Technical University Ostrava. The aim was to find whether the brand perception is the same or different for key brands on the mobile phone market.

Samsung brand has been indicated as the most valuable brand across all respondents with the highest spontaneous knowledge and the highest ratio "I probably would have bought/I would never have bought". The highest difference has been found in the case Nokia/Microsoft brand. Czech students know the brand and opt for buying while spontaneous knowledge of ERASMUS students is significantly lower and ratio "I probably would have bought/I would never have bought" is balanced what is not very promising for the brand. Also Sony/SE brand is better perceived by Czech students. The position of Apple brand is positive for both students but spontaneous knowledge of Apple brand is extremely high in the case ERASMUS students and reaches the value of knowledge for Samsung brand. ERASMUS students have very negative attitude to Asian brands (namely Chinese ones) where ratio "I probably would have bought/I would never have bought" is lower than one. It means that less students would opt for buying brand than to refuse it. This result has not been observed in the case of Czech students. Type of adoption category has not substantial effect on spontaneous knowledge of brand. Apple brand is just one exception confirmed by statistical test.

The research study documented the differences in brand knowledge and brand attitudes of students. No matter that students come from the same generation and they are affected by global advertising campaigns brand position is different in the Czech Republic and European markets. This research cannot answer the question how diverse are European markets because sample size from particular countries was rather limited.

Acknowledgements

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The Spectre of Deflation in the Euro Area

Lenka Spáčilová

VŠB - Technical University Ostrava
Faculty of Economics, Department of Economics
Sokolská 33
Ostrava, Czech Republic
e-mail: Lenka.Spacilova@vsb.cz

Abstract

Inflation in the euro area has been below the European Central Bank's target for more than two years and is also expected to remain at a very low level in the near future. Although the recent decline in inflation is mainly the result of falling energy and food prices, low inflation can under today's economic conditions – weak global economic activity – increase deflation fears in the euro area. This paper analyses the factors that increase the risk of lasting deflation and prevent a return to the ECB's inflation target.

Keywords: Deflation, Inflation, Inflation Expectations, Energy Prices, Euro Area, European Central Bank, Output Gap

JEL Classification: E 31, E65, F45

1. Introduction

The global financial crisis, which started in late 2008 and was caused by a combination of asset price bubbles and a credit bubble, affected member countries of the euro area more strongly than it was at the global level. Economic repercussions of crisis had hit the euro area so hard that seven years since its beginning, the euro area economy appears not to have quite recovered. The euro area output is far below standard estimates of potential output and in addition inflation has been low and in some cases even turned negative. This development has increased concerns about a possibility of self-reinforcing spiral of deflation and recession in the euro area. Therefore, the aim of this paper is to analyze the factors that increase the risk of lasting deflation in the euro area.

According to mainstream economists, deflation is defined as a general decline in prices, with emphasis on the word 'general'. In November 2013, Mario Draghi (ECB, 2013) has described deflation in the euro area as a situation where price level declines occur 1) across a significant number of countries; 2) across a significant number of goods; and 3) in a self-fulfilling way.

Economic theory suggests two causes of deflation – a decrease of aggregate demand or an increase of aggregate supply. The effect on the economy depends on whether deflation is demand-side or supply-side deflation. Demand-side deflation is so-called 'malign', whereas supply-side deflation is so-called 'benign'.

DeLong (1999) argues that there is reason to fear deflation more than inflation. According to him, our social loss function is evidently asymmetric - that deflation does more macroeconomic damage than an equal and opposite amount of inflation.

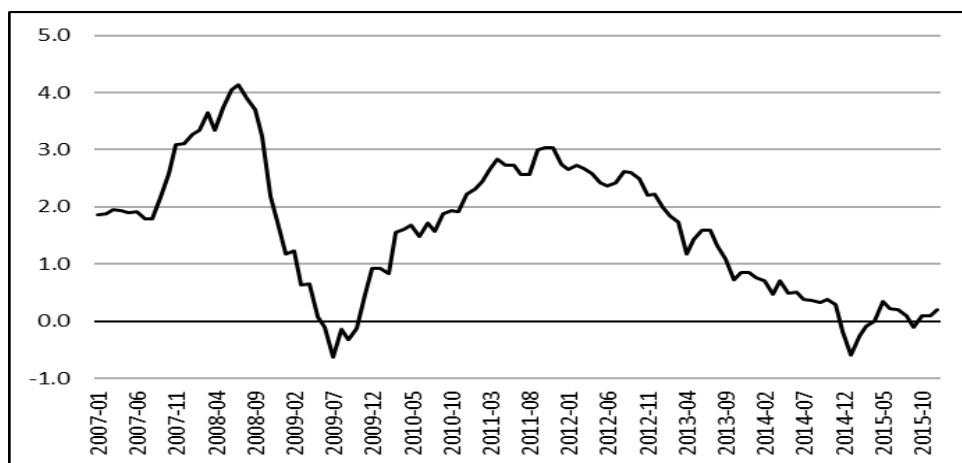
The rest of the paper is organised as follows. Section 2 presents a development of price level in recent years in the euro area. Determinants of the recent low inflation/deflation in the euro area are analysed in Section 3. Section 4 offers some conclusions.

2. Recent Development of Inflation in the Euro Area

Inflation in the euro area, which had begun falling at the end of 2011, had dropped below the ECB's objective of close to but below 2 per cent at the beginning of 2013. It continued to decline in subsequent years and reached negative territory at the end of 2014 (Figure 1). In January 2015 it bottomed out when the HICP index was -0.6% year-over-year. There has been only one period with similar inflation rates since the introduction of the euro – the months following the trough of the Great Recession from June to October 2009. From April 2015 inflation in the euro area has been close to zero but positive with the exception of September 2015.

Global headline inflation has also remained relatively low. For example, annual consumer price inflation in the OECD area was 1.2% in January 2016, compared with 0.9% in the previous month. US annual rate of CPI inflation increased to 1.4% in January 2016 from 0.7% in December 2015. CPI inflation in Japan and in the United Kingdom was similar to the euro area inflation and remained very close to zero during last year. However, the overall low global CPI inflation masks considerable differences across countries. At the beginning of 2016, there are some large economies with considerably higher annual rate of inflation - for example Brazil (10.7%) or Russia and Turkey with annual rate of inflation more than 9%. (OECD, 2016)

Figure 1: Inflation in the Euro Area, 2007-2015, Year-Over-Year Per Cent Per Annum



Source: own elaboration based on data from Eurostat, 2016

In January 2016, HICP inflation in the euro area as a whole was 0.3 per cent per annum. The rates of inflation (measured by HICP) in the individual member states of the euro area vary greatly from -1.1 per cent (Cyprus) to 1.8 per cent (Belgium). A year ago - in January 2015, negative annual rates were observed in 17 from 19 member states of the euro area. The lowest annual rates were registered in Greece (-2.8%) and in Spain (-1.5%). Positive annual rates (<1%) were recorded only in Malta and Austria. Currently, six member states suffer from negative inflation rates, two countries have inflation rate at zero per cent and only two

members (Austria and Belgium) register annual inflation rate above 1%. It means, in most members of the euro area, inflation is far from ECB's inflation target. (Eurostat, 2016)

3. Determinants of Low Inflation/Deflation in the Euro Area

What are the factors leading to current low inflation/deflation in the euro area? These factors include declining energy prices and inflation expectations, negative output gap and weak wage growth.

3.1 Energy Prices

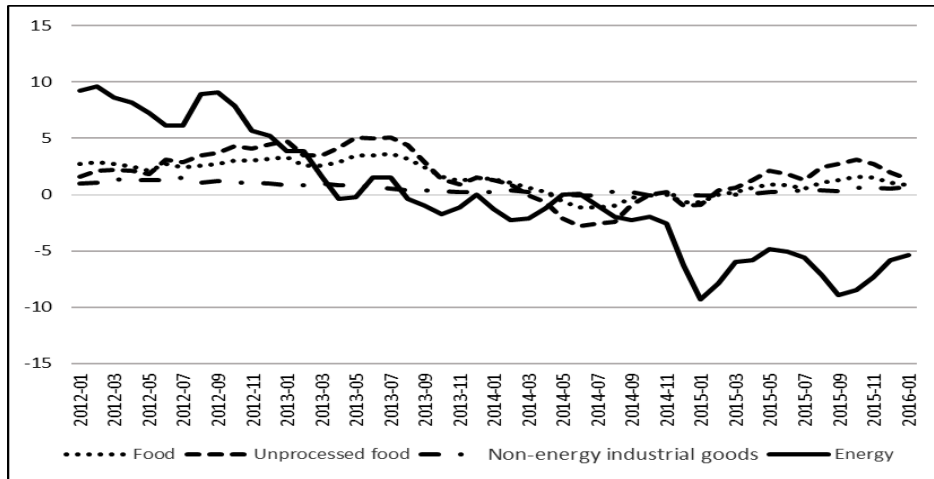
The fall in oil prices started in early 2012 and accelerated sharply since June 2014. The initial fall was because production of oil grew faster than projections and demand deteriorated faster than expected, resulting in an excess of oil for sale in the world. The fall in the price of crude oil Brent from June 2014 to December 2015 was around \$80 per barrel (Nasdaq, 2016).

Lower energy prices impact inflation, and not just because energy products accounts for more than 10 per cent of the HICP (approximately 6% are liquid fuels) in the euro area as a whole. Prices of energies may also influence other prices through indirect effects. For example, the cost of transportation might fall, but more generally, lower energy prices reduce production costs in various sectors. Thus, the fall in inflation in the euro area since early 2013 can be partially attributed to the development in prices of energy goods. The crude oil price slump has finally resulted in a marked decline in the energy component of HICP, as shown in Figure 2. The appreciation in the euro effective exchange rate has also contributed to the decline in inflation, amplifying the effect of declining commodity prices.

In a period of negative rate of inflation at the turn of 2014 and 2015, lower prices of food and unprocessed food also slightly contributed to low inflation/deflation in the euro area. The other main components of the euro area price index - non-energy industrial goods and services (not shown in the Figure 2) - have also been characterised by subdued dynamics. Core inflation – which excludes more volatile components of HICP, namely unprocessed food and energy – was at 1% in recent months. It is obvious, that low energy prices are the main component of low inflation/deflation in the euro area. Iossifov and Podpiera (2015) found that falling world prices of food and energy had been the main disinflationary driver across EU countries outside the euro area, including Sweden.

Oil prices have already collapsed before, for example in the 2008 and 2009 period, when oil prices collapsed dramatically during the most acute phase of the global financial crisis. But the current disinflationary phase is radically different due to possibility of second-round effects when inflation expectations, negative output gap and wage growth press inflation down yet more.

Figure 2: Some Components of HICP Inflation in the Euro Area, January 2012 - January 2016, Year-Over-Year Per Cent Per Annum



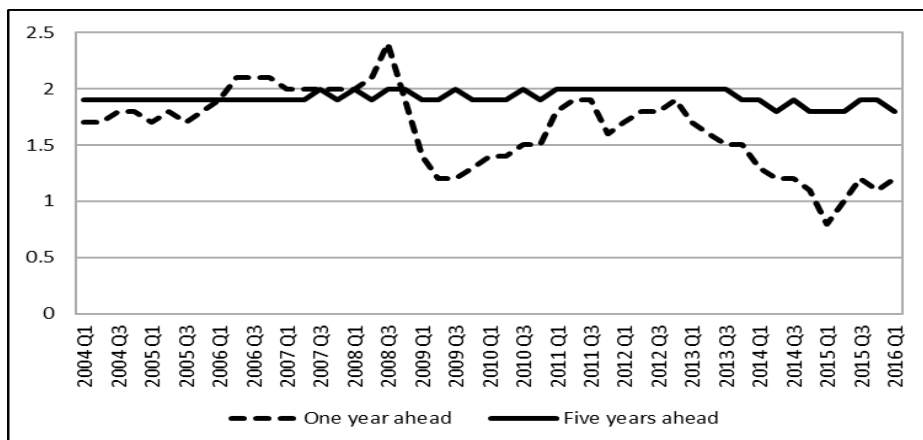
Source: own elaboration based on data from Eurostat, 2016

3.2 Inflation Expectations

Second-round effects via forward-looking inflation expectations have been non-negligible. According to the latest ECB Survey of Professional Forecasters (SPF), the expected five-year ahead inflation rate edged downwards from 1.9% in the fourth quarter of 2015 to 1.8% in the first quarter of 2016 (see Figure 3). The decline in expectations has been more evident over shorter horizons, reflecting the impact of the renewed decline in oil prices.

The recent drop in inflation expectations, especially in long-term inflation expectations, does not suggest a quick return of euro-area inflation rate to ECB's inflation target and low inflation rates can be anticipated for the longer term. Very low inflation and inflation expectations can create a problem for monetary policy even without the outbreak of sustained deflation.

Figure 3: Inflation Expectations in the Euro Area, 2004 - 2016, Year-Over-Year Per Cent Per Annum



Source: own elaboration based on data from ECB Survey of Professional Forecasters, 2016

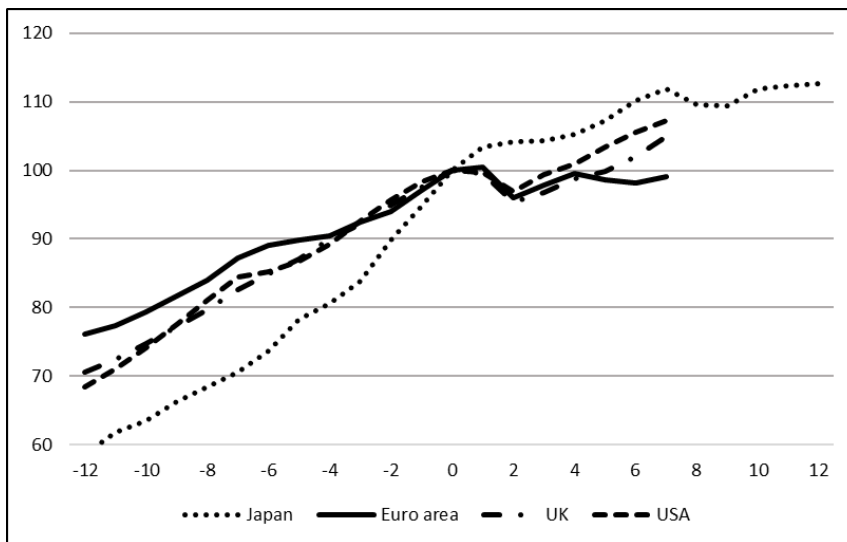
3.3 Output gap and Wage Growth

The level of an output gap is crucial for determining inflationary pressures in the economy. Output gap is defined as the difference between potential and actual GDP.¹⁰⁵ A large negative output gap suggests inflation should be low. As Bulíř and Hurník (2006) found for “old” EU member countries, a cumulative output gap of more than 1 per cent of GDP relative to average was associated with inflation lower than the EU-15 average by 0.1 per cent during a period 2001 – 2005.

Since 2008, the euro area has experienced a deep recession, a quickly interrupted recovery, another long, mild recession, and finally a slow recovery. During recession, the economy falls below its productive potential and the output gap is negative. The euro area output is now 20 per cent below the level it would have achieved the trend growth in the previous 15 years continued after 2007. An estimated output gap for the euro area was about -2% in 2015.

The low inflation rates in the euro area reflect a continued sluggish recovery in the aftermath of the global financial crisis. Figure 4 shows real GDP evolution in the euro area, Japan, United Kingdom and United States¹⁰⁶ as index before and after a peak of their economic activity. As we can see in Figure 4, euro area real GDP grew in years after the peak at a slower pace than in other countries and still remains slightly below the pre-crisis peak. Data show that Japan's GDP grew with slight fluctuations a little faster than Eurozone's GDP today. Yet Japan has not been able to break out of deflation for many years (see e.g. Spáčilová, 2015). Long-lasting output gap in the euro area creates a significant risk of deflation.

Figure 4: Real GDP in the Euro Area, Japan, United Kingdom, United States, Index



Note: There are years before and after the peak on the horizontal axis.

Euro area, USA, UK: 100 = 2007, Japan: 100 = 1990

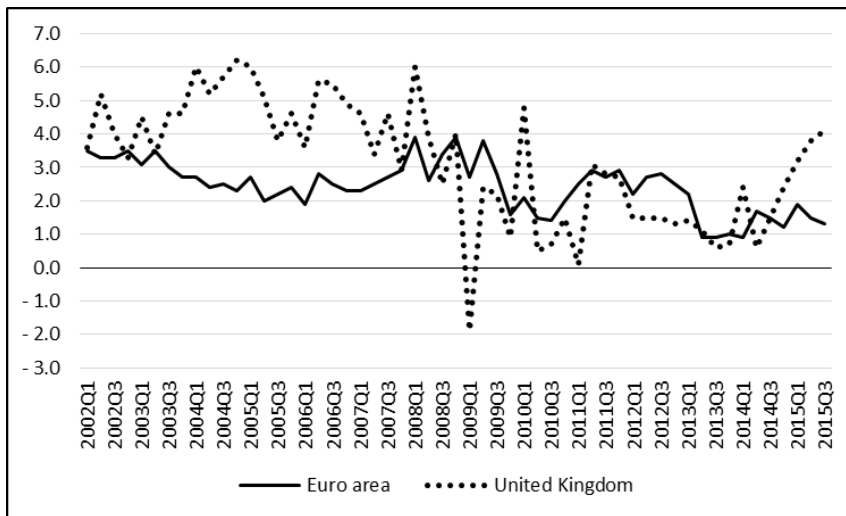
Source: OECD, 2016, author's calculations

¹⁰⁵ In practice it can be more difficult to measure the output gap.

¹⁰⁶ Japan, United Kingdom and United States are forerunners in applying of quantitative easing (see e. g. Fawley and Neely, 2013 or Spáčilová, 2011).

As a consequence of large negative output gap wage growth in the euro area has remained moderate. Wage growth in the euro area is measured by labour cost index which shows the short-term development of the labour cost, the total cost on an hourly basis of employing labour. In Figure 5, change in hourly labour cost in the euro area declined to 1.3% in the third quarter of 2015, compared with the same quarter of the previous year, from 1.5% in the second quarter. It means, that labour markets in member countries of the euro area do not create pressure on price level. It is related to rate of unemployment that is decreasing but still high. In the United Kingdom, as compared with situation in the euro area, hourly labour cost rose by 4.1% in the third quarter of 2015 and by 3.8% in the second quarter. While wage growth in the euro area fluctuated in the past six quarters, it was growing in the United Kingdom, as we can see in Figure 5.

Figure 5: Total Nominal Hourly Labour Cost, Business Economy, % Change Compared to Previous Quarter, Seasonal and Working Day Adjusted



Source: own elaboration based on data from Eurostat, 2016

4. Conclusion

In recent years, overall annual HICP inflation in the euro area has declined significantly and there were periods in which the rate of inflation was negative. This development sparked fears that the euro area could follow Japanese path with the lost two decades. In the euro area context it should be kept in mind that deflation risks must be analysed for the euro area as a whole, taking into consideration that, within a monetary union, negative inflation in individual countries may reflect relative price changes in order to get back competitiveness.

Deflation is not necessarily bad because some subjects may benefit from period of deflation or low inflation. But often periods of low inflation/deflation can lead to economic stagnation and periods of high unemployment. Although, Polouček and Hodula (2015) confirmed with using the example of Switzerland, that deflation does not necessarily mean losses in output. Low inflation/deflation can also be problematic notably for the euro area as a whole and for financial stressed countries, where it implies higher real debt stocks and real interest rates. The high real interest rates that follow from deflation depress investment, lower demand, and raise

unemployment. The worry is that deflation would aggravate possibility of economic recovery in the euro area.

The current low inflation rates in the euro area are the result of a confluence of both supply-side and demand-side factors. On the supply side, decline in energy prices has played the most important role in current decrease of euro area price level and has created so called good deflation/low inflation. However there are factors on demand side – inflation expectations, output gap and wage growth that would be prerequisites for a self-reinforcing deflationary cycle. Output gap and a lot of excess capacity in the euro area economy imply weak labour market conditions and reduce inflation. One indication that low inflation rates can be anticipated for the longer term is that inflation expectations in the euro area have declined significantly in recent months. The longer that actual inflation remains far below 2%, the more likely it is that long-term expectations will become de-anchored from the ECB's objective, making it even more difficult to return to the target range.

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Practical Aspects of EU Project and Grant Management in Programming Period 2014-2020

Michaela Staníčková

VŠB - Technical University of Ostrava

Faculty of Economics, Department of European Integration

Sokolská třída 33

Ostrava, Czech Republic

e-mail¹: michaela.stanickova@vsb.cz

Abstract

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 work place are different than what was needed several years ago. Questions are following: Is the education system changing to meet the changes in working and business environment? Is education system preparing the students for new realities of a global economy? In the field of study European Administration at Faculty of Economics, VŠB-Technical University of Ostrava, we are preparing students on the practical aspects of the European Union funded project implementation. The EU allocates essential part of its budget to countries, regions, companies and organisations in the form of calls for tenders, grants, proposals or funds and other programmes. In the course EU project and grant management, we teach the students about framework of EU Cohesion policy and using of EU funds supporting specific projects.

Keywords: Applicants/Beneficiaries, EU, ESIF, Online Systems, Project Management

JEL Classification: O10, O22, O52, R58

1. Introduction

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 European Union (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, 2011). 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, 2012). 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 (Hančlová, 2011).

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, 2013). The EU faces increased competition from other continents, their nations, regions and cities, what has impact on the EU international relationships and partnership in the case of all EU Member States (Vahalík, 2014) and also Eurozone countries (Fojtíková, 2014). 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 European Union (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.

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 (EC) 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? These questions were asked during preparation of the new course named "EU Project and Grant Management" that have started in the academic year 2013/2014 in the European Administration field of study at the Faculty of Economics, VŠB-TUO. New course is much abler to effectively respond to changing environment and requirements of labour market and the new EU programming period 2014-2020, than the old course "Preparation and management of EU development projects". The EU programming period 2014-2020 holds lots of opportunities to fund innovative ideas and projects. The architecture of ESIF and direct grants continues to offer a wide range of funding opportunities in the Member States. However, funding is often not used effectively or it may be denied due to poor planning phase. Although numerous programmes and initiatives have different features, the development and implementation of projects in practice follow common rules – not only the specific EU rules, but also the general PM rules.

Project environments is gaining recognition in both research and practice. As Bartoska et al (2013) mentioned, the knowledge of a project structure, acquired by project managers during their studies in specialized courses or at universities, is vital for future initiatives and PM. Courses of PM at universities is topic of many papers and orientation of research for finding new effective methods of PM teaching. Shen and Scott (2001) explore learnable aspects of PM in academic programmes. Byrne, Snyder and Seward (2008) examine the education system quality and examine the methods and objectives of PM teaching in the United States. Thomas and Mengel (2008) try to develop the abilities necessary to confidently navigate the dynamic organizational environments and complex projects facing project managers today. Mengel (2008) or Ojiako et al (2011) deal with PM teaching methods and development of project-based learning. Ríos Carmenado, Díaz-Puente and Yagüe Blanco (2011) state that learning and its constant development is significantly important for student's future learning and training as project managers. Ochiening et al (2012) examine influence of teaching techniques on developing the desired PM skills and confirm that students have a strong preference for and against active/passive-like teaching methods according to their capability and familiarity.

In this paper, the new concept of PM education is discussed that may help students – potentially new project managers – to orientate one selves in using of ESIF supporting specific projects and to professionally and effectively manage these projects. The aim of the paper is to describe innovative approach used in practical seminars of the course "EU Project and Grant Management" which respond to the needs of EU project managers' skills, knowledge and experience required in practice at market on the basis of personal theoretical experience with

learning and teaching PM on the one side and personal practical experience with implementation of EU funded projects. In this paper, it is also explained understanding of PM education in mentioned course and reflected about how we develop students to deal with the increasing level of complexity, chaos, and uncertainty in project environments. From the point of view of competitive advantage, the aim of new course is that students seeking careers in the PM discipline, they will be able to gain PM position and make sense in EU subsidies.

2. Practical Aspects of EU Project and Grant Management

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 (often catastrophically) develop bad practice without being aware of its deficiencies, as mentioned Shen and Scott (2001). Based on this fact, the paper exams the aspects of PM which are “learnable” in university course and which helps to avoid the problems with implementation of EU funded projects and drawing money from ESIF. The Czech Republic fails in this facility and is under the EU average; the incompetence of many project managers is one the biggest problem that influences total score in this issue.

Based on information above, Project Based Learning (PBL) was chosen as the main teaching approach in “EU Project and Grant Management” seminars. PBL generally means “students working in teams to experience and explore relevant real-world problems, questions, issues or challenges; then creating presentations and products in the frame of team corresponding tasks to share what they have learned. The teacher’s role is one of coach facilitator, guiding, advising and mentoring – not directing or managing all student work.” PBL is thus basically learning by doing which assumes knowledge of the theoretical background of PM - this requires in the student a degree of maturity in learning which will give the student the ability to adapt, apply and develop basic ideas to their own professional environment. It seems appropriate to explore using some of the attributes of PBL as a method to address the PM applied skills deficiencies. This pedagogy seems perfectly aligned with teaching applied skills (specific teaching methods in Tab. 1), because it is the way in which allows the students to develop their skills and apply their knowledge to real situations. Teaching applied skills and PM using an actual project seemed as a reasonable instructional method for students. This method seemed as an excellent method to allow the students to learn the material while maintaining their interest in the subject matter, as confirmed also Byrne, Snyder and Seward (2008). With all of these considerations and the changing teaching and learning environment, a new course “EU Project and Grant Management” that has been designed to cater for these needs has been designed and delivered.

Table 1: PBL – Way of Used Teaching Methods

Active-like teaching methods	Utilization at “EU Project and Grant Management” seminars
<ul style="list-style-type: none"> • Case studies; • Individual short projects; • Team projects; • Class discussion. 	=> Examples of real proposals and realized EU project => Short student’s task about EU structural framework => Group work – project proposals based on real EU calls => Solving of difficult steps/milestones in project creation
Passive-like teaching methods	Utilization at “EU Project and Grant Management” seminars
<ul style="list-style-type: none"> • Lectures by seminar teacher; • Classroom presentation. 	=> Theoretical project requirements based on EU regulations => Project lifecycle phases and project creation/realisation

Source: author’s elaboration, 2016

Creation the orientation of “EU Project and Grant Management” seminars, led to the question of how can a period of learning be directed along appropriate paths and what will students learn at the seminars (see Tab. 2)? What are the specific objectives developed to achieve the aim of the course (see Tab. 2)? If the students of PM are to build upon their own experience and interleave this with the theory and experience from others, new alternative techniques for learning may be necessary and appropriate. Traditional learning and teaching depends upon the presentation and acceptance by students of well-developed and established theories, common practices and procedures. Experience has also shown that the most effective way of presenting and applying PM is to introduce basic skills (see Tab. 2), ideas and processes and then to allow the students to learn by “doing” (Wong, Shen and McGeorge, 2002). In this instance the “doing” involves applying these basic ideas to their own experience.

Table 2: PM Skills Needed and Their Link with Key Focus of Teaching

What are the specific objectives developed to achieve the aim of the course?	What will students learn at seminars?	Applied Skills
<ul style="list-style-type: none"> • To identify which teaching method(s) is/are more effective for promoting learning for PM students; • To identify which teaching method(s) the students perceive as helping them learn most in acquiring professional PM skills; • To propose an effective approach for teaching construction PM; • To explore adequately teaching methods. 	<ul style="list-style-type: none"> • How to plan, manage and implement projects according to EU regulations; • What are the different project lifecycle phases and key activities to be undertaken during each phase; • How to improve project strategies to ensure effective performance; • How to prepare an activity and budget plan; • What is the importance of indicators for project preparation, implementation and evaluation; • How to define indicators for EU funded project; • Which factors affect the success of partnerships; • How to report and promote results. 	<ul style="list-style-type: none"> • Creativity; • Critical thinking; • Diversity; • Ethics; • Knowledge of online systems for applicants and beneficiaries; • Leadership; • Problem solving; • Professionalism; • Self-direction; • Teamwork.

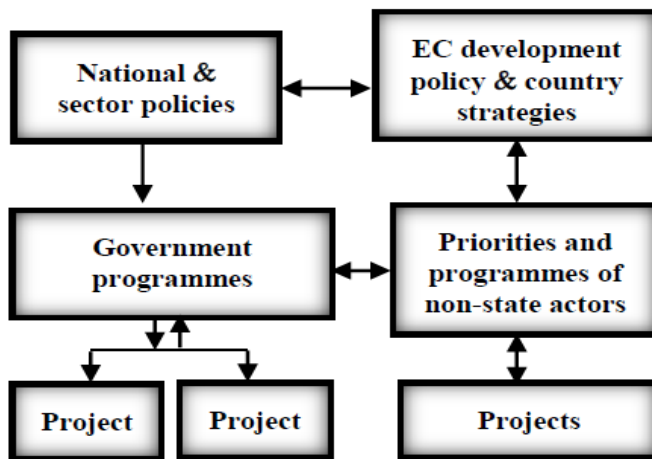
Source: author’s elaboration, 2016

What it is necessary to say is that teaching methods differ as a function of the module being taught, the different assessment criteria and the preferences of the teachers who may give emphasis to practical, theoretical or mixed approaches. In the case of our seminars, the aim is to explore PM students’ perception of the effectiveness of different teaching methods in helping them acquire professional PM skills, as it is shown in Tab. 2. Used methods offer students a chance to learn how to work in project teams and this help them to develop a skill that would be beneficial in a real life project environment. This approach helps students examine, evaluate and share knowledge about PM. Teacher has to provide a model for thinking like a project manager and a structure for student discussion – it is for them more interesting, more motivating and essentially give them a much better idea of managing projects.

3. Adoption of EU Project and Grant Management to Programming Period 2014-2020

Professional associations, institutions and international organizations the world over are introducing ever more project management standards and certification processes. Also the EU is involved in this area in the form of European Project Planning and Management because of setting rules for drawing EU funds. In 1992 the EC adopted “Project Cycle Management” (PCM) as its primary set of project design and management tools (based on the Logical Framework Approach, LFA), subsequently this has been updated. The Guidelines cover EU assistance policy, an introduction to the concept of the ‘project approach’, an overview of operational guidelines, and, perhaps most importantly, a tools section, with methodologies on how to develop and implement projects. The general relationship between EU policies, programmes and projects is illustrated in Fig. 1. It is clear that project objectives should contribute to national and sector policies wherever a public sector activity is being supported.

Figure 1: EU Policy, Programmes and Projects



Source: author’s elaboration, 2016

The EU Project Manager profession focuses on competencies for management of projects implemented according to EU regulations, requirements and conditions. Knowledge about opportunities for financing within different EU programmes, procedures and knowledge is essential for development of project proposals, as well as knowledge and best practices for management of EU projects, which are usually distributed, complex, multi-national/-cultural. In this context, the objective is to provide students with the skills to successfully work in the field of European cooperation, through the use of funding in education, training, culture, research, development, external cooperation etc. made available by the European Commission.

The approach used in seminars of master course “EU Project and Grant Management” is highly practical, based on the course trainers who have over several years’ experience in European Project Planning and Management. Practical simulations are carried out for each topic analysed. The practical simulation is also based on use of on-line databases, programme and project documentation available by managing authorities or intermediate bodies.

The objective of practical activity is the simulation of planning and management of European projects. The seminars are thus divided into following units and elements displayed in Tab. 3.

Table 3: Thematic Composition of EU Project and Grant Management Course

Topic within European Project Planning and Management/ Content of seminars	
Introduction into EU projects	<ul style="list-style-type: none"> • EU Structure and EU Programmes • Analysis of European funding opportunities • Management of EU projects • EU projects and programming periods 2007-2013 and 2014-2020 • Structural framework and operational programmes in the Czech Republic (CR) – period 2007-2013 and period 2014-2020
Project planning/management	<ul style="list-style-type: none"> • Overview of PCM • Using LFA (Introduction, link to the project cycle, matrix format and terminology, preparatory and problem analysis, defining a problem tree) • Application LFA (Intervention logic, moving from objectives to results and activities, analysis of objectives and strategies, on objective tree and choice of strategy) • Practical exercise
Structural aid programming	<ul style="list-style-type: none"> • Understanding calls for proposal • Identification and collection of documents for the project submission • Practical exercise
Identification and formulation	<ul style="list-style-type: none"> • Assumptions • Development of effective project ideas • Indicators and sources of verification • Identifying tasks, which are necessary to achieve results • Analysis of strategies • Practical exercise
Project preparing	<ul style="list-style-type: none"> • Start up and Objectives • Management of work packages and project results • Project timetable and key project activities • Preparing budget - resource and cost schedules • Planning the financial aspects of the project • Defining indicators for your project • Filling in of Application Form for the submission of European Projects – via online systems valid in the Czech Republic • Practical exercise
Project implementation	<ul style="list-style-type: none"> • Effective PM for reaching the project expected outcomes • Helping ensure successful project management • Managing progress against milestones/project plan • Spend against budget • Balancing quality, time and costs • Identify risks - problem solving and the solutions focused approach • Reporting and promoting results • Practical exercise
Monitoring, Evaluation, Audit	<ul style="list-style-type: none"> • Monitoring and evaluation of European Projects • Collecting and using information • Information requirements and criteria • Tasks and responsibilities • Dissemination, exploitation and sustainability
Problematical aspects, quality issues and best practices – the case of the Czech Republic	

Source: author's elaboration, 2016

The seminars are thus designed as one big project – based on theoretical assumptions, EU conditions and rules and programming structure of the Czech Republic. Students prepare their project applications for subsidies according to the specific project call for proposal. At the end of the seminars, every student, resp. work group will have produced:

- Work group presentation about relevant grant scheme for the project plan - an operational program, priority axis, the area of support, and call for proposal;
- European projects include the application form, budget, partnership, administrative requirements, supporting documents etc. processed and generated within the one of online systems for applicants and beneficiaries valid in the CR (Benefit 7, Benefill, e-Account) according to valid call for proposals;
- Guidelines for an Effective European Project Management, i.e. project based LFA.

Conceived framework of the course is thus challenge for students, resp. for their abilities. This use of practical activity was found to be of great value to the students in the course, as provided a connection between the abstract learning with concrete applications.

4. Conclusion

Practitioners maintain that PM 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, as mentioned e.g. Shen and Scott (2001). The main feature of course “EU Project and Grant Management” that have started to teach in the academic year 2013/2014 in the European Administration field of study at the Faculty of Economics, VŠB-Technical University of Ostrava has not only theoretical part (lectures), but also practical part (seminars) including specific EU aspects of PM. Students will have a prerequisite of not only an academic qualification but also a period of practical experience. The most valuable and effective way of learning about PM is when students have completed both their initial training and has had several years of practical experience. This endorses the idea that project management is something, which is learned rather than taught. The learning process utilises professional experience rather than relying solely upon theory and taught wisdom. From this point of view, teacher need to illustrate PM concepts with real world examples and encourage their students to think from this perspective. However, it is important to remember that different teaching methods have different impact on the students’ learning.

The paper deals with creation of efficient approach in teaching and learning PM under EU conditions, which will be able to effectively respond to changing environment and requirements of labour market and the new EU programming period 2014-2020. From this point of view, the paper presents approach how to set content of practical seminars to course “EU Project and Grant Management” and what topics to study depending on the importance of knowledge and experience endowment and according to practical experience of teacher with EU PM. Students' progress has been monitored both with direct review of performance and surveys of the participating students. A significant benefit from the teachers’ point of view is the facility to monitor the progress of individual students. Students will be able to work on EU funded projects in groups made of participants in different EU regions/countries, different offices and with different responsibilities.

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The Analysis of Public Health Care Expenditure in the Selected EU Countries as the Basis of the Decision Making Process in the Common Health Policy

Agnieszka Strzelecka

Czestochowa University of Technology
Faculty of Management
Ul. Dąbrowskiego 69, 42-201 Częstochowa
Czestochowa, Poland
e-mail: astrzelecka@poczta.onet.pl

Abstract

The amount of financial resources allocated to health protection depends mainly on the size of GDP of a given country, because the level of GDP has a great influence on health care expenditure. However, an analysis of these expenses would be imperfect without regard to health care systems. For this reason, the identification of trends in the examined economic phenomenon is crucial to making decisions concerning health care policy. Therefore, the main aim of this paper is to present an analysis of public expenditure on health care in selected European Union countries in the years 2000-2013. Not only does the study consider the nature of individual systems, but also determines their the short-term and long-term tendencies. Furthermore, EU countries similar in terms of a multidimensional features are distinguished to show groups of countries where the analyzed phenomenon occurs in a similar way – the last years of the study: 2011-2013. The data come from both the OECD Health Statistics 2015 - Frequently Requested Data and OECD.Stat.

Keywords: *Health Care Systems, Short-term and Long-term Tendencies, Cluster Analysis*

JEL Classification: *C01, C19, C22, I15*

1. Introduction

The volume of outlays on health care depends mainly on the country's economic development reflected by GDP. But when analyzing the influence of GDP, we should factor in the affluence and the economic development of a given country, especially in the integration process. As nowadays the populations are aging, which imposes an extra burden on health care systems, it is necessary to increase outlays on medical services, even more so that the approach of patients towards their health is changing too. Moreover, the increase in the demand for health services is closely connected with using innovative solutions, and especially new communication and information technologies and econometric tools (Komaba et al., 2015; Włodarczyk, 2012). A continually improving level of services and reduced waiting times can be achieved through the implementation of new technologies, logistics solutions, e-training and IT which help to share knowledge and information (Mesjasz-Lech, 2014; Rudawska, 2011; Strzelecka and Skrodzka, 2013).

Another crucial aspect of health care funding is embedding it in the health care model of a given country (Strzelecka, 2013). A health care system is generally understood as a system for both delivering and financing health services. But considering all elements of the health care model of a country it is hard to classify it in a clear-cut way, because every EU country has a

system adjusted to their socio-economic situation, which also involves reforms of the health care system. As a result, often in one country we encounter mixed institutional, organizational and financial systems. That is why we can much more easily group the models according to the basic health care funding method, rather than categorize them accurately. Accordingly, the health care models of the EU member states are often divided into: the insurance model (Bismarck model) and the budget model (Beveridge model) (André and Hermann [online], 2010). Presented below are the most important features of these models (Table 1):

Table 1: Chosen Characteristics of the Health Care Financial Models in the EU

Determinants	Insurance model	Budget model
Financing of services	Compulsory health care contribution paid by employees or employers	General taxes and other public sources
Entity concentrating funds and financing services	Public and non-governmental, not-for-profit funds which compete with one another	Government or local government institutions
Types of health care providers	Mainly non-public providers (out-patient health care); public and private not-for-profit hospitals, commercial branches	Mainly public health care providers, although the number of private entities has recently grown
The entitled to health care services	Contributions payers	Every citizen
Patients' participation in the costs of treatment	Co-payment of the majority of services	Limited co-payment

Source: Lewandowski, 2015

Depending on the health care system type, the countries were divided into the ones with the insurance model ("insurance countries") - Austria, Belgium, the Czech Republic, Estonia, France, the Netherlands, Luxembourg, Germany, Poland, Slovakia, Slovenia, Hungary, and the ones with the budget model ("budget countries") - Denmark, Finland, Greece, Spain, Ireland, Portugal, Sweden, Great Britain, Italy.

The present analysis is an economic view of the issue and focuses on the fact that differences in health care systems influence the volume of outlays allocated to health care in a given country. The main goal of the study is an analysis of public expense on health care in the European countries which have been members of the EU and OECD since at least 2004, which is the moment of the accession of Central European countries. The article describes the long-term and short-term tendencies. All analyses have been carried out for two groups of countries: the ones with the insurance system and the ones with the budget health care system. The analysis is based on annual data from years 2000-2013.

Furthermore, the presentation of the percentage of public money in the GDP funding of health care is to picture the present trend in this respect in the selected European countries. We will also show the clusters of countries similar in terms of the volume of outlays on health care, which will help us find countries comparable with respect to the analyzed features. The premise for using the cluster analysis method is the fact that we attempt to distinguish groups of countries where the analyzed phenomenon functions in a similar way. As we are most

interested in the changes in the final years, the time span in both cases stretched from 2011 to 2013.

The presented analyses are to serve as a starting point for deciding on the direction of health policy of the EU, because benefiting from experiences of other countries is one of the major elements of the European integration. The Commission of the European Communities places emphasis on the level of health care outlays because they are interrelated with the health indicators of populations.

2. Data and Methodology

The analysis began with the presentation of the discussed outlays in the EU countries in the final years of the analysis: 2011-2013. Then groups of countries where the examined phenomenon occurred in a similar way were distinguished – here the Ward method was used:

- one of the cluster analysis methods. In the next stage the income elasticity was determined,
- the Error Correction Model was applied.

The analysis considering the typological groups and trends took into account different health care systems in the discussed EU countries. The study uses annual panel data. The information concerning the discussed values comes from the data base of the OECD Health Statistics 2015 - Frequently Requested Data, and the OECD.Stat. For the last three years of the analysis (2011-2013), the study employs the Ward's method and figures and for the 14 year period (2000-2013) it is based on the econometric model. The time span selection was based on the availability and credibility of data and so that it suited individual analyses.

The data expressed in currencies are presented in US dollar per capita measured in purchasing power parities by constant prices from 2014. This approach results from the differences in purchasing power of currencies in various countries. That is why it is necessary to convert nominal expenditure into the so-called real term expenditure per capita. We analyze the European Union countries which are also members of the OECD and have participated in both organizations since at least 2004. The year 2004 is chosen as the starting point because that is the moment of the accession of Central European countries to the European Union. And so the studied countries are: Austria, Belgium, the Czech Republic, Denmark, Finland, France, Spain, the Netherlands, Ireland, Germany, Poland, Portugal, Slovakia, Sweden, Hungary, Great Britain, Italy. The analysis of the public expenditure on health care does not consider Luxembourg and Greece - the relationship between the percentage of public funding and the health care systems there is too close. These countries can be considered unique - the health care in Luxembourg is in over 90% financed with public money, in Greece about 40% of the funding comes from direct patient payments. Also Estonia and Slovenia are not covered in the study. Although they belong to both organizations, they only became members of OECD in 2010 which is why they do not meet our criteria.

2.1 The Cluster Analysis

The Ward's method, one of the cluster analyses, aims at the minimization of the sum of the square of two arbitrary clusters. The goal of the method is to combine objects in such a way that the inter-group variance describing the objects within a group is as low as possible. The obtained tree of connections, the dendrite, presents the creation of consecutive clusters of higher tiers with determined link lengths. Initially, every object constitutes an individual group, then new clusters are created along the assumed linkage technique. The last group contains all analyzed objects (Dańska-Borysiak, 2011).

The cluster analysis was used because it was the author's intention to point out the similarities and differences among countries in the final period of the analysis with regard to the multidimensional features set. Such studies, in fact, may help build on the example of the country which is most similar in terms of these characteristics and foster the integration.

The object grouped in the study are the selected European countries, and the features characterizing public outlays on health care in these countries per citizen are: current GDP in USD per capita measured in purchasing power parities, the percentage of the total number of doctors in the population (representing wage expense), number of hospital beds per 1000 people (represents costs other than wage-connected), percentage of the population over 65 years of age, percentage of the population under 15 years of age.

All variables were normalized through a quotient transformation with reference to the benchmark (average variable value). Next, using the Euclidean distance measure, the matrix of the distance between the countries was determined.

2.2 Error Correction Model

The space-time analysis used the econometric model (JEL C01) which initially was in a power form. After logarithmizing both sides a linear form was obtained – it was estimated with the least squares method. The objects (i) in the model were the European countries, and time (t) covered the 2000-2013 period.

First the regression model was used. The public outlays on health care were interpreted by the economic increase measured with the GDP of the current year. But because this model did not take into consideration the long-term relationship between the levels of variables, the Error Correction Model (ECM) was applied (JEL C22). It allowed to distinguish the long-term and short-term tendencies (Wójcik-Mazur and Szajt, 2015).

In the presented model, in order to assess the situation in the EU, the coefficients of public outlays elasticity in relation to the GDP were used. The GDP is one of the most important factors influencing the discussed outlays. The form of the created ECM model is as follows:

$$\Delta \ln PEH_{it} = \beta_0 + (\beta_1 - 1)(\ln PEH_{it-1} - \delta \ln GDP_{it-1}) + \beta_2 \Delta \ln GDP_{it} + \varepsilon_{it} \quad (1)$$

where: $\Delta \ln PEH_{it}$ – ln increase in the public expenditure on health care in USD per capita according to PPP for an i country over a t period, $\ln PEH_{it-1}$ – ln increase in the public expenditure on health care in USD per capita according to PPP for an i country over a $t-1$ period, $\ln GDP_{it-1}$ – ln GDP w USD per capita according to PPP for an i country over a $t-1$ period, $\Delta \ln GDP_{it}$ – ln increase in GDP w per capita according to PPP for an i country over a t period, β_0 – constant, $\beta_1 - 1$ – error correction term, β_2 – short-run multiplier, δ – long-run multiplier, ε_{it} – error term for an i country over a t period.

In the model we consider the non-stationarity of the levels of processes connected with variables and present the first differences of the processes (increments of the logarithms of successive variables). Using the increments is crucial because it allows to achieve the stationarity of variables, avoid the spurious regression and autocorrelation of the error term.

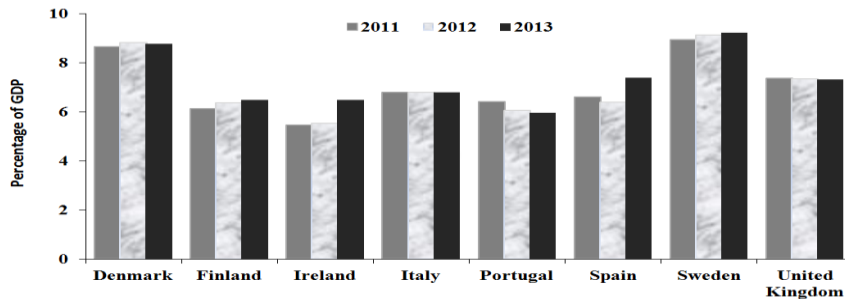
3. Results

The volume of the GDP outlays on health care is the determinant of activities in this field of the economy and, accordingly, of the allocation of financial resources to health care. And so the socio-economic policy and the health care system of a given country are of great significance here. We should not forget, though, that the people and institutions in individual countries responsible for health policy have to follow the EU health programs and the

standards accepted by the European Union and the World Health Organization (Nieszporska, 2014; Kawiorska, 2013). Such an approach is required in the development of a common health policy in the EU.

The country leading among the ones where the funding of health care comes from taxes is Sweden (9.24% share in the GDP). Second comes Denmark where the percentage of the last year’s public expenditure measured by the GDP was lower by about 0.5 percentage point. The lowest value of the index is observed in Ireland – 5.96% (Figure 1).

Figure 1: The Share of Public Expenditure on Health Care in GDP Percent in the Selected EU Countries with the Budget System of Health Care in the Years 2011-2013

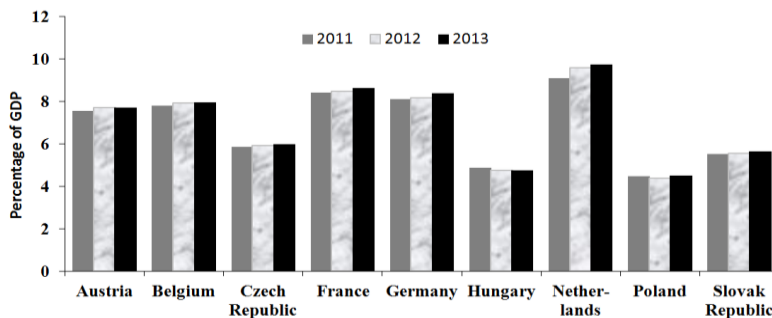


Source: author’s calculations on the basis of www.oecd.org

On the basis of the above figure we can say that over these three years the percentage of public outlays in GDP dropped only in Great Britain and Portugal. But the tempo of the change was slowing down in both countries - by 0.01 percentage point in Great Britain, and by 0.27 percentage point in Portugal. Decreases, although over different periods, are also observed in Italy and Denmark (respectively by about 0.24% and 0.68% - 2013/2012) and in Spain by 3.01% - 2012/2011.

Analyzing the share of public health care funding in the final result of the activity of all entities of the state economy in the countries with the insurance type health care system, we can say that in all countries, apart from Austria, there is an increase in the year 2013 compared to 2012. A very slight growth was recorded in Hungary - of about 0.017 percentage point. Only in this country and in Poland we see a drop which occurred in the years 2012-2011 (Figure 2).

Figure 2: The Share of Public Expenditure on Health Care in GDP Percent in the Selected EU Countries with the Insurance System of Health Care in the Years 2011-2013

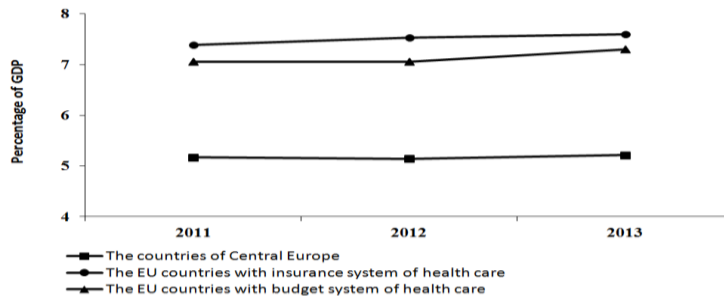


Source: author’s calculations on the basis of www.oecd.org

It all looks different when we take into consideration the average percentage changes over the 2011-2013 period. Here the percentage of outlays in the GDP was growing fastest in the Netherlands (on average by about 3.5%), and as dropping only in Hungary - by about 1.01%.

Analyzing the percentage of public health outlays in the GDP we can say that in the whole discussed period the percentage in Central European countries is smaller than in the countries with the insurance health care model by about 2.33%, and by 1.96 % in comparison to the countries with the budget health care system (Figure 3).

Figure 3: The Share of Public Expenditure on Health Care as a GDP Percent in the Countries of Central Europe and the Other Selected EU Countries in the Years 2011-2013



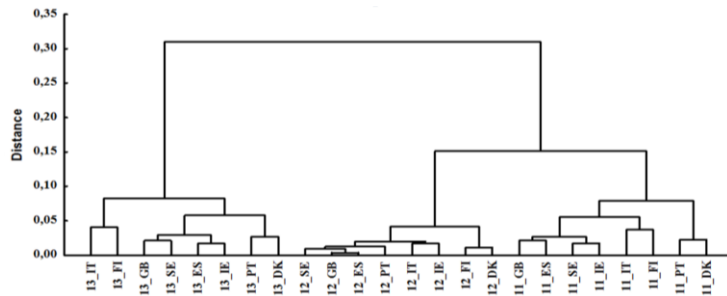
The countries of Central Europe (Poland, the Czech Republic, Slovakia and Hungary) were singled out from the group of the countries with the insurance health care model.

Source: author’s calculations on the basis of www.oecd.org

The Czech Republic, with a percentage on the level of 5.94% is the leader in the Visegrad Group. Poland, on the other hand, occupies the last position (4.45%). It is likely due to the fact that the health contribution in the Czech Republic is higher than in Poland (13.5% and 9% respectively). The Czech Republic also reduced the informal payments and introduced the so called regulatory charges (Tambor et al., 2013).

Yet despite varying solutions in health care, we attempt to arrange the countries in certain groups (with the same variables set). It revealed a decreasing similarity among countries in terms of public expenditure on health care (Figure 1 and 2).

Figure 4: Ward’s Dendrogram of the Selected EU Countries with the Budget System of Health Care in the Years 2011-2013



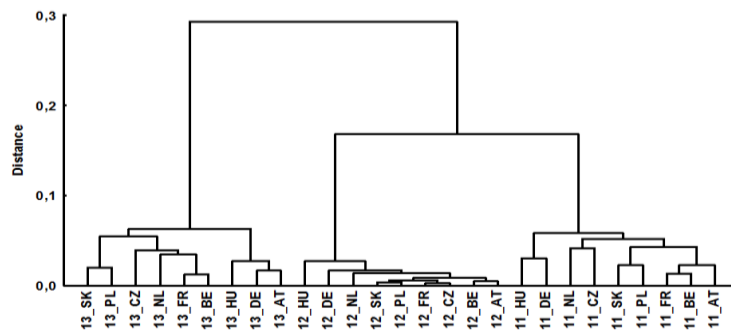
DK - Denmark, FI - Finland, IE - Ireland, IT – Italy, PT - Portugal, ES –Spain, SE - Sweden, GB - United Kingdom, 11_ – 2011r., 12_ - 2012r., 13_ – 2013r.

Source: author’s calculations with using Statistics 12.0

In this chart we see that the closest pairs were Sweden and Ireland (2011), Spain and Great Britain (2012) and Spain and Ireland (2013).

In the last analyzed year, we see 4 clusters with the linkage on the level lower than 0.041: (Ireland, Spain), (Sweden, Great Britain), (Denmark, Portugal), (Finland, Italy). It is worth noting that with respect to the analyzed features Ireland and Spain are the closest pair. Specialized doctors receive wages, but the primary health care doctors are paid in different ways - in Ireland mainly through fee-for-service, in Spain through wages or capitation (Paris, Devaux and Wei [online], 2010). The second cluster is Sweden and Great Britain. The former country has a fully democratic and decentralized health care system, in the latter the state intervenes much in the system, mostly through legal regulations in the health care sector (Jaworzyńska, 2012).

Figure 5: Ward's Dendrogram of the Selected EU Countries with the Insurance System of Health Care in the Years 2011-2013



AT - Austria, BE - Belgium, CZ – the Czech Republic, FR - France, DE – Germany, HU – Hungary, NL – the Netherlands, PL – Poland, SK – the Slovak Republic, 11_ – 2011r., 12_ – 2012r., 13_ – 2013r.

Source: author's calculations with using Statistics 12.0

Based on figure 2 we can say that the countries which were most similar in 2011 and 2013 were France and Belgium, and in 2012 the Czech Republic and France.

In 2013 in the case of the countries where contributions is the basic financing source we observe three clusters on the lower linkage level. These are: (Poland, Slovakia), (Belgium, France), (Austria, Germany). Coexisting of Poland and Slovakia in one group is due to the low level of outlays on health care in relation to GDP. The doctors of countries in the other two clusters are paid in a similar manner (*fee-for-service*), and through the popular DRG (Kumar et al. [online], 2014).

Considering the difficulties connected with strategic management in health care and the existence of various solutions for the sector, the aim of the elaboration is to determine long-term and short-term tendencies in the EU countries. It is to become a tool supporting changes introduced to the health care sector, especially in the era of globalization. The measure with which to determine these tendencies is the elasticity coefficients. Their values enable to define what “good” the health care for the decision makers in the analyzed countries is. Knowing how the health care is perceived by the society facilitates health care policy both in each country and the EU as a whole.

The analysis resulted in the following estimations (Table 2):

Table 2: The Results of Estimation of ECM Models

	Parameter	Model for the "budget countries" (model 1)		Model for the "insurance countries" (model 2)	
		Parameter estimate	t-Students statistics	Parameter estimate	t-Students statistics
short-run multiplier	β_2	0,53	3,82	0,85	6,65
long-run multiplier	δ	1,51	3,59	1,65	4,79
error correction term	$\beta_1 - 1$	-0,11	-3,36	-0,16	-4,67
F test		F (3,100)=10.66 (p<0.0000)		F (3,113)=21.43 (p<0.0000)	

Source: author's calculations with using LIMDEP

The results show that in the long-run virtually all countries perceive health care as a luxurious good, and when it is approached on a short-term basis, health care is seen as a necessity good. An increase in GDP by 1% over a short period translates into an average increase of public expenditure by 0.53% (model 1) or by 0.85% (model 2). In the long-run, the elasticity regarding GDP is higher than unity, and so the influence of GDP is more than proportional - a 1% GDP increase results in the growth of the discussed outlays by 1.51% (model 1) or 1.65% (model 2). When over a long period outlays grow faster than GDP, it means that the beneficiaries need time to adjust the demand and outlays on health services to their evolving income (Lago-Penas, Cantarero-Prieto and Blazquez-Fernandez, 2013). Furthermore, low values of the estimates of parameters with the error correction term ($\beta_1 - 1$) tell us that the examined countries will reach equilibrium in the near future. The EU countries with the insurance system of health care will reach equilibrium sooner than countries with budget model this sphere of national economy.

4. Conclusion

Although there are many health care systems in the European Union with various elements borrowed from different countries, the model solutions are still a significant determinant of health care systems. It is the assumed model that directly effects the method of health care system financing. Additionally, the interpretation of system solutions is conducive to convergence, which arises from the fact of European integration. In all countries efforts are made to improve the functioning of the organizational system and to verify the financial system. It ought to help to create the common health care system for all the countries of the European Union in the future, which could be part of the social security system.

Having analyzed the financing of health care in different countries, we can conclude that there exists no ideal model of the percentage of individual resources types (public and private) in financing health care. The differences come mainly from the relationship between the volume of funds allocated to health care services and the actual demand for them. Yet despite the discrepancies, most countries use mixed financing sources. There are problems connected with the quality and the accessibility of medical services, the increase in the number of seriously and chronically ill people and the aging of the population.

Looking at our results showing the grouping of EU countries according to the similarities in the expenditure on health care, and considering the multidimensional set of variables, we see the highest level of similarity in the case of: (1) countries where the funding comes mainly

from taxes - Sweden and Ireland (2011), Spain and Great Britain (2012) Spain and Ireland (2013); (2) countries where the funding comes mainly from contributions - France and Belgium (2011 and 2013), and the Czech Republic and France (2012).

Apart from that, the following countries also belong to one cluster: France, Belgium, the Netherlands and the Czech Republic. These Bismarck model countries are at the smallest distance in terms of the analyzed features - similar structure of public expenditure on health care. Nevertheless, it should be pointed out that among the Beveridge model countries, the ones close to one another are: Great Britain, Sweden, Spain and Ireland. The obtained results show similarities in both groups for the studied set of variables. As the distance grows, so do the differences between consecutive countries. In the analysed EU countries, there are inherent regulating mechanisms that restore the health protection systems to the original condition (i.e. a state of equilibrium that results only from the features of the model) if only the situation is changed due to the action of external forces. The examined systems are dynamically balanced and the impact of disequilibrium in the previous period is weak (system inertia measured with the value of parameter ρ_1 is relatively strong). Thus we can speak of the existence of a long-term relationship between the examined economic values. However, countries in which health care are primarily financed from premium will reach the equilibrium sooner than others.

Furthermore, the bottom line conclusion is that the public financing of health care is stimulated by the GDP stronger in a long-run than in a short period (the long-term elasticities are higher than short-term ones). In all EU countries, the outlays on health care are only determined in the association of actual needs of the population in a short term. Moreover, regardless of the health care system in place, also the type of offered services, institutional solutions and demographic situation all have an important influence on public outlays. However, in order to confirm the importance of the influence and to define its scale, detailed research should be carried out. Summing up, the analyses of health care expenditure and organizational solutions are the basis upon which decisions concerning the European integration are made. It comes from the fact that the EU emphasizes both the responsibility for health and economic effectiveness and coordinating health policies of individual countries. In addition, an extremely important issue for the introduction of the common EU health policy is cooperation with the various international entities in the implementation of health programs and IT.

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Virtual Weakness of Europe of Regions: the Case of the Czech Republic

Jan Sucháček

VŠB - Technical University of Ostrava
Department of Regional and Environmental Economics
Sokolská třída 33
Ostrava, Czech Republic
e-mail: jan.suchacek@vsb.cz

Abstract

Europe of regions became one of truly frequented notions of modern period. Undoubtedly, there are plenty of interconnections among Europe, European policies and regions. Reversed side of the phenomenon, i.e. presence of European dimension in regions, is debated only seldom. Our article is devoted to the interception of European themes within national TV coverage in the Czech Republic. Comparisons show TV coverage is an adequate representative of media agenda. The analysis will be performed at the level of self-governing regions. This will happen so just for the sake of self-governmental responsibility for the development of these territorial units. Moreover, self-governing regions form natural arenas for mirroring European dimension within national TV coverage. European topics resonating within national TV broadcasting will be evaluated from both quantitative and qualitative perspectives.

Keywords: *Czech Republic, European Topics, Self-governing Regions, TV Coverage, TV Portrayals of Self-governing Regions*

JEL Classification: *B52, R10, M30*

1. Introductory

Virtual worlds increasingly accompany their real counterparts. Important territorial units, which are embodied by regions, are shaped by both material and intangible processes. In connection with intangible geographies, themes, such as local and regional reputation, local and regional images or mental maps resonate rather frequently (for more details see Gould and White, 1986).

Mental maps are luring quite intense attention. General augmentation of their importance is in consonance with growing weight of soft location factors. Investors, tourists as well as other target groups are spatially directed just on the basis of particular mental maps (see Lloyd, 1976, Johnston, Gregory and Smith, 1994 or Stefko, Habanik and Sindlerova, 2010). The question remains to what extent mental maps mirror the reality of individual localities and regions (see also Sebova and Dzubka, 2013).

There are only little doubts that one of the most important underlying factors standing behind final pattern of mental maps are media. Media in connection with spatial sciences are becoming important more and more (see also Suchacek, Seda, Friedrich and Koutsky, 2014). Put succinctly, they act as one of important generators of mental maps.

It should be reminded that media do not act as mere observer of events, on the contrary, they are actively able to shape these events. They in a way became a one-way mediator of information from powerful elite groups to the wide society. Notions, such as mediocracy, agenda-setting, agenda-cutting or gatekeeping attract extensive attention (see Brighton and Foy, 2007, De Fleur and De Fleur, 2009, McCombs and Shaw, 1972, Shoemaker and Vos, 2009 or Shoemaker, Eichholz, Kim and Wrigley, 2001). In this context, one should not omit short term and long term perspectives, which considerably influence the intensity of the agenda in question (see Suchacek, Seda, Friedrich and Koutsky, 2015).

There are various kinds of media and TV still remains one of pivotal ones. As to its impact on wide public and representativeness, it is an appropriate medium for the analysis we intend to execute (see also Necas, 2009). TV broadcasting and more precisely, TV coverage, is the field we focus on in our article. Taking into account the impact of national TV coverage, it represents a useful point of departure. Therefore, we delve into regionally-bound national TV coverage, which is orientated to European topics.

The main objective of this paper consists in the analysis and assessment of European themes occurring within national TV coverage in the Czech Republic. The analysis will be performed at the level of NUTS III self-governing regions. In that way, we are able to determine, which of self-governing regions in the Czech Republic draw on the slogan “Europe of regions” also from virtual or intangible perspective. Our research will be accomplished from both quantitative and qualitative perspectives.

It should be mentioned that the notion “Europe of regions” has been coined already a long time ago. It epitomizes the spirit of European integration, which finds its ample projections for instance in the bulk of finance devoted to European regional policy and cohesion. At the same time, regions represent appropriate spatial units for fulfillment of further principle of European unification expressible as “unity in diversity”. Last but not least, it should be mentioned that Europe distinctively strives – sometimes more theoretically rather than practically - for eliminating the “dead valleys” on its territory. From this point of view, the article captures an interesting issue of the media presence of European dimension within Czech self-governing regions.

2. Methodical Continuities

The article is underpinned by the data on media content provided by Media Tenor. This agency focuses on media content analysis and has wide international networks at disposal. In the context of the Czech Republic, such kind of research is rather unique. Media – and more precisely TV – portrayals of individual territories constitute an exciting, albeit not-yet-established direction of research in our country.

As already indicated, for TV broadcasting, rather high impact on the wide public as well as representative character are concomitant. Analyses show that TV coverage agenda to a large degree expresses also press or radio coverage agenda (for more information see Nečas, 2009). Indeed, TV coverage is rather persuasive and almost omnipresent, which forms a solid basis for our research.

More precisely, we deal with evening news of three relevant TV companies – one of them public and two of them private – in the Czech Republic. Thus, Události of Czech TV and Události, komentáře of Czech TV provided us with useful material originating in public TV and Televizní noviny of TV Nova together with Zprávy of FTV Prima show the production of private TVs. The whole research concerned the period between 2004 and 2011.

TV news reporting was investigated from both quantitative and qualitative perspectives. Quantitative dimension of the whole research stresses the amount of contributions within the national TV coverage. European themes bound to single NUTS III regions in the Czech Republic will be evaluated from both absolute and relative perspectives. While absolute point of view leans upon the absolute amounts of news in analysed regions, the relative perspective shows the ratio of Europe-orientated topics on the whole amount of regionally-related news appearing within national TV news reporting.

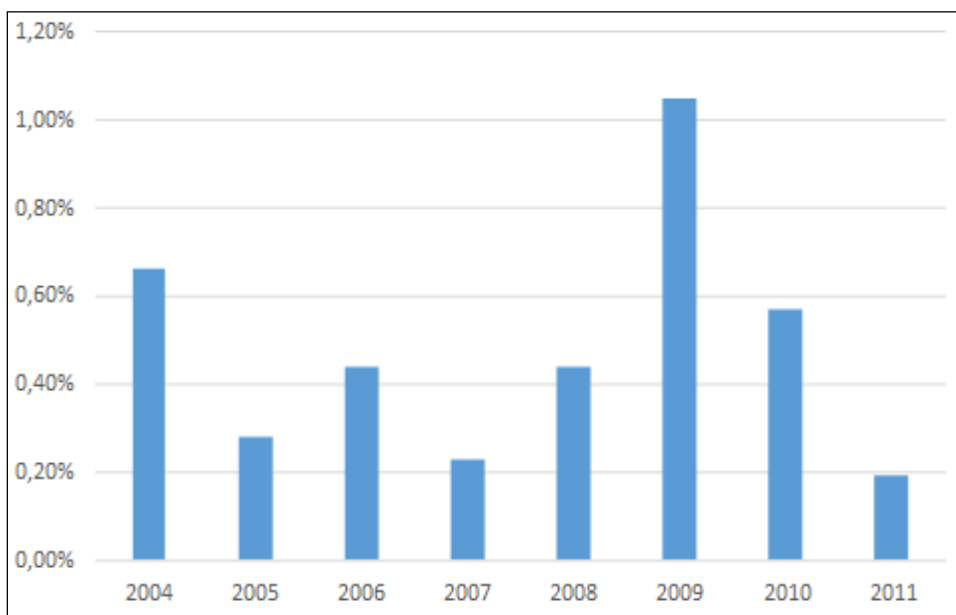
Qualitative analysis and interpretation relies upon content composition of regionally-related contributions brought by national TV reporting. We focused primarily upon European topics in order to reveal, to what extent TV coverage in the Czech Republic reflects on “Europe of regions” or how intensely the European dimension is virtually present in individual self-governing regions.

3. Results and Discussion

3.1 Quantitative Dimension of Europe of Regions within National TV Reporting

This subchapter concentrates on the presence of regionally-related European themes within national TV reporting. Figure 1 shows relative number of European topics related to self-governing regions in the Czech Republic between 2004 and 2011.

Figure 1: Share of Topics Related to European Issues on the Total Amount of Topics between 2004 and 2011



Source: Media Tenor and author's calculations

In spite of the fact that Czech Republic joined the European Union already in 2004, European topics actually form only a minor part of TV coverage. Higher share of regionally-bound European news on the total amount of news was observed merely in 2004 and in 2009. In 2004, the when the Czech Republic became the member of the European club, there appeared more news related to this truly important event. Surprisingly, much less attention was devoted

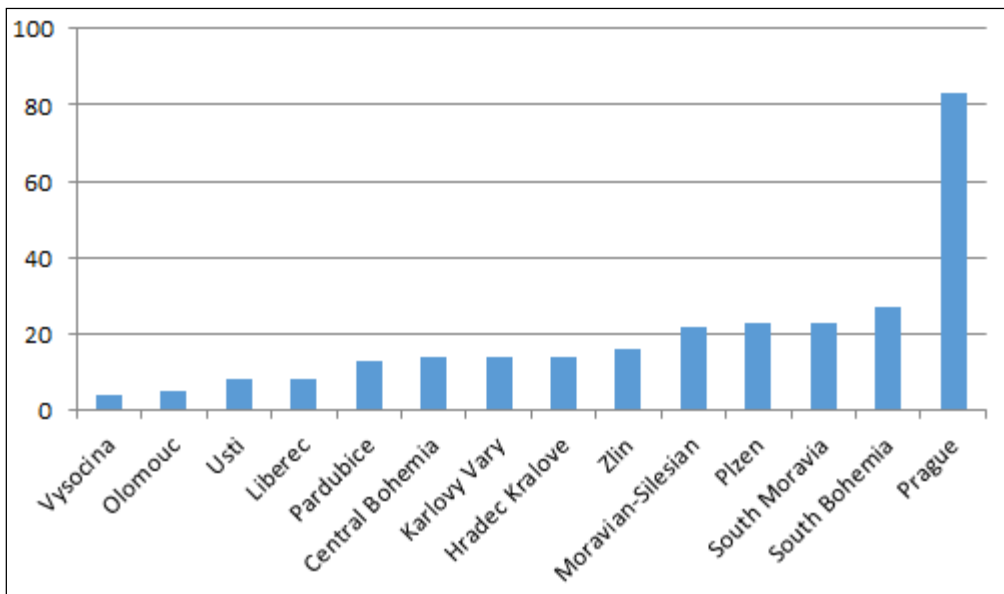
to the elections to the European Parliament, which proved to be a completely new element for the country at that time.

In 2009, elections to the European Parliament already became the subject of wider debate, which found also its TV coverage projections. At the same year, Czech –abroad widely criticized – presidency of the European Union took place, which again attracted a bit higher media attention. Year 2009 is a special one as it was only the year when the amount of topics related to the European issues on the total number of themes was higher than 1 %. Apart from these two years, media were largely oblivious to substantial European issues.

As it can be derived from Figure 2, the highest amount of Europe-orientated news was published in the capital city of Prague, which represents an outlier, sui generis. This result could be to some extent expected because of Prague’s exclusive position within the country. It is also worth noticing that objective “sucking effect” beset populous Central Bohemia, which forms a compact hinterland surrounding the capital city.

The next position is occupied by South Bohemia, which can appear a bit surprising; in reality, the affair of Temelin nuclear power plant affected the final statistics. The third place in this ranking is occupied by South Moravia, which can be accounted for by the presence of the second largest city in the country. Other regions, whose absolute amounts of themes related to Europe exceeded the value of 20, were Plzen region and industrial and populous Moravian-Silesian region. Remaining self-governing regions were ranked in the following way: Zlín, Hradec Králové, Central Bohemia, Karlovy Vary, Pardubice, Liberec, Ústí, Olomouc and Vysočina regions.

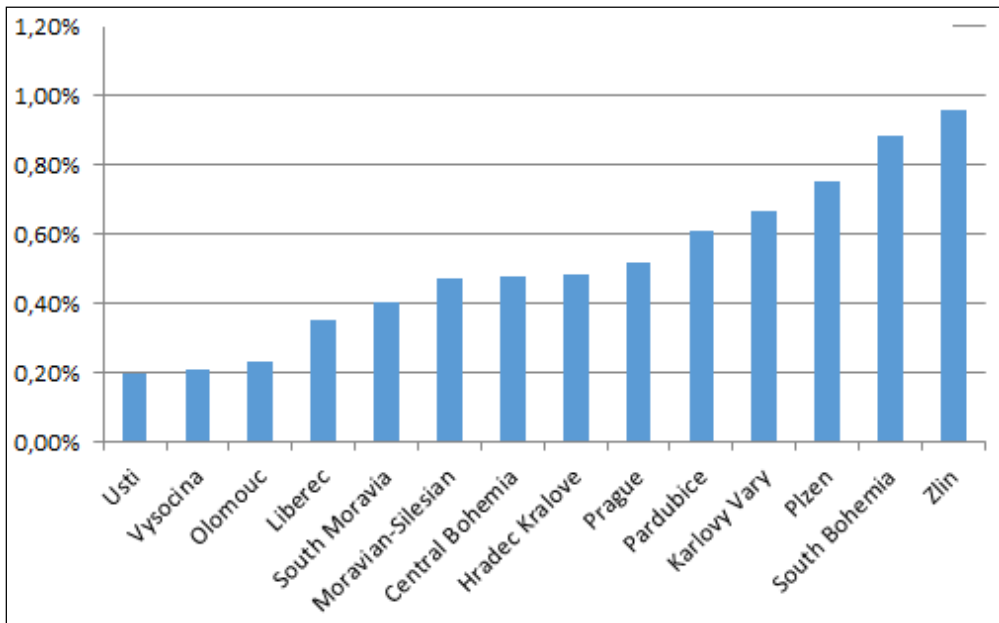
Figure 2: Absolute Amount of Europe-Orientated Topics bound to Self-Governing Regions on the Total Amount of Topics between 2004 and 2011



Source: Media Tenor and author’s calculations

If we evaluate the relative amount of Europe-orientated themes bound to self-governing regions on the total amount of themes in these regions between 2004 and 2011, we get considerably different picture. Prague, which represents country's decisive political-administrative nod, scored under 0.6 % from relative point of view. This can serve as a confirmation that attention devoted to European issues, which are mostly beneficial for the country as well as its single regions, is not a satisfactory one.

Figure 3: Relative Amount of Europe-Orientated Topics bound to Self-Governing Regions on the Total Amount of Topics between 2004 and 2011



Source: Media Tenor and author's calculations

Territories, whose relative amount of themes related to Europe was the highest one, are as follows: Zlín region, South Bohemia, Plzeň and Karlovy Vary regions. What do they have in common is that they are located in the southern and western part of the Czech Republic and are under the population average of all self-governing regions in the country. Thus, neither regional distribution of population nor overall settlement system can be perceived as spatial determinants of the relative number of news related to European Union.

The ranking of other self-governing regions was as follows (in descending order): Pardubice, Prague, Hradec Králové, Central Bohemia, Moravia-Silesia, South Moravia, Liberec, Olomouc, Vysočina and Ústí region. Apparently, the fact that population size can be treated as *spiritus agens* of the overall volume of activities in the researched territory did not find its media manifestation in the realm of European issues.

3.2 Qualitative Dimension of Europe of Regions within National TV Reporting

Previous subchapter gave us the basic insight into the problem of the occurrence of regionally bounded European themes appearing within national TV coverage. Apart from already depicted quantitative dimension of the issue, it is useful to have a look also at the thematic

structure of the news. In that way, one can create more complex view of the whole issue from both quantitative and qualitative perspectives.

With exception of already depicted joining the European Union or elections to the European Parliament, principal TV companies in the Czech Republic tend to inform about large spectrum of European issues, including European integration, news about visits of foreign politicians, European security, freedom, justice and other topics of that ilk.

As already mentioned, the largest absolute number of Europe-related news had a connection with the capital city of Prague. Majority of news related to Prague was devoted to joining the European Union, Czech presidency of the European Union or elections to the European Parliament. One can also fathom Prague differs from the rest of the country just for the sake of its specific urban character.

Second region as to the number of European news, which is South Bohemia, was partly driven by the issue of Temelín nuclear plant. Gatekeeping principle is actually concomitant for regional coverage appearing within national TV broadcasting in the Czech Republic, which was confirmed also by other researches (for more details, see Suchacek, Seda, Friedrich and Koutsky, 2015). Contrary to that, South Moravia occupying the third position was devoid of any dominating European topics. Thus, its European dimension was a quite motley one without any prevailing theme.

As for other regions that were evaluated, European news had largely mosaic character and no dominant theme could be captured. The only exceptions are represented by Plzeň and Moravian-Silesian regions since their capitals, the third and fourth largest towns in the country, acted as candidates for the title of European capital of Culture 2015.

From relative point of view, Zlín region was on the very top of the ranking. Nonetheless, its absolute amount of contributions was so small and so diversified that no specific feature of that region in the sphere of Europe-related news could be identified.

To sum it up, content structure of European news related to self-governing regions of the Czech Republic had just the basic informative character. Extraordinary events or news of tabloid character, which play a tangible role in regionally- or locally-related coverage (see for instance Suchacek, Seda, Friedrich and Koutsky 2014) became rather exceptional in the framework of Europe-orientated reporting. Thus, orientation to other than extreme or tabloid news is surely a laudable one. At the same time it is worth reminding that as to their amount, the weight of Europe-orientated news is nearly negligible.

4. Conclusion

Despite its membership in the European Union already from 2004, the Czech Republic can be still ranked among quite Euroskeptic countries. This attitude finds its reflection also in the framework of TV news reporting, which deals with European issues in unsatisfactory little extent. As to the regional dimension of European news in the country, from absolute point of view, the capital city turned out to be an outlier. Results of other self-governing regions proved to be much weaker from quantitative perspective. Further positions were occupied by South Bohemia, South Moravia, Plzeň and Moravian-Silesian regions.

If we have a look at the relative number of Europe-orientated themes bound to self-governing regions on the total amount of themes, top regions are Zlín region, South Bohemia, Plzeň region and Karlovy Vary region. What they have in common is that they are not so populous

and with exception South Bohemia and partly also Plzeň region, their profiles as to European issues are quite amorphous.

Qualitative point of view etches in the whole analysed issue. With some exception, the European topics tackled mainly country's joining the European Union, elections to the European Parliament or visits of foreign politicians. In case of South Bohemia, one single event affected the media portrayal of the whole region. Taking into account the funds as well as know-how and general standards the European Union brought to the country - and via differentiated diffusion processes also to its self-governing regions - such a little presence of regionally-orientated European themes within national TV coverage is disappointing. In case of the Czech Republic, we are indeed entitled to talk about virtual weakness of European dimension in its self-governing regions.

Previous facts confirm the necessity of more systematic marketing activities that should be adopted by individual self-governing regions. From this perspective, regions can use wide spectrum of categories involving relationship marketing, monitoring regionally-directed TV coverage or organisation of events in the region in question. Media portrayals of regions constitute truly exciting theme allowing for both quantitative and qualitative analyses, which was confirmed also by previous researches (see Suchacek, Seda, Friedrich and Koutsky 2014 and 2015).

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The Young People's Labour Market and Crisis of Integration in European Union

Adam Sulich

Wroclaw University of Technology
Faculty of Computer Science and Management,
Department of Infrastructure of Management
ul. Wybrzeże S. Wyspiańskiego 27
Wroclaw, Poland
e-mail: adam.sulich@pwr.edu.pl

Abstract

The young people labour market in European Union is facing great challenges. Young people's unemployment has been on rise in EU continuously since 2008 and it reached its highest value in 2011. Young people's unemployment causes negative sentiments and tenses among society and possibly has an impact on European integration. In some member countries, young people start working much earlier than in others, e.g. in the form of summer jobs or jobs for students. It is also possible to be in education system and on the labour market at the same time, leading to an overlap. Another challenge of this specific labour market is migration of young people from non-member states of EU which began in 2008 and has caused a migration crisis in 2015. This article focuses on the complex interplay between education and participation of young people in labour market of the EU as a possible indicator of European integration.

Keywords: Education-to-work Transition, Unemployment, Young People Migration

JEL Classification: F22, J42, N34

1. Introduction

The unemployment rate can be important indicator of European integration process due to its both social and economic dimensions. Rising unemployment results in a loss of income for individuals, increased pressure with respect to government spending on social benefits and a reduction in tax revenue. Youth's or young people's unemployment is a problem in economy, which is connected with both youth transition into labour market (or integration with labour market) and society expectations towards governments.

This article is the result of a conviction that the young generation is certainly one of the resources which the strategies of European integration can rely on. Therefore, if youth's and young people's well-being and future are endangered, then the idea of European integration and the future of UE are unsure. That formulated thesis about youth's enormous potential is in accordance with Karl Mannheim's idea about the young generations as agents of social change. In his work K. Mannheim emphasises that this potential is important especially when the society faces the upcoming challenges (Mannheim, 1943).

After the economic crisis in years 2008-2009 unemployment among young people has risen not only in EU but also all over the world. University graduates had the same problems on the labour market like people with secondary or lower education (Fic, 2015). The same difficult

situation is observed in all EU countries, where studies and education ceased to be a guarantee of employment. The trend of young unemployment is “the same in the Euro-zone and outside of it” (Fic, 2015). Problems of youth and young people on the labour market endangered “well-being and prosperity of younger and future generations, which are guarantee of solidity of transnational structures in Europe” (McNeill, 1974).

The aim of this article is the analysis of the complex interplay between education and participation of young people in the labour market of the EU as possible indicator of European integration. The methodology used in this article was based on the analysis of the literature and the statistical data for the period 2008-2014 (Eurostat [online], 2016b).

2. Youth and Young People Definitions

There are many different “youth” and “young people” definitions in literature (Fic, 2015). Most of them are traditionally related more to sociology and life phases or social roles (Elder, 2009). Traditionally, youth refers to people who did not become fully independent. Previously the end of this life phase was marked by specific events and life situations such as commencing employment, marriage, having a family or an independent household. Adulthood was recognized after achieving full life stabilization, which was usually possible around the age of 20. The transition from phase of youth (denoting the status of a dependent person, not treated seriously and incapable of deciding about oneself) to adulthood (designating the status of a society member with full rights capable of taking independent decisions) is of great subjective importance to young people – it provides them with the feeling of independence and autonomy.

Nowadays, this criterion ceased to suffice and classifications made in such papers often are a result from categorisations employed by institutes collecting statistical data. However most of the organisation use both of the terms “youth” and “young people” interchangeably with the understanding that member states and other entities may use different definitions. The various definitions of “young people” and their age frames were presented in Table 1.

Table 1: Differences between “Youth” and “Young People” Definitions

Organisation:	Age
International Labour Office (ILO)	Youth:15-24
United Nations (UN) and its agencies: UN Secretariat, UNESCO, UNICEF	Young people: 25-29
European Union (EU) and its statistic office Eurostat	Young people:15-29
Organisation for Economic Co-operation and Development (OECD)	Youth: 7-15 Young people: 16-29
African Youth Charter (AYC)	Youth: 15-35
Organisation of African Youth	
World Health Organization (WHO)	Adolescent: 10-19,
United Nations (UN) and its agencies: UNFPA, UNICEF	Young People: 10-24, Youth: 15-24
United Nations (UN) Youth Fund	Youth: 15-32

Source: author’s adaptation based on (UNESCO [online], 2016)

In Table 1 chosen definitions formulated by international organizations were presented. In practice, the operational definition of youth, or young people, varies widely from country to country depending on cultural, institutional and political factors. National statistic agencies of each country distinguished their own age frames and even different definitions related to youth

and young people. As showed even in one organization (i.e. United Nation and its agendas) there is not a single definition of young people.

For the purposes of this article following definition is formulated as consequence of methodology: the terms “youth” and ”young people” are referred respectively to the age groups 15-24 and 25-34. Within the category of young people, it is also important to make a further distinction between teenagers and young adults, since the problems faced by these two groups are quite distinct.

3. Young People’s Unemployment

According to the ILO definition, the unemployed are described as those “people who have not worked more than one hour during the short reference period (generally the previous week or day) but who are available for and actively seeking work” (Elder, 2009). Even this fairly unequivocal definition, some cross-country differences may arise. For example, in most countries students are considered to be outside the labour force (Table 2, residual inactive youth), in others if they are actively seeking work they are included.

Table 2: Young People’s Situation on the Labour Market

Unemployment	The status of individuals who are above a specified age and who are without work, currently available for work, and actively seeking work. Those seeking work include those who are looking for land, building machinery, equipment, financial resources, or permits and licenses to start their own enterprises
Unemployment (wide definition)	Same as unemployed but relaxing the criterion of actively seeking work. Those are also not involved in any form of entrepreneurship. Unemployment which is defined without search being a required criterion
NEET	The Neither in Employment, Education or Training (NEET) population is made of persons above a specified age who are not employed, not enrolled in education or in vocational training
Residual inactive youth	Those not in the labour force (neither employed nor unemployed using wide definition) nor enrolled in education or training
Time-related underemployment	Refers to situations where working individuals (non-part time workers) are willing and available to work longer hours (full time).
Vulnerable Employment	Unpaid family workers (housewives) and own account workers (self-employed) without employees
Irregular employment	Wage and salaried workers holding a contract of limited duration (less than 12 months in developing countries) or no contract at all, plus workers in vulnerable employment as defined above.
Youth labour underutilization	The three categories of irregular employment, unemployment (relaxed definition), and residual inactive youth, when combined, make up labour underutilization.

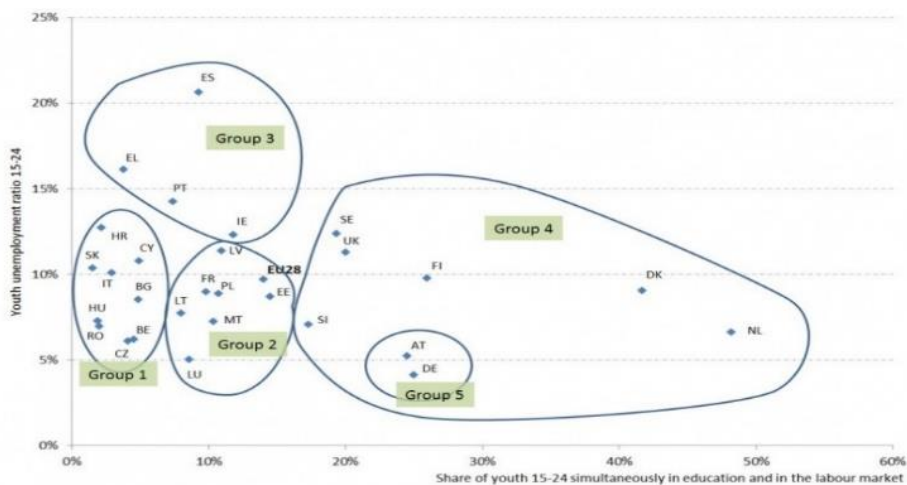
Source: (Assaad and Levison, 2013)

Classification proposed in Table 2, allows to denote young people to groups distinguished on labour market by ILO. As Table 2 shows, there is not a single and clear unemployment definition. Whatever the merits of the foregoing arguments, this article continues to employ

the conventional unemployment definition (listed on the top of Table 2), since it is the only statistic which is widely available across a range of countries.

The Figure 1 presents relation between participation youth (15-24) on the labour market and in education system simultaneously and their unemployment ratio. All the member countries of EU have been divided to 5 groups. On the Figure 1. EU-28 average was also marked. There are significant structural differences among European countries in young people's participation in the labour market. The reason is a combination of institutional factors (e.g. formal apprenticeship schemes), cultural determinants, whether there is a job market for students, the role of professional training, etc. Differences in the national systems of education and training also play a major role.

Figure 1: Country Groups by Participation of Youth in Education and in the Labour Market



Source: (Eurostat [online], 2015)

As showed on Figure 1, there are some differences in young people's (who are in transition stage) situation in the labour market between groups of countries. In the best situation are young citizens of Germany and Austria (group 5) who participate in the labour market and in education system simultaneously. In this group youth unemployment is one of the lowest. The worst situation in transition process is observed in group 3, where unemployment ratio among youth is relatively higher than EU-28 average, but contrary to group 4 and 5, attendance both in employment and in education is less than 20%. The distinction showed in Figure 1 reveals that there are two main supergroups of countries with significant differences in development and active state policy on the labour market. The first supergroup consists of groups of countries: 1, 2, 3 presented on Figure 1 (mostly poorer states). Second supergroup of countries are Europe economic leaders (aggregated groups 4 and 5) or countries keeping the pace in integration (Ročtus, 2014). Therefore, in this second supergroup of countries the integration of young people into the labour market turns out to be clearly smoother than in the other countries (Muller, 2005). W. Muller points that differences between countries comes out from different institutional arrangements in the national systems of education and training (Muller, 2005).

In Table 3 young people's average unemployment rates in years 2005 - 2015 for all 5 groups and the EU-28 were compared. Countries included groups were the same as defined on the Figure 1. After the economic crisis, since 2008 differences between groups become more visible. Most rapidly growing unemployment rate among young people occurred in group 3, and was highest among all groups. Very interesting situation can be observed in countries of group 2. They also reported growth of young people's unemployment rate (parallel to group 3 in years 2008 - 2010). Since 2011 very efficient programs of EU to involve young people into labour market were implemented, so only groups 1 and 3 have noticed relatively higher unemployment rate comparing to EU-28 average (Table 3). A second group of countries has two features: a) a moderate overlap between education and the labour market and b) youth unemployment levels around the EU average. This group includes Estonia, France, Latvia, Lithuania, Luxembourg, Malta and Poland (Figure 1). The defining feature of countries in this group is thicker bands of students or apprentices in the labour market than in the case of countries in the group 1 (Table 3).

Table 3: Young People's (Age 25-34) Unemployment Rates in Years 2006-2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU 28	8,2%	7,2%	7,1%	9,0%	9,6%	9,7%	10,5%	10,9%	10,2%	9,5%
Group 1	8,4%	7,2%	6,6%	8,0%	9,4%	9,7%	10,8%	11,7%	11,1%	10,2%
Group 2	7,6%	6,1%	6,4%	10,6%	12,1%	10,6%	10,0%	9,3%	8,6%	7,8%
Group 3	7,7%	7,6%	8,6%	12,6%	14,6%	16,7%	20,0%	20,8%	19,1%	17,3%
Group 4	5,8%	5,2%	5,0%	6,7%	7,4%	7,4%	7,7%	8,0%	7,7%	7,4%
Group 5	7,6%	6,7%	5,8%	6,5%	5,2%	5,2%	5,1%	5,3%	5,3%	5,2%

Source: author's own calculations based on (Eurostat database [online], 2016)

In last quarter of 2014 youth (age 16-24) unemployment rate in EU-28 was 21,4%, and in euro-zone was 23,2% (Eurostat [online], 2016a). Situation of youth and young people in European Union is different in each country. Young people who are living in countries of Southern Europe are endangered by unemployment. Youth unemployment rate in 2014 was almost twice higher than in all EU-28 in South Europe and it was as follows: Greece – 52,4%, Spain - 53,2%, Italy – 42,7%, Cyprus – 35,9, Portugal 34,7% and Croatia 45,5%. An exception was Malta with 11,8% youth unemployment rate. In the most EU-28 the average value of youth unemployment rate was about 22%. There is a group of EU member states which have effective policy which is counteracting to general unemployment (young people and youth as well – Figure 1 and Table 3). These countries are: Germany - 7,7% of youth unemployment rate, Austria - 10,3%, Denmark - 12,6%, The Netherlands - 12,7%, Estonia 15,0% (Eurostat [online], 2016a).

4. Young People's Migrations

Young people constitute a significant portion of the migrating population (both EU and non-EU countries). They are relocating not only in search of labour (this motive refers mainly to citizens of poorer states) (Vasileva, 2011). An ever more frequent reason is education (studies and the desire to change place of residence (these motives being characteristic of citizens of developed EU states) (Dinan, 2005). Problem of young people's labour market is the influence of new groups incoming immigrants in production age (Vasileva, 2011). The impacts of immigration on the labour market critically depend on the skills of migrants, the skills of existing workers and the characteristics of the host economy. The immigration has a small

impact on average wages of existing workers but more significant effects along the wage distribution: low-wage workers lose while medium and high-paid workers gain (Dinan, 2005).

Many EU states which prove attractive for newcomers may save themselves by means of immigrants, who not only provide them with increased population, but constitute also a portion of the given state's labour force (Simek and Janickova, 2014). Their presence does however give rise to several problems in terms of ethnicity and religion (Vasileva, 2011).

Rising youth's unemployment in many of the countries (Greece and Spain) emphasized by economic crisis brings the democratic dangers of having such constrained labour market without opportunities for young workers (Dinan, 2005). D. Dinan claims that high youth unemployment is a direct consequence of policy choices and that there are profound consequences, including the risk of a widespread disillusionment and disengagement with civic society (Dinan, 2005).

5. Problem Formulation

The situation we are facing today in European Union is a crisis of integration. This crisis has deep roots, being closely connected with uncovered basic expectations and needs of young people in their transition into labour market. One of the reason of young people public protests and riots in years 2010- 2012 in countries listed in the third group (fig. 1) like: France, Greece and Spain was the extremely high young graduate's unemployment (Traynor, 2012; Eurostat [online], 2016b). Additionally, in 2006 and again in 2016 youth protests occurred in France as a result of opposition to a measure set to deregulate labour law (Rose and Melander, 2016).

In Spain unemployment among fresh graduates (in age 19-30) in 2011 was 47% and was highest value in all UE (Eurostat [online], 2016b). Therefore, in 2011, in Madrid and other main cities of Spain, young people organised themselves in protest in group *Movimiento 15-M* (Alcaide, 2011). In 2013 in Greece unemployment ratio among university graduates (age 25-29) was 43%. In these few countries tensions among society raised and exploded in form of demonstrations, riots and, in some cases, clashes with local police.

Youth transitions take place in different European contexts determines the position of youth as a group in the system of social relations. Young people may be more inclined to participation through institutional channels or political protest or (in contrast) remain inactive. Government in Poland introduced legal changes (the same as proposed in France) to allow flexible contracts. These changes had dramatic and negative consequences for young people's labour market status and has left large numbers of them without the protections of standard labour law.

6. Problem Solution

The competences of the European Union have expanded to affect almost any aspect of the economics and politics of our continent. One of the European integration effect is one market without borders. People, goods, services and money can move around the EU as freely as within a single country. However, there is no one labour market in EU with the same labour law (i.e. one fixed minimal wage, the same privileges or taxes) in each of member state of UE (Eurostat [online], 2016c). The minimum wage levels vary considerably across the European Union (EU) member states.

Creation of one single labour market could abolish one of the last borders existing in integrated united Europe. Furthermore, migration contributes to the functioning of a market economy as

an adjustment mechanism. Social tensions among society can be reduced by education and vocational training system based on the best (proved on Figure 1) German model.

As showed in Table 3, since 2011 the EU has been working to reduce youth unemployment and to increase the youth employment rate in line with the wider EU target of achieving a 75% employment rate for the working-age population (20-64 years). Some countries – especially denoted to third group – have taken active part (active labour policy) in key actions launched by EU such as Youth Employment Package (since 2012) and Youth Employment Initiative (since 2013). Actions dedicated to help unemployed young people also has been adopted in 2013 in all EU countries. The programme titled “Working together for Europe’s young people” aim was to accelerate investment in young people and to develop EU-level tools to help EU countries and firms recruit young people. There is a lot of actions which have been undertaken to drive down youth’s and young people’s unemployment also on domestic level of each member state. All of them combined together with actions of European Commission are very effective because in all groups of countries young people unemployment rate is systematically falling (Table 3). The EU-wide tool is EU Skills Panorama which is gathering information on skills needs, forecasting and developments in the labour market. In future this tool can help build a comprehensive package of policy initiatives on education and employment for young people in Europe.

7. Conclusion

The youth is a very good starting point for observing what is happening in whole society. It is a lens which focuses various problems and tensions among society (Majone, 2012). The situation of young people, their world perception, aspirations and ambitions for life reflect the changes which have occurred and the distance which is still left to be covered. In a natural way, youth and young people diagnose compelled thinking about the future and introduce an intellectual practice which is indispensable for long-term and enlightened politics – they are a natural point of reference of any prognosis.

All of EU-28 countries show considerable differences. However, in the specific arrangements for education and training their educational systems provide, they also differ in their labour market institutions. Therefore, all programmes created to solve (youth or young people) unemployment problems do not work separately. Additionally, new problems arise like migration from countries of lower wages or economic migration from non-EU member states.

Education and vocational training systems are institutional factors that either enhance or deter mobility in Europe (Fic, 2015). In addition, the dual vocational training system represents a key element of the German model (Muller, 2005). In the context of the convergence towards a single European labour market, and further European integration other European countries should adopt the German system or offered by European Commission programmes.

Youth’s and young people’s unemployment is a multidimensional problem, related to education, labour market, demographic changes such as migration. This issue shows ongoing process of integration that has not been accomplished yet.

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Illusion Euro or the Price-Quality Ratio - Changes in the Market of Tourist Services in Slovakia

Marek Szajt

Czestochowa University of Technology
Department of Econometrics and Statistics
Al. Armii Krajowej 36b
Częstochowa, Poland
e-mail: marszajt@zim.pcz.pl

Abstract

This article aims to analyse the situation on the market of tourist services in Slovakia after euro adoption. On the basis of statistical data from Eurostat, the National Bank of Slovakia, World Economic Forum, the situation in Slovakia and other countries that have adopted the euro was compared. One of the main problems was the crisis that began in the time of the adoption of the euro by Slovakia. In this situation, potential tourists much more precisely watched price-quality relationship. Introduction of the euro allowed to conduct international comparisons. The author argues that the apparent increase in prices resulting from the introduction of the euro was not the reason for the decline in demand for tourist services. The real reason was the ability to reliably assess the quality-price relationship in relation to competing economies.

Keywords: *Comparing the Relationship Quality-price, Illusion Euro, Market of Tourist Services, the Slovak Economy*

JEL Classification: *F45, L83, O52*

1. Introduction

Money illusion means that people subject to psychological attitude do not distinguish between transactions in nominal and real terms (Gamble, 2006). What is more, often they use nominal, not real price (Raghubir and Srivastava, 2002). It is even more noticeable during deeper analysis of economies which changed their currencies, which is the case in many European countries. It has been observed that if nominal value of new currency exceeds nominal value of previous currency, new price is perceived as higher (Bondos, 2014). Money illusion may even cause distortion in real prices (Noussair et al., 2012) in consumer perception. Such situation we have faced in the European Union. This was not the adoption of euro as a common currency by many countries at one time, but above all situation in subsequent countries joining the monetary union. The most glaring example of this appears to be Slovakia. In this article, the goal was to analyze situation of tourism market in Slovakia in the period preceding and following adoption of euro by this country.

Market of tourist services, as highly competitive and playing a big role in shaping individual economies - especially in developed countries - seems to be a good example for similar analysis. The market of tourist services is characterized by a high level of competitiveness but substitutability too. Therefore, it can be assumed that the reaction of consumers to the apparent or actual changes in the prices of tourist services is clear and almost immediate.

2. Slovakia in the Monetary Union

Slovakia as an independent country has been established (formally) in international arena in January 1993. From the beginning, following past years' experience, the country sought to strengthen relations with countries of the European Union newly founded from previous economic structures. Like other countries of the former Eastern bloc, and small Mediterranean countries, it joined the EU in 2004. One of objectives of the European Union is strengthening economic contacts also at the level of integration in terms of used currency. Despite exclusion of this system by such countries as UK or Sweden, Slovakia joined ERM II in 2005, and after four years on 1 January 2009 it adopted the euro as currency. Previously - from a group of 10 new members - only Slovenia (1.01.2007), Cyprus and Malta (1.01.2008) have done this.

Change of currency to euro is associated - among many complications of administrative nature - with the tendency to overestimate psychological level of inflation called the "illusion of euro". As noted in the course of many studies, consumers revalue its subjective assessment of the level of inflation. For instance, rounding seems natural - especially in colloquial meaning of conversion - as was the case in Germany, where the German mark was converted to euro in relation 1.95583/1. For residents of Germany, it was natural to approximate the proportion of 2/1 (Bittschi and Duppel, [online] 2015). Data published by central banks of countries that have adopted euro confirm the impact of this operation on change in prices of up to 0.2% - 0.3%. Slovakian bank estimates the impact of euro on inflation at the level of 0,15-0,19% (National Bank of Slovakia, 2009). Of course, the rate of change of prices based on generally applicable methodology is taken into consideration. Meanwhile, rise of particular prices - especially retail - concerned primarily consumer goods, food, and basic necessities. The cappuccino effect which can be sometimes observed do not translates in such a drastic way to change of prices in general. Single rounding up, also did not cause significant increase in price level even though such was their perception. Of course, danger of betting on the increase in prices by companies in response to lack of price transparency can be assumed with high probability, but this has been remedied - especially in case of Slovakia - through showing prices in dual-currency system in the period preceding currency exchange. Thanks to this, transition to the euro zone itself was more symbolic. However, there were areas of economy, where this effect - at least apparently - has played a role. Studies conducted in churches of Ireland and Italy showed the increase - resulting from a change in exchange rates - in donations to sacrifice (Cannon and Cipriani 2006). This effect, if any noticeable or significant occurs only in the first year of change. The effect of introduction of euro estimated by Eurostat is about 0.3% of the Index Changes Price (European Commission, 2009), but it was counted only for a few months of transition - December - January, February. In practice, the effect - especially with relation to clearly seasonal manufacturing and services sectors is visible only when seasonality occurs. However, perception of price movements in the market remains. Many consumers all changes - no matter of normal changes in the economy - submits to one cause, in this case adoption of new currency.

Purchasing power of money largely determines the level of consumption in a given area. Usually, an increase in inflation which accompanies fall in value, and in results decrease of money value and thus reduces (due to limited resources) demand for certain types of goods. Insensitive or less sensitive to such variations are inferior goods - especially primary, but this effect is most noticeable with respect to superior goods. In this group (if only because of lack of any compulsion to use them) are services offered by tourism market. It can therefore be assumed that if demand for such services decreases, this is a result of reduction in income or an increase in prices (usually in reference to the quality offered) or a decline in competitiveness

of the group of services (Karas and Ferencová, 2010). Given the pervasive globalization, competitiveness of services must be considered in a very wide spatial terms. Particularly in regard to the European Union, where countries after implementation of the Schengen arrangements promote visa-free, unrestricted movement across borders.

3. Market of Tourist Services in Europe

Tourism market is associated with organization of leisure activities. Its development is accompanied by observed increase in wealth of countries and their citizens while reducing work time during last years and increasing time devoted to rest. Not unreasonably, this market is associated primarily with the period of summer holiday season (or winter holiday). The largest share, confirming a high level of seasonality, have periods of several or more days' break associated with winter or summer and Christmas periods. During most intense selling services (i.e. high season) in countries of the European Union 13.0% (Germany) to 29.7% (Croatia) of full-year sales is sold, while in worst month of sale of these services does not exceed an average of 4% (most 5.7% in Finland). What is important sale of tourist services is affected not only by domestic market but also, and perhaps above all, the sale of these services to consumers from abroad - to visitors. Share of non-residents in tourist traffic measured by the number of sold night accommodation ranges from 9.5% to 23.1 for countries least sensitive to this factor, such as Germany, to 98.5% for Cyprus. For countries such as Malta and Cyprus - where tourism plays a significant role in shaping the GDP, share of foreign tourists in any of studied period does not fall below 70%. It is no wonder, therefore, that trends observed few years ago in these countries aimed at introducing the euro as base currency. It is a very significant support for potential tourists from other countries located in the zone. It should be underlined that external factors, on which country has no influence have huge impact on tourist traffic. Meanwhile, international situation – because of large share of non-resident tourists - is extremely important for tourism markets of most (17) European countries.

Tourism market plays a significant role in shaping the economic potential of the European Union. Direct participation in development of tourism in Union's GDP is 5%, while in Slovakia currently only 2.5% (Weiss et al., 2013). It is estimated that more broadly defined tourism sector currently generates 9% of GDP and forms each eleventh workplace in Europe (Tourism Strategy, [online] 2015). For Slovakia, it is only 5.8 GDP and 5.6 jobs (WTTC, [online] 2014). Slovakia in the ranking of 140 countries has been for several years consistently at 54 place in terms of attractiveness of trips, and what is worse in comparison to other European countries is on the 32 place - only Romania falls behind and inter alia, Montenegro, which is not member of EU is placed higher. Competitive pricing puts it just at 81 (World Economic Forum, 2013). Such situation unfavorable for the Slovak market of tourist services has appeared in 2009. Then from 38 place in the ranking of the World Economic Forum Slovakia has fallen to 46 and two years later to 54, where it settles permanently. The biggest decline in ratings were related to the evaluation categories such as the availability of skilled labor - a drop from 5th place in 2007 to 53 in 2009, now 42, human resources from 10 in 2007 to 52 currently, cultural and natural resources from 16 place to 54. In the last six years only health and hygiene - from 18 to 12 place - and perception of national tourism, from 71 to 51 place have improved (in the assessment). Also share of tourism industry in GDP fell between the years 2006 - 2008 from 2.2% to 1.5% and the entire tourism sector from 15.4 to 9.9 in 2010. First of these indicators now returned to previous position, however the second fell to 5.9%. What is worse, this led to a situation in which the tourism sector in the broad sense produces only 5.7% of jobs, while six years back it created 13.6% of jobs.

4. Market of Tourist Services in Slovakia Compared to other European Countries

Given the psychological effect - at least in theory - of the euro illusion, analysis should cover not only Slovakia, but also other countries which joined the zone, namely: Malta, Cyprus, Slovenia and Estonia. Lithuania and Latvia have joined too late to enable an analyzes of effects of this fact. According to the idea of this article, an analysis will be made through the prism of situation on the market of tourist services.

Table 1: Competitiveness Rankings in the Travel and Tourism Countries that Have Adopted the Euro in 2007-2012

Evaluated category	Country	Ranking of the year:						change before/after €*	Change 2015/2007
		2007	2008	2009	2011	2013	2015		
The Travel & Tourism Competitiveness	Slovenia	44	36	35	33	36	39	-	-5
	Malta	26	25	29	26	24	40	-1	+14
	Cyprus	20	24	21	24	29	36	4	+16
	Slovakia	37	38	46	54	54	61	8	+24
	Estonia	28	26	27	25	30	38	5	+10
Price competitiveness in Travel & Tourism industry	Slovenia	106	102	94	99	111	96	-	-10
	Malta	109	100	122	111	90	106	-9	-3
	Cyprus	72	95	82	109	102	111	23	+39
	Slovakia	57	84	88	102	81	80	4	+23
	Estonia	34	60	64	44	44	72	0	+38

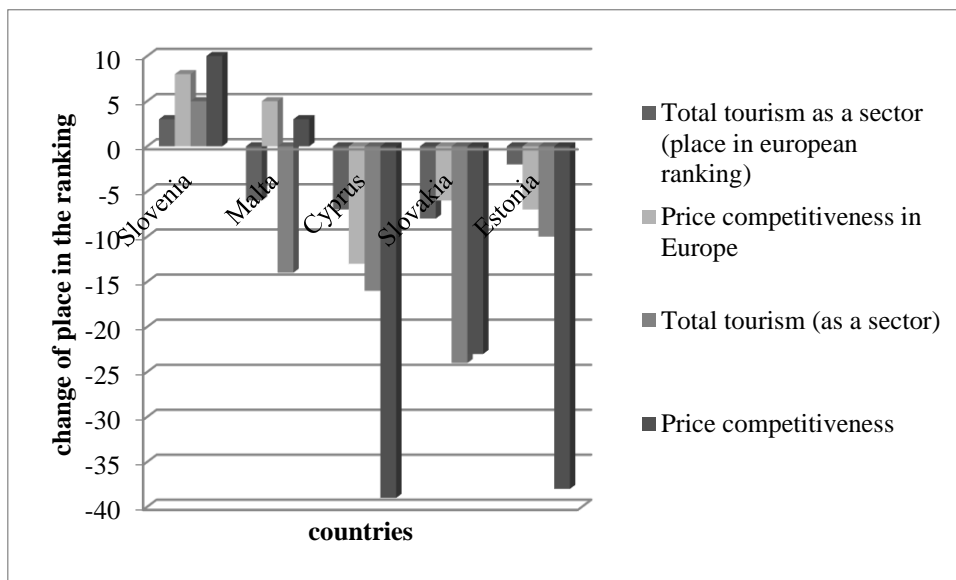
* negative values indicate an improvement in the ranking

Source: own elaboration on the basis of The Travel & Tourism Competitiveness Reports

Data presented in Table 1 indicate that it is difficult to assess a direct impact alone of change of currency on market situation. Indeed, ranks in the studied group of countries more deteriorated than improved, but this is not a norm. What is more (especially given the increase in number of countries ranked from 116 to 140), these differences do not seem to be significant. Price competitiveness - which in this case should be most susceptible to changes in the currency market - for two countries (Cyprus and Malta) with similar specificity is perceived quite differently. Situation in Slovakia in terms of price competition is now only back to situation before the financial crisis. While assessment of competitiveness of tourism market in general yields very bad results for Slovakia. In Europe, it is a 32 place for 42 countries included in the ranking. Neighboring Czech Republic are about by 10 positions in the European ranking and by 20 in the world ranking higher.

Similar statements can be made for Europe. In this perspective, the situation is similar. Figure 1. shows changes in the positions of ranking of countries that have joined the monetary union on a global basis and for Europe.

Figure 1: Change of Place in the Ranking in 2007-2015 in Relation to Competitiveness of Tourist Services and Price Competitiveness of Countries that Have Joined the Monetary Union



Source: own elaboration on the basis of The Travel & Tourism Competitiveness Reports, [cit.2016-02-28]. Available: <http://reports.weforum.org>

Definitely a noticeable deterioration in price competitiveness of Estonia and Cyprus in the studied years can be observed. While analyzing data on Slovakia, it turns out that despite the fact that competitiveness in general decreases, price competitiveness declines at a slower rate. It means that there is other than price reason for these changes. Moreover, share of Slovakia in the European tourism market - albeit faint at a level not exceeding 0.5% for years is stable. Visits by non-residents increased by 15.38% but it is less than the EU average. In turn, number of tourists' residents increased by 7.99%, which is much faster than the average in the EU, especially when in countries which are not in the euro zone this indicator actually declined. Number of tourists' residents is a very accurate indicator of perception of price changes. Level of comparability of prices of countries with the same currency should be kept in mind. Therefore, Slovaks knowing prices abroad, choose holiday at home country – it can be called a growth of competitiveness on the internal market.

Meanwhile, despite the increase in number of tourists in Slovakia in the years 2003 - 2013 by about 52.3%, the number of tourists from the EU countries increased only by 13.2%. If we take into account number of nights, it decreased overall by 10.8% in this period and for the guests from the EU declined by as much as 36.7%. Another issue is the availability of transport to Slovakia from other EU countries. But the situation is different, when we look at the structure of foreign guests in Slovak Republic. Share of tourists from outside of Europe in the years 2009 -2013 has increased from 17.8% to 25.1%. Share of visitors from the USA increased from 2.3% to 8.7%. We can assume that visitors from outside of Europe organize their trips to visit - after getting to the continent - as many places as possible. In this kind of tourism, single currency works in favor of Slovakia.

It seems that the main problem is the moment of entry into the euro zone by Slovakia. This coincided with the peak of global crisis. Number of tourists in Slovakia in 2009 compared to 2008 decreased by more than 16%. To make matters worse in the next year it remained unchanged. By 2014 previous level has not been achieved - was still lower as much as 12% - and the tourism sector is one of the most slowly coming out of the crisis in the European Union. In 2012, the European Union observed increase in turnover for tourism by 10.9 higher (the number of tourists by 9.9 higher) than in 2008, for Slovakia were indicators of revenue growth of 7.6 and 16.7 decrease in the number of tourists foreign (Malachovsky, 2014). Number of tourists recorded in 2014 compared to 2008 was lower only in Cyprus (after several years of growth), Romania by about 2.4% and Ireland by about 5%. We can even talk about deterioration of the tourism economy in Slovakia. Pace of development of tourism (measured by number of nights) in Slovakia is 30.4 percentage points lower than the average and by 24.8 p.p. less than half of countries in the European Union. Number of tourists (apart from the length of stay) provides slightly better results. Here, the level of 2008 was achieved in so far record 2013. Data from the first half of 2015 indicate that perhaps these limits have already been exceeded, and a noticeable increase in the number of tourists can be observed. It would be great news, especially taking into account that 2013 results were achieved thanks to Koszyce, which during that year was the global culture capital.

Each year (after the crisis) number of accommodation nights in Slovakia was lower by 13.3% from the level of 2008. Continuation of this trend for e.g. 2015-16 years will result in effect comparable in terms of power to a complete lack of income from tourism in one of eight years.

However, the effect of price changes in economy - especially in tourism - after introduction of euro is noticeable. Inflation in the years 2008-2014 in Slovakia was 16.86%, while in the Eurozone 11.04%. Among zone countries only Austria (17.03), Finland (19.84), Malta (17.09) and Estonia (22.08) experienced higher inflation rate. Two of them also entered the area later. Countries outside the zone were characterized only by moderately higher level of inflation in the restaurant and hospitality sector approximately 2 percentage points, which is still lower than in Slovakia. In this respect, competitiveness of tourism sector in Slovakia cannot be positively evaluated.

Analyzing the decline in demand for services in Slovakia a significant change in prices in neighboring countries should also be taken into account. With the crisis, there was a sudden devaluation of forint, Polish zloty and the Czech koruna. Declines were double-digit (30% for the zloty) (Adamiec, 2010). Therefore, attractiveness of these economies from the point of view of imports but also delivery of services - including tourism - has relatively increased, which was reflected in a drop in demand for products and services from native Slovak consumers.

Kind of bad luck in Slovakia was that thanks to money illusion, return to equilibrium in real and nominal prices after their decline is slower than in case of price increases (Fehr and Tyran, 2014). In this case, financial crisis has extended a negative effect and subsequently dismissed a return to balance. Thus the fall in demand resulting from negative assessments of prices - even illusory - was inevitable in short term.

5. Conclusion

Analyses presented in this paper indicate clearly the deterioration of tourism economy in Slovakia in recent years. Situation began to improve only in 2013, which still represents a delay relative to other EU countries. Probable reason for deterioration of situation, not only

prices but in general economy of Slovakia was not the introduction of euro - which is an easy excuse for opponents - but coincidence of this event with global financial crisis. No possibility of economy response through monetary policy tools resulting from restrictions for countries of the monetary union, with crawling system, has prevented aid from financial institutions of the state. In turn, reduction of external demand associated with the crisis has augmented the effect of the fall in demand in the market of tourist services. It must also be assumed that competitive, better developed markets, started much more intense battle for the customer at the moment of recovery from the crisis. Their financial capabilities and past reputation, combined with experience in operation of described system allowed to succeed, which was at the same time failure of weaker competitors, which include, among others, market of tourist services in Slovakia. Conclusion concerning inflation resulting from introduction of euro which is the reason for difficult economic situation – also among the public - must be seen as over-interpretation in the light of presented data. Described situations should be treated as specific, which does not depreciate importance of its analysis. Recurrence of a similar scenario cannot be excluded, therefore, potential members of a monetary union (euro or any other hypothetical) should focus on scenario analysis of this issue and try to find ways out of this situation. Data indicate that other countries that have adopted euro at other times (both earlier and later) did not face such far-reaching problems.

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Real Societal Impact of Projects Supported within Human Resources and Employment Operational Programme in Selected Czech Regions

Jarmila Šebestová, Zuzana Palová

Silesian University in Opava, School of Business Administration in Karvina
Department of Business Economics and Management
Univerzitní nám. 1934/3
Karvina, Czech Republic
e-mail: sebestova@opf.slu.cz, zuzana.palova@centrum.cz

Abstract

Main goal of this paper is evaluate real effectiveness of financial support from Human Resources and Employment Operational Programme (OP LZZ) in 2007-2013 in chosen regions (Moravian-Silesian, Plzen, Hradec Kralove and Ústi). The analysis will be done in two independent layers, primarily from data collected from beneficiaries, secondly in comparison of regional socio-economic indicators. Authors found positive relationship between outputs of projects and project location. The existence of regional differences is one theoretically plausible explanation for spatial variations in different activities within regions and it is necessary for Community-Led Local Development planning within EU requirements and its rational evaluation in area of recommended programme indicators. Finally, SROI indicator was used to evaluate the Programme effectiveness.

Keywords: *EU Funds, Regional Development, Societal Impact, Socio-economic Indicators, SROI*

JEL Classification: *L31, O35, R58*

1. Introduction

In the most European countries governments are cutting their budgets, so local governments respond by restriction in support in many areas such as education, social services, and support in employment of young people. The need of social solutions in case of termination of traditional employees in regions after the economic crisis leads them to support projects, connected with EU funds support (Lauritzen, 2012). European integration brought along development of European regional support systems by putting in place the European Structural Funds to make a contribution to attainment of the European economic policy and social cohesion, bridge the gaps in respect of regional development and growing standards of living of citizens of the European Union's Member States and they have strict matrix of indicators to measure effectiveness of support allocation (Rodriguez-Pose and Fratesi, 2004). Projects dedicated to labour market improvements in the Czech Republic that are funded within the framework of the Human Resources and Employment are perceived by financing bodies as successes when they are completed on time, within budget, and meet all specifications set in the project plan. All key indicators on national level are crucial for EU-funded projects and finally funding bodies are responsible to evaluate them. Real societal impact is not measured in detail. As recent research shows (Viturka, 2007, Chitu, 2012), some of the indicators are averaged for an entire region and are not always adequate for the local socioeconomic

situation. Main weakness of EU-funded projects could be seen in a support of European policies in achieving their overall goals. These indicators are broadly classified as: income of its population; the infrastructure existing in the districts; health, education and employment levels of its population (Gupta, 2014). These indicators are mostly connected with entrepreneurial activity and their innovative spirit which have an influence on local society behaviour and the real societal impact of Operational Programmes as whole.

In such context, this paper aims to measure firstly through a marketing quantitative research, using the survey research method (based on an evaluation questionnaire applied on beneficiaries) the level of impact of projects financed through Human Resources and Employment Operational Programme in 2007-2013 over the target audience in selected regions in the Czech Republic. Secondly, the effectiveness of support allocation is measured by modified ratio of Social return ratio (SROI), suggested by authors. Finally, an evaluation tool of real socioeconomic impact is presented.

1.1 Human Resources and Employment Operational Programme 2007-2013

The Human Resources and Employment Operational Programme (HREOP) was the program which was focused on the social sector and produced social innovations more than the other operational programmes. That was the reason why authors included the Human Resources and Employment Operational Programme into this research. This program was focused on minimization of unemployment by means of active policy on the labour market, professional education, reintegration of socially excluded citizens into society, improvement of public administration quality and international cooperation in the problematic areas. Especially, Social innovation call (SIC) was opened in 2013 by the Czech Ministry of Labour and Social Affairs to foster societal impact of the programme (Kadeřábková, Moghadam-Saman, 2013). Within the framework of the Human Capital Operational Programme, we can distinguish the following types of performance indicators, which we can find in other EU countries (Poland, Romania and others) in their National Reports and research analyses covering programme above (Jalocha, 2012, Pădurean, et al., 2015, Wolińska, et al., 2010): (i) *Impact indicators* – describing immediate effects on beneficiaries and they are applicable in medium term. The Managing Authority is responsible for measuring the impact indicators. (ii) *Product indicators* – describe the product of activities of the persons as beneficiaries of the programme. They differ according to priorities of the Programme. (iii) *Results indicators* – present information about the changes taking place with regard to the direct beneficiaries.

It seems that in the EU-funded projects discussed in this paper, it is not always obvious and accepted that success is a multi-dimensional construct (which was described above), because the criteria for success are very rigid and based mostly on indicators imposed by the financing bodies not by local governments. The research question is, how regional projects really achieved a goal to improve socioeconomic environment.

2. Problem Formulation and Methodology

Operational Programme HREOP 2007-2013 as a whole consisted of five priority axes. In this paper authors used three priority axes only: Adaptability, Active labour market policy, Social Integration and Equal Opportunities. Priority Axis 4 – Public Administration and Public Services was not included into this analysis because beneficiaries of funds were municipalities, regions and public government, fifth priority axis was focused on transnational cooperation. Regional socioeconomic analysis is mostly based on three pillars, which assess impact of actions on regional policy. Those pillars are economical (dynamics of economic development),

social (investments in social capital, main indicator for societal development) and finally environmental (eco-friendly approach, recycling). Main condition of society development is to give the balance between those pillars (Minařík et al., 2013). In this context, Kapstein and Kim (2011) presented fully developed matrix of socioeconomic impacts on local community and their model includes four dimensions: (i) *Macroeconomic impacts* (GDP contribution and other macroeconomic indicators), (ii) *Socioeconomic impacts and linkages* (education, employment), (iii) *Community impacts* (changes in settlement, social structure, migration), (iv) *Environmental impacts* (pollution, investments for environment protection). The study undertaken aims to explore the immediate effects of using the European Structural Funds on the current context of regional development, highlighting the influences on socioeconomic indicators and social return of investment ratio (SROI). The selected area is complex and is represented by the impact of structural funds financing on the socioeconomic results obtained at the level of Kapstein and Kim (2011) indicators and of social innovations, which expresses the new regional capacity to be a dynamic at both local and regional levels.

2.1 Data Sources and Basic Evaluation

For the performance of this study it was used (1) secondary data from Czech statistical Office, to evaluate socioeconomic improvements on regional level, (2) secondary data from database of beneficiaries of the Operational programme to create a database for the next step (3) the quantitative research with the survey analysis as method, based on a questionnaire of beneficiaries evaluation towards their participation to these projects to be able to evaluate their societal impact in form of social innovations. The research included all businesses except municipalities, regions and public administrations in the four regions in the Czech regions. Authors chose these regions: the Moravian-Silesian Region, the Usti Region, the Hradec Kralove Region and the Plzen Region (NUTS III). These regions have been chosen because these regions completed condition of (1) not sharing a border, (2) they differ in regional competitiveness indicators (Viturka, 2007) as Hradec Kralove (HK) and Plzen Regions (PR) are both classified in B group (good competitive position) and the Moravian-Silesian Region (MSR) and the Usti Region (UR) are in the contrast to them ("C" group – less favourable position). This classification support Melecký and Staničková (2011) when they divided NUTS II regions (8) as follows MSR (8th place), UR (part of region Severozápad, 7th place), HK as part of Severovýchod (4th place) and PR as part of Jihozápad (3th place).

2.1.1 Secondary Research Data Evaluation

For better evaluation of the financial resources deployed in each region, it was necessary to determine the amount of financial support for one region. Many of the projects were implemented in more than in only one region. Due to it was not possible to adequately distribute financial support by region; these projects were excluded from the overall financial analysis. Table 1 show the realized projects, which were implemented in only one region. The table shows the total allocated amount of financial support that has been sent into individual regions divided by priority axes. Due to the total number of realized projects in regions was declined. Overall ranking of region in the number of realized projects was not changed.

Table 1: The Number of Projects Implemented by Priority Axes and Regions Realized Only in One Region (in million CZK)

	Priority Axis 1 - Adaptability	Priority Axis 2 – Active labor market policy	Priority Axis 3 – Social Integration and Equal Opportunities
Moravian-Silesian Region	112	56	162
Total allocated amount	322	276	612
Usti Region	58	50	136
Total allocated amount	55	259	604
Plzen Region	41	6	37
Total allocated amount	137	26	135
Hradec Kralove Region	41	5	26
Total allocated amount	160	25	95

Source: Own proceeding according data by ESF CR. [online] [cit. 2015-05-27]. Available:<http://www.esfcr.cz/modules/projects/index.php?lang=1>

The largest amount of projects was realized in the Moravian-Silesian Region in Priority Axis 2 with 162 projects in total value of 612 million CZK. The Usti Region was on the second place. In contrast in the Hradec Kralove and the Plzen Region there were realized several times less projects.

2.1.2 Primary Research Data Evaluation

Authors send a questionnaire to 1 051 respondents which received financial support from Human Resources and Employment Operational Programme in period 2007-2013 in observed regions. They received 165 completed questionnaires (response rate of 15.69 %). From these questionnaires only 50 respondents (only 30.3% from completed questionnaires) answered that due to the financial support which they received for the realization of their projects a social innovation was created ad societal impact of their project. All the analysis is based on the relationship of the business entity and other variables, which have an influence on social innovation creation. Economic entities are divided into five groups according the size according EU definition of small and medium sized companies (28% till 9 employees; 28% till 49 employees; 26% till 249 employees and 18% in size of 250+ employees). The most active segments in area of social innovation are entities till 49 employees (56% of the sample). The highest amount of financial support was obtained in priority axis 1 – Adaptability with generation of 20 social innovations. There were created especially innovations in new platforms and innovation in education. The most frequent beneficiary in this axis was Business Company, which receive support for employment education or non-for-profit organization, which was focused on social dialog in the whole Czech Republic. It was the main reason, why the amount of support was so high. These kinds of projects had over regional character and created crossborder spillover. Priority axis 3 – Social Integration and Equal Opportunities was on the second place with financial support, but in number of social innovation (26) placed on the first position. That it is due to the focus of an axis for social innovations creation. The less number of social innovations was created in priority axis 2 – Active labour market policy (2). There was also the lowest financial support for the realized projects, so we expect lower return rate and effectiveness.

In order to verify possible linkage between financial support from the Operational Programme and the creation of social innovation correlation analysis was used. The interpretation of correlation analysis results was based on the scale according to Liebetrau (1983). It was found a very strong direct correlation (correlation coefficient was 0.69, Sig. 0.00, $\alpha = 0.05$) between the amount of financial support (divided by priority) and a number of social innovation (divided by priority axis). Other assumptions were tested in a partial dependency with cross tables, depending on the region and implementation of the priority axis. The table below (Table 2) summarizes the various factors of relationships. The evaluation was based on value of Cramer V (Sig. 0.00, $\alpha = 0.05$) If a relationship has been found, then we used a sign "+", if a relationship not exists, we used a sign of "0".

Table 2: Causal Analysis Between Chosen Variables from Survey

Variable	Relationship to the region	Relationship to priority axis
Legal form of beneficiary	0	+
Number of employees	0	+
Main business activity	0	+
Type of innovation	+	+
Amount of innovations per project	0	0
Willingness to continue in 2014-2020	0	+
Networking	+	+
Total direct impact (total "+")	2	6

Source: author's calculations

We confirmed results of previous studies (Jalocha, 2012, Viturka, 2010; Chitu, 2012, Pădurean, et al., 2015, Wolińska, et al., 2010) in area of variables dependence on priority axis and its indicators (6 points) than dependence to real societal impact in regions (2 points). We can expect that recipient will also create social innovation within the same priority axis in the new period 2014+. Based on survey results, there is a causal relationship between the region of implementation, the priority axis and the nature of innovation (Cramer V = 0.329, Sig. = 0.017, $\alpha = 0.05$), which it was significant within Priority axis 3. Although 63% of respondents were shortened in the project budget in 20% of total amount, 46% of them decided to submit the new project in the next OP Employment 2014-2020.

3. Problem Solution

According Viturka (2010) each priority axis is determined by quantifiable indicators of input, output, outcome and impact, a part with qualitative performance indicators is still missing. This is the reason why within new period will be applied in the evaluation of projects a system of indicators for local action groups (LAGs) and LEADER principles for community led development. The number of people supported by the project or number of innovation generated by the project does not answer the question about real contribution to the development of local communities, increase local prosperity and security in life. On the other hand, Richmond, Mook, and Quarter (2003) suggested social accounting, but for many organizations it was still difficult to evaluate their work because of really quantitative approach. Finally, New Economics Foundation presented a social ratio, called social return on investment (SROI) based on return on investment in business analysis (Clifford, List, Theobald, 2010). The European Union recommended the use of SROI and encouraged member

countries to develop their own versions (Moody, Littlepage, Paydar, 2015), but this approach is still not widely used. We recommend, according our survey experience, a SROI ratio improvement, based on Cooney and Lynch-Cerullo (2014), which can be calculated for expected earnings (Earnings before Interest and Taxes, EBIT) over five-year period after the investment:

$$SROI = \text{number of clients enrolled} * \text{earning difference}(ED) / \text{program cost} \quad (1)$$

We have modified this approach (1) according priority axis requirement into two possible ratios. Priority axis 1 had in outcome indicators change in earnings of participants of the programme. We used 5-year change in average wages and salaries in each region, separately. We accounted 2-year effect after project completion (n+ 2 rules). According that, we suggested modification for *Axis 1 Adaptability* is:

$$SROI_{\text{AXIS 1}} = \frac{\text{number of successful participants} * ED \text{ per participant in two years}}{\text{value of the project}} \quad (2)$$

The same approach (1) was used for Axis 2 and Axis 3, where key performance indicator was “newly employed person” (NEP). According that, we suggested modification of an initial formula as follows:

$$SROI_{\text{AXIS 2,3}} = \frac{\text{number of NEP} * \text{savings from compensations in unemployment (5 months)}}{\text{value of the project}} \quad (3)$$

According our survey data, we expect an average group of 50 successful participants, who completed the education in Axis 1 and they would have possibility in salaries growth in 2 years after project completion (2013-2015). Salaries growth we simulated from growth of average wages and salaries within regions in mentioned years (calculated as EBIT – Earnings before Interests and Tax). In case of Axis 2 and 3 we expected 100 supported participants due to size of projects. We calculated savings in compensations in unemployment in average amount of 5 months as EBIT. Finally, SROI was calculated according equations (2) and (3).

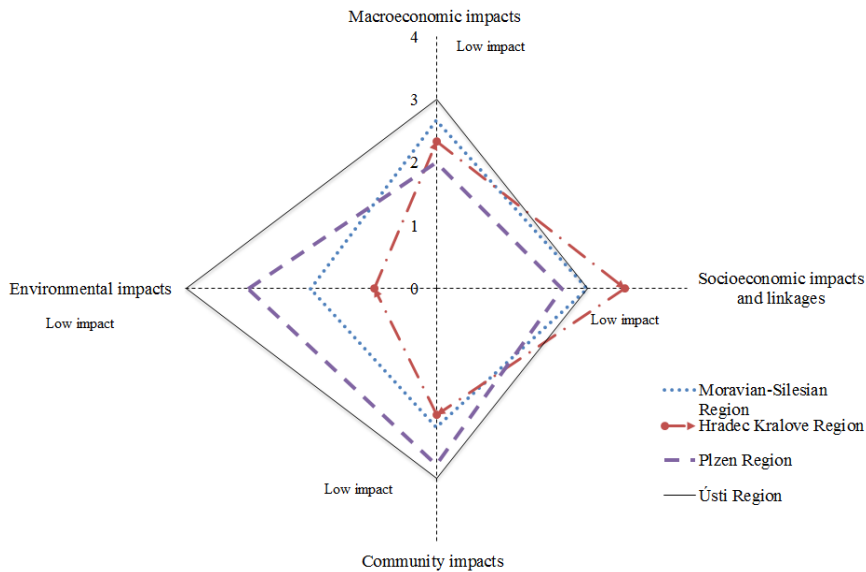
Table 3: SROI Evaluation by Priority Axis

		Moravian-Silesian Region	Usti Region	Plzen Region	Hradec Kralove Region
Priority Axis 1 - Adaptability	Number of projects	112	58	41	41
	Total support (Mil. CZK)	322	55	137	16
	EBIT (Mil. CZK)	1.62	2.02	2.33	1.5
	SROI	0.56	2.13	0.7	3.84
Priority Axis 2 – Active labour market policy	Number of projects	56	50	6	5
	Total support (Mil. CZK)	276	259	26	25
	EBIT (Mil. CZK)	6.57	6.24	5.58	6.347
	SROI	1.33	1.2	1.29	1.27
Priority Axis 3 – Social Integration and Equal Opportunities	Number of projects	162	136	37	26
	Total support (Mil. CZK)	612	604	135	65
	EBIT (Mil. CZK)	6.57	6.24	5.58	6.347
	SROI	1.74	1.41	1.53	2.54

Source: author’s calculations. Data by ESF CR. [Online] [cit. 2015-12-27]. Available: <http://www.esfcr.cz/modules/projects/index.php?lang=1>

We could assume that SROI indicator is in our simulation very low. In priority axis 1 two regions have this indicator below 1 (Moravian-Silesian, Plzen), which show us not effective allocation of EU funds money (1 CZK spent in project generated only 0.56 resp. 0.7 CZK of added value). A little bit better situation could be seen in axis 2 and 3, where all regions reached ratio above 1. It is still so low, when optimum value of social project is between SROI 2-3 (Kadeřábková, Moghadam-Saman, 2013). Finally, we followed methodology of Kapstein and Kim (2011) and we divided indicators into four groups, when into social impact we added results from survey as social innovation, socially excluded location and EU project share. As a baseline for macroeconomic indicators we chose a year of 2007 (Figure 1, Appendix). We used ordinal scale between regional comparisons, where the lowest score represents the best performance.

Figure 1: Regional Evaluation Model 2007-2014



Source: author's calculations. See Appendix for values.

The best results in most of four dimensions obtained Plzen region, the worst performance under operational programme could be seen in Usti region. When we focused on socioeconomic dimension, we could see imbalanced relationship with macroeconomic indicators. When the impact on society was high, the result on macroeconomic indicators was lower (compare Hradec Kralove and Moravian-Silesian region).

4. Conclusion

Grant makers and supporting agencies seeking the optimal measurement of social (societal) impact of their support, in our case of EU funds projects in area of Human Resources development. It seems to be useful to continue in development of an optimal method, which could help beneficiaries, supporting agency and policy makers to evaluate real social impact of given Operational programme. It is still so hard to get suitable information about real impact and work within EU projects as our survey had shown. Most of beneficiaries cannot describe real social value of their project and how it was connected with analysed programme and how they made a contribution to the society i.e. by social innovation.

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Appendix

Data used for Regional Evaluation model 2007-2014

- **Points (P)** : Ordinal scale, when 1 is the best result within 5 years, 4 is the worst result within 5 years in chosen group of regions.
- **Index (I)** : indicator data were compared to year 2007 as a baseline:

$$Index_{2007 / 2014} = \frac{Indicator_{2014} - Indicator_{2007}}{Indicator_{2007}} * 100[\%] \quad (4)$$

	Moravian-Silesian Region		Hradec Kralove Region		Plzen Region		Ústi Region	
	P	I	P	I	P	I	P	I
Macroeconomic impacts (GDP contribution and other macroeconomic indicators)								
GDP contribution	3	-3.0%	2	2.2%	1	4.0%	4	-6.3%
Disposable income of households	3	-1.9%	2	0.0%	1	1.9%	4	-5.6%
Gross fixed capital	2	2.1%	3	-8.8%	4	-25.8%	1	27.3%
<i>Average score</i>	8		7		6		9	
Socioeconomic impacts and linkages (education. employment)								
Average monthly wages and salaries	4	-1.3%	2	2.0%	1	2.5%	3	0.1%
Participation rate of people aged 15 and more	1	1.3%	4	-1.7%	1	1.3%	3	-0.7%

General unemployment rate	2	-14.1%	4	8.7%	3	0.6%	1	-18.5%
Tertiary education rate	3	-1.7%	4	-2.3%	2	0.1%	1	52.8%
Net increase of businesses (units)	2	-46.4%	1	-14.3%	3	-50.8%	4	-59.5%
Average score	12		15		10		12	
Community impacts (changes in settlement. social structure. migration)								
Net migration	4	-755.2%	2	-146.5%	1	-9.8%	3	-153.1%
Mid-year population growth	2	-46.4%	1	-14.3%	3	-50.8%	4	-59.5%
Social innovations	1	72	3	36	4	42	2	89
EU Projects share	1	341	3	77	4	84	2	249
Socially excluded localities	3	19	1	4	2	3	4	11
Average score	11		10		14		15	
Environmental impacts								
Environmental protection expenditure	2	28.7%	1	31.5%	3	4.0%	4	-40.6%
Average score	2		1		3		4	

Source: CSO, 2015. [online] [cit. 2016-01-27]. Available from https://vdb.czso.cz/vdbvo2/faces/cs/index.jsf?page=statistiky&filtr=G~F_M~F_Z~F_R~F_P~_S~_null_null_, author's calculations

Absorption Capacity of the Czech Republic to the European Union Funds

Alice Šedivá Neckářová, Richard Šedivý

College of Polytechnics Jihlava
Department of Travel and Tourism
Tolstého 16
Jihlava, Czech Republic
e-mail: aliceneckarova@centrum.cz

Abstract

The main objective of the paper is to evaluate the absorption capacity of the Czech Republic to the European Union funds in the 2007-2013 programming period and to inform about the issues that prevented successful drawing of the funds. The paper will further describe the Cohesion Policy of the European Union, the implementation structure, and the system of drawing funds from the EU funds in the Czech Republic in the current programming period 2014-2020. The core chapter analyses the mistakes and shortcomings of the previous programming period and determines measures to improve the whole system of drawing money from the EU funds and thus increase the absorption capacity of the Czech Republic.

Keywords: *Absorption Capacity, European Union Funds, Operational Programs, Cohesion Policy*

JEL Classification: *H0, R1, R11, R58*

1. Introduction

The main objective of the paper is to evaluate the absorption capacity of the Czech Republic to the European Union funds in the 2007-2013 programming period and to inform about the issues that prevented successful drawing of the funds. The core chapter analyses the mistakes and shortcomings of the previous programming period and determines measures to improve the whole system of drawing money from the EU funds and thus increase the absorption capacity of the Czech Republic. Information was gained from books and publications, the Internet was the main source of data and information, especially the website of the Ministry of Regional Development. Direct experience with the implementation structure and drawing funds from the EU funds was used also.

1.1 Cohesion Policy

Cohesion (regional) Policy is in the current programming period 2014-2020 the EU's main investment policy. Cohesion Policy 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. In order to reach these goals and address the diverse development needs in all EU regions, € 351.8 billion – almost a third of the total EU budget – has been set aside for Cohesion Policy for 2014-2020 (European Commission [online], 2016b).

“Strengthening social, economic and territorial cohesion is a central objective of the European Union and the Structural Funds reflect the main financial effort of the EU to pursue this goal”

(Pinho, Varum, Antunes, 2015). Cohesion's Policy implementation through the Structural Funds is one of the main axes of EU action in delivering the Europe 2020 Strategy for growth and jobs.

“The Cohesion Policy also expresses the EU's solidarity with less developed countries and regions, concentrating funds on the areas and sectors where they can make the most difference. Its main aim is to increase economic and social cohesion by reducing disparities in the development of individual regions” (Marek, 2009).

“While EU Cohesion Policy has the ambitious objective of supporting lagging regions and promoting inter-regional convergence, its impact is dependent on the ability of cohesion policymakers to secure and use EU funding to meet the region's needs” (Dotti, 2016).

Cohesion Policy is delivered through three main funds: the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) and the European Social Fund (ESF). 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.

“Cohesion Policy in the Czech Republic is a set of measures, which the government carries out a balanced development of the state or regional territory within the framework of the adopted measures, including the aid for regional development. Czech Cohesion Policy is reflected in the selection of criteria for projects in individual programs co-financed from EU funds” (Ministry of Regional Development [online], 2016d).

1.2 Absorption Capacity

“The term absorption capacity can be explained by Document Revision Phare 2000 as the national government's ability to plan and implement external assistance” (Neckarova Sediva, 2014). Absorption capacity reflects the degree of the state's ability to use the resources provided by the Structural and Investment Funds. “It cannot be understood solely from an economic viewpoint. There are other aspects such as political, legal, cultural, etc. This problem has many aspects, especially with regards to: 1) administrative capacity, i.e. the ability to manage the Structural Funds programs in accordance with applicable rules and regulations of the EU, 2) co-funding, ability to co-finance projects from national public resources, and 3) project pipeline, i.e. the ability to prepare high-quality projects well in advance that are awaiting funding” (Ministry of Regional Development [online], 2016c).

(Katsarova [online], 2013) explain the term absorption capacity as “extent to which a country is capable of effectively and efficiently spending its Structural Funds allocation, and is expressed in percentage of the total allocation”. Experts relate absorption to three main features: macroeconomic capacity, financial capacity, i.e. the ability to co-finance the programmes and projects supported by the EU and administrative capacity, i.e. the ability of central and local authorities to manage the EU programmes and projects.

“Absorption capacity usually means the ability of a country or organization to receive aid and use it effectively. Developing countries often lack this capacity. For example, a country may receive enough money to enable all its children to attend primary school – but owing to a lack of teachers, lack of schools or a poor administrative system, it is impossible to spend this money in the short term. Work must first be done to train teachers, build schools and improve the efficiency of the system – thus raising the country's 'absorptive capacity’” (European Commission [online], 2007).

High absorption depends mostly on institutional factors, both at EU level (e.g. consistency and increased co-ordination in the fund allocation process) and at national level (e.g. political system: federal vs. central). “Absorption capacity is usually positively correlated to the ability of central and regional authorities to prepare consistent multi-annual plans, to cope with the substantial amount of administrative work, and, finally, to finance and supervise implementation, avoiding fraud, clientelism and corruption” (Katsarova [online], 2013).

“Many European countries have faced difficulties in absorbing the structural funds from the EU budget, the most cited reasons being generated by the lack of a coherent long-term vision of the authorities, insufficient resources to co-finance projects, low administrative capacity at central and local’s levels, lack of inter-institutional coordination, failures of public-private partnership, insufficiently skilled human resources” (Zaman, Georgescu, 2009).

2. The System of Drawing Funds

The European Commission published a package of six new regulations on 6 October 2011. Their final version was approved on 17 December 2013. In the 2014-2020 programming period it is the legislative basis for support from the European Structural and Investment Funds. Files of these regulations is to ensure uniform rules throughout the European Union as well as improving of coordination among individual funds, hence the programs on the national level. Structural Funds and Investment Funds European Union are paid to the Member States from the European Union budget. As already mentioned, almost one third of the financial budget is allocated to Cohesion Policy.

In order to use funds provided under the EU's Cohesion Policy, Partnership Agreement was signed between the Czech Republic and the European Commission. It is a document which sets targets for the efficient use of European Structural and Investment Funds to the Europe 2020 strategy based on national priorities. It was necessary to prepare an analysis of disparities and development needs for growth potential problem areas within which are identified by national and regional problems, development needs and priorities. As a starting point of this analysis national development priorities of the Czech Republic for the period 2014-2020 were used, which are consistent with the objectives of Europe 2020 (European Commission [online], 2010).

Strategy Europe 2020 puts forward three mutually reinforcing priorities: 1. Smart growth: developing an economy based on knowledge and innovation. 2. Sustainable growth: promoting a more competitive and greener economy more resource efficient. 3. Inclusive growth: fostering a high-employment economy, which will be marked by social and territorial cohesion.

Implementation structure is a system of controlling the flow of financial resources from the EU funds. This system is laid down in a binding document Management methodology programs in the programming period 2014-2020. National Coordination Authority has been entrusted to the Ministry of Regional Development, the role of payment, certification and audit authority to the Ministry of Finance. Managing authorities of individual operational programs are relevant ministries.

Providing support from the European Structural Funds is based on a system of pre-financing from the Czech state budget and finance from the EU budget are paid to ex-post. This means that the state budget of the Czech Republic must reckon with relatively high financial resources for pre-financing.

In the Czech Republic we can get drawing funds from those of the European Structural and Investment Funds through operational programs. For the programming period 2014-2020 there is a set of 10 national operational programs, 5 cross-border cooperation programs and 6 transnational and interregional cooperation programs. In the current programming period the Czech Republic can draw funds from the EU funds in the amount of 24.203.705.168 €.

3. Absorption Capacity of the Czech Republic

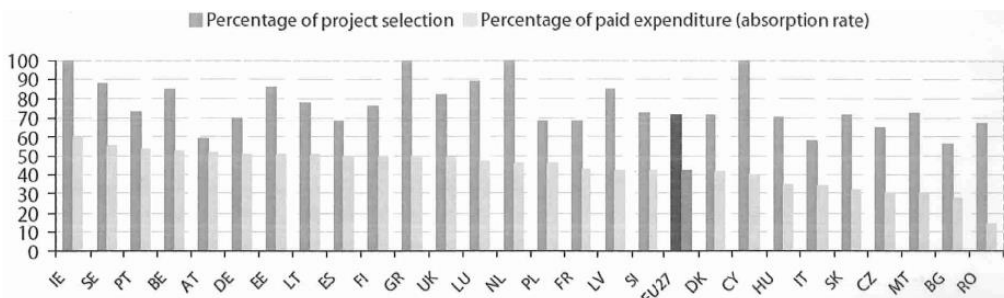
In the programming period 2007-2013 funds from the EU funds was possible to draw with regard to the n + 2 rule until the end of 2015. The n + 2 rule is considered an administrative tool to ensure the continuity of drawing money from the EU funds. According to this rule the allocation of support for the nth year must be exhausted in the next two calendar years. If not, there will be automatic decommitment.

Owing to the fact the Czech Republic in 2013 was on the last positions in drawing these funds (see Figure 1) within the Member States of the European Union, the National Coordination Authority in connection with the implementation of Government Resolution dated March 5, 2014 no. 144 prepared material Analysis drawing from the European funds and contingency plans for 2015. The aim of the measures adopted emergency plans was to minimize the amount by which the Czech Republic could lose, but not at the cost of avoidable errors, irregularities and inefficiency of spending. The Ministry of Regional Development, or National Coordination Authority, monitored and continually evaluated the financial execution of the individual operational programs in 2014. In cooperation with the governing bodies is created an emergency plan for each operational program, there have also been defined cutting and key risks and there were set measures for their elimination.

The exhaustion of the allocated budget must be shown at the end of the period. Any automatic decommitment will not be carried out immediately after the end of 2015, but the European Commission will wait until March 31, 2017, in which there must be for individual operational programs submitted requests for payment of the final balance. Approximately till half of 2016 certification of expenditure declared by beneficiaries to 31 December 2015 will be completed and its audit will be carried out.

On the 4. March 2016, the Czech Republic is the 22nd place among all European Union member states, which has been utilized 85.5% of the total amount allocated. The average of all 28 EU countries is 89.2% (Ministry of Regional Development [online], 2016b).

Figure 1: Absorption Rate of the EU Member States



Source: European Commission, Strategic report on implementation 2007-13 In Katsarova [online], 2013.

“For the successful use of Structural and EU Investment Fund it is required to fulfill some basic conditions: to have prepared appropriate priorities and strategies to ensure co-financing from the Czech Republic to ensure the operational implementation system (management system, setting administrative processes, system control and auditing) and align legislative environment, ie. the legal norms of the European Union and the Czech Republic” (Ministry of Regional Development [online], 2012). In a well-adjusted priorities and strategies of the Czech Republic may be a problem with low absorption capacity. We have not well-constructed strategic goals. There is a wide variety of government-approved strategies and policies, but there are not clearly outlined goals and indicators, mutually exclusive, there are not established clear responsibilities for their implementation.

Conversely, in some operational programs allocation was insufficient and the amount of aid applications submitted greatly exceeded it. The Czech Republic tried together with other European Union countries to agree with the European Commission for greater flexibility within the rules of drawing, such as the possibility of transferring funds within one operational program from one priority axis to the other one. Brussels denied moving funds between operating programs in the past. This plan, however, encountered the resistance of certain net payers. Unspent funds from the EU funds these countries get back. Finally move between the priorities axes managed to negotiate. In connection with this, the European Commission managed to agree to an exception that allows not draw allocation priority axis up to 10 % without risking loss of unused funds. Another way how to reduce the amount of unspent funds in the 2007-2013 period is the phasing of projects, ie. their division into two parts. One will be covered from the EU funds in the programming period 2007-2013 and the second one in the programming period 2014-2020. For example, the Operational Programme Research and Education announced a call for phased projects on 17 September 2015. It also tried loosening the $n + 2$ rule $n + 3$. This was not accepted by European Parliament authorized in any Member State of the EU except Slovakia and Romania.

“In connection with the term absorption capacity it is also necessary to mention the administrative capacity. That is the human factor that significantly affects the success of obtaining funds from the EU funds. The problem comes, when there is a high labour turnover in the implementation structure. All new employees, often with no previous experience need time to learn their new role. If there are many new employees in an office, this can cause a big issue. There is a delay in administration and errors arising from ignorance or incompetence. As a result, it can slow down the whole process of reimbursement of funds and increased error rate program. It is very important to choose the right people and as soon as possible give them the appropriate training. Quality of human resources in an organization plays an essential role” (Neckarova Sediva, 2014). Only competent and adequately motivated employee is able to perform demanding, time-shock and in some cases highly specialized activity resulting from the roles of methodology, project manager, financial manager or other roles. The new Act no. 218/2002 Coll., Called. Law on the Civil Service, which would streamline and depoliticize public administration, could also help to increase the administrative capacity. It is an ex-ante conditionality which is necessary for funding from the EU funds.

The total budget of the European Union, which is possible to gain through EU funds, is fixed at EUR. For this reason, the exchange rate development affects the success of disbursement of funds very significantly. In November 2013, when there was a significant foreign exchange intervention by the Czech National Bank, the exchange rate EUR / CZK fell from 25.742 to 27.350 (European Commission [online], 2016a). This means an increase in the amounts earmarked for financing projects from 668.9 to 715.5 billion CZK (Ministry of Regional

Development [online], 2016b). Thus, there was a sudden increase in the allocation of operational programs, that is why more projects could be supported, but it had to be reckoned with higher amounts necessary for their co-financing in the state budget. Individual governing bodies had only limited room to do something about it. Projects were used in the project pipeline, there was an acceleration in the administration.

In preparation for drawing money from the EU funds in 2014-2020 programming period, in terms of delays, however, we are doing even worse than in the previous period. At the beginning of May 2015, 16 months after the start of the new period, we approved only one operational program (as the last EU Member State) and three ones just before approval by the European Commission. The first calls for proposals were announced until the second half of 2015, the first payments to grant recipients will be held until 2016. It is a delay of more than two years. Preparation of operational programs started late and lasted a very long time, which is the responsibility of individual ministries. Not a very good role was played by the National Coordination Body at the Ministry of Regional Development, which should prepare a whole new programming period methodically, it should lead and deal with the European Commission. At the time when the European Commission has not been approved by all operational programs yet we were able to announce calls and when we know that the area has already been pre-arranged with the European Commission. We did not use this possibility. Delay in announcing the calls was also caused by an inefficient and moreover very expensive monitoring system MS2014 +. This was one of the criticisms of the audit of the European Commission. Till 31 January there were given only 3.9% of the total allocation of the Partnership Agreement for the period 2014-2020 (Ministry of Regional Development [online], 2016a). But it is not only the Czech Republic's mistake that we are in delay with drawing funds in the 2014-2020 programming period. The adoption of the legislative framework in European Commission for the funding period 2014-2020 was delayed and Member States hesitated to speed up the preparation of the programming process. Part of the 2014 allocations will be lost due to the delay encountered and will not be available for urgently needed investments in the regions.

4. Conclusion

The economic crisis, insufficient administrative capacity, changes in national/regional governments, and the effects of national sectoral reforms are the reasons for low absorption capacity in the 2007-2013 period.

In the previous programming period, the whole system of drawing money from the EU funds was relatively complicated, implementation structure was fragmented, inconsistent and duplicate mechanism emerged. The managing authorities of individual operational programs were not uniform, methodologies were different, and the applicant respectively. Beneficiaries did not understand them. Additionally, the Ministry of Regional Development as a focal body not manage its role just in relation to individual governing bodies. Its influence on the various ministries was relatively small. In the current programming period 2014-2020 there was a significant simplification of the implementation structure and the general conditions for drawing and rules, and reduction of the number of operational programs.

Applications for support of the project shall be submitted electronically in a unified information system MS2014 +. Applicants, by extension, the beneficiaries would not have to make so many mistakes, some unnecessary administrative tasks will be removed. There will be less "paperwork" and it will lead to more efficient use of funds. The Ministry of Regional Development issued a uniform methodology for managing programs in the programming

period 2014-2020, which constitutes the overarching policy document drawn up for the purpose of managing programs financed from the European Structural and Investment Funds. The methodology is to provide aid to providers and for the recipient's clear and transparent tool for orientation in the conceptual environment in the programming period 2014-2020. Currently, the methodology contains 25 annexes relating to the modification of procedures, for example in public procurement, publicity, evaluation and selection of projects, monitoring projects etc.

The most frequent errors leading to the achievement of project objectives, monitoring indicators, the non-execution subsidies and final event of the low absorption capacity of the Czech Republic, among misconduct on the part of the recipient in the field of public procurement or reimbursement of expenses that are not eligible, but also the low administrative capacity and inefficient implementation structure. It is important to unify and streamline documentation challenges, to focus on greater clarity for applicants of support. Revision of guides for applicants and beneficiaries should be carried out only when necessary. Regarding of procurement, as the project would be useful, for example, to carry out their inspection, even before the announcement of the contract and subsequently before the conclusion of the contract. This would eliminate a lot of problems with the eligibility of expenditure and the emergence of irregularity or suspected irregularity. They could also make greater use of lump sum expenses, ie. expenses specified percentage of the total expenditure of the project, for example. If they are clear and well-defined and pre-defined rules for the payment of lump sum expenses, it can significantly help prevent irregularities. During public inspection it is necessary to proceed uniformly, it is not possible for a single supervisory authority, to recognize all expenses as eligible in the project and other inspection authority found the same expenses irregularity or breach of budgetary discipline. Uniform methodological recommendations should eliminate these problems.

Many grant recipients have a negative experience with drawing EU funds. Many people who without any implemented a project, are a priori against subsidies from the EU funds. Generally, there is a rather negative attitude towards EU fond in society. Why? There are often served very distorted information. I often hear only what went wrong, when the subsidies will be returned, the allocation will not be completely drawn etc. Of course, this is also true, but on the other hand, many billions of euros from the European funds were utilized very meaningfully. The beneficiaries themselves are often responsible for the low absorption capacity of the Czech Republic, but also the actual system of configuration and implementation structure. Promoters often faced improperly set procurement rules in 7 last years. Some bidders had to wait for the decision of the Office for Protection of Competition, where the number of unsuccessful candidates appealed to. However, the beneficiaries themselves will already be in the current programming period more experienced, and if we manage to set it up and harmonize all processes, we will not be at the end of the 2014-2020 programming period at the end of the ranking of EU countries with low absorption capacity.

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Analysis of The Main Causes of Brexit and Its Potential Consequences

Michaela Ševčíková

University of Economics

Faculty of Economics, Department of Economic and Social Policy

Winston Churchill Sq. 4, 130 67 Prague 3

Prague, Czech Republic

e-mail: michaela.sevcikova@vse.cz

Abstract

The prospect of the United Kingdom leaving the European Union is closer than it has ever been. The decision of British voters in a referendum, scheduled for 23rd June 2016, might initiate considerable changes in the European integration process and would influence the future of the entire EU. The main purpose of the current paper is to research important factors and implications of a potential Brexit. It analyses costs and benefits and selected arguments of both the pro-EU and the exit-EU campaigns. Building on this framework, this paper provides a SWOT analysis of Brexit. The final result depends on how Prime Minister David Cameron will be able to persuade Britons about the advantages of staying in the EU and of continuing as an EU member country, and also with respect to variables.

Keywords: *Brexit, European Union, Referendum, United Kingdom, David Cameron*

JEL Classification: *N24, O52, G20*

1. Introduction

The European Union has reached a peculiar state of affairs, because one of its strongest and largest members seriously considers leaving this “elite” club. Prime minister David Cameron has called for a referendum on the issue, which is to be held on 23rd June 2016. Any negative decision leading to an exit from the EU would activate, for the first time in history, article 50 of the Lisbon Treaty, and a process of withdrawal from the agreement would take two years or more to complete. Essentially, while it is a precedent for the EU, Greenland a country that is geographically large but relatively insignificant already left the European Community in the mid-1980s.

The potential British exit from the EU (Brexit) is a relatively new European phenomenon, but due to this risky and significant event (as it is considered by Brussels, by EU member states and by the UK alone), numerous studies and analyses dealing with this topic have been produced. A comprehensive analysis of Brexit is offered in Woodford study (2016), which discusses the relationship between the UK and the EU and its potential impact. In his analysis, Grant (2015) provides Cameron’s priorities and also obstacles for the renegotiation. Boulanger and Philippidis (2015) quantify the impact of a Brexit under the conditions of the UK-EU free trade area scenario. Glencross (2015) reflects upon why a British referendum is not an appropriate response for any future settlement with the EU. Further, Simon (2015) analyses geopolitical and geostrategic views on relations between the EU, Britain what the exit presents within the international context.

Exactly seventy years have passed since Winston Churchill (1874-1965), in his famous speech in Zurich, called for a “United States of Europe” (Churchill, 1946), but his tenet excluded the participation of Britain. The United Kingdom joined the European Community (EC) in 1973. Only two years later, under the labour Prime Minister Harold Wilson, Britons decided in a referendum that they should remain as a part of the EC. The referendum question was cleverly complemented by the term, Common Market, which was in parenthesis and ended up in favour of the supporters for membership, gaining 67% of the votes.

The current paper is focused on an analysis and assessment of some selected economic and political factors related to the possibility of Britain leaving the EU. It discusses the main causes and implications and includes certain facts and statistics in the Brexit debate.

2. Some Aspects of Brexit and David Cameron Deal

The United Kingdom has always been perceived as a country with a special relationship status (perhaps as a wayward, and in some cases awkward partner) with respect to its European partners, with various exceptions. Charles Grant (2015) states that the British brand is damaged, the UK is fairly unpopular among European representatives and Britain’s soft power has been destroyed due to the strong anti-EU rhetoric of some British politicians and officials.

Euroscepticism is traditionally rooted in British politics and society and, therefore, the country always vehemently defends national identity, sovereignty and economic interests in relation to European institutions and its own legal framework. But, as a general rule, British national interests are often in conflict with European interests. In this context, Glencross (2015) goes even deeper into whether “*European integration—in theory and in practice—is compatible with British interests and British identity*”. Britain already has opted out of key parts of European integration: single currency, Banking Union, Fiscal Pact, Schengen area (a member having only police and judicial cooperation), except from the EU’s Charter of Fundamental Rights. Hence, there is a specific and uneasy relationship between the EU and this island country.

The final result of a potential Brexit will notably depend on future arrangements in relations with European partners and whatever kind of model or relationship will be negotiated. Whether the UK shall remain a part of the internal market represents the main point, particularly for the financial and industrial sectors. But, there are a few options, one of which is that Britain will be linked into a single market through its membership of the European Economic Area (EEA) as with, for example, Norway, Iceland and Liechtenstein. Or it could follow the example of bilateral agreements as in the case of the Swiss model. It is noteworthy that once the country wants to participate in the internal market as a non-EU country it must, nevertheless, respect *acquis communautaire* but without the possibility and right with respect to the decision-making process and without power to influence European law. Furthermore, the UK’s representatives are relatively very successful in enforcing their interests on the final form of directives concerning, for example, the financial sector. However, as a member of the EU, the UK was able to campaign for “better regulation”. But, joining the European Economic Area (EEA) will still impinge upon a need to fund EU programmes. It is questionable whether the UK will be capable of negotiating such terms, as with the countries of the EEA. However, Dhingra et al. (2015, p.4) argue that the financial payment of Norway (expressed per capita) to the EU is 83% of the current UK contribution. Another alternative on the table is to become solely a member of the European Free Trade Association (EFTA), which entails being affected by the Common External Tariff, carried out by the EU.

The main goal of David Cameron's announced potential Brexit is not necessarily an exit. He primarily wants to renegotiate the terms of Britain's membership, to stop the transfer of new powers from Brussels and to arrange an advanced settlement for the UK. Lastly, Cameron has had to satisfy, by holding a referendum, any critical Eurosceptic voices within his Conservative Party. Rewriting founding treaties and European law is, in some respects an opening of Pandora's box. David Cameron set out the objectives of the renegotiation that may be summarised in the following categories. The first category represents "sovereignty" with an explicit commitment, which is approved by the European Council (2016, p.16) that "[...] references to ever closer union do not apply to the United Kingdom". This change will be incorporated in the next amendment of the EU Treaties. According to Booth and Ruparel (2016), it might influence any future UK position within financial rules with respect to British nonparticipation in a banking union and also strengthen its own decisions in justice and home affairs legislation. Further, David Cameron negotiated the so-called red card for national parliaments, which means that 55% of the EU's national parliaments gain the possibility to object to any proposal of new pieces of EU legislation within a period of 12 weeks. As Weiss and Blockmans (2016) emphasise, this call is for the Council of the EU, not for the Commission. However, while it sounds interesting, in practice it will be very difficult to find the required majority and to activate this mechanism. The second category encompasses arrangements within economic governance and "mutual relations with the Eurozone". It was decided that a non-eurozone and non-banking union country will not be disadvantaged and discriminated against, and will not fund Eurozone bailouts. The third category probably contains the most controversial requirements, dealing with the "free movement of EU citizens", one of the fundamental principles of four economic freedoms. The highest state representatives of the European Council (2016a) agreed on some limits for child benefit for those families living in other EU countries (indexing them according to the standard of living in their home countries). This measure will be valid for new arrivals immediately and for EU citizens who are already settled in the UK from year 2020. The so-called emergency brake, another tool applied for a maximum of seven initial years, allows the UK to impose limits on in-work benefits for EU migrant families during the first four years of their stay in the country. These restrictive provisions are presented as an instrument to decrease migration to the UK, prevent abuse of the UK social system and stop welfare tourism. What is questionable is that they are essentially going beyond the basic principles of a discrimination ban based on, for example, nationality. The last category of "competitiveness" is focused on strengthening the internal market, on better regulation and on simplifying the regulatory framework. If we evaluate this deal, with its four points, on Britain in Europe between the EU and the UK, it can be argued that some trade-offs have been achieved, but no big concessions (such as the originally intended veto for Britain, opt-out from employment and social law, for example) or big achievements in the sense of some reformed EU. Notwithstanding, the model of multi-speed Europe or Europe *à la carte* has been further strengthened.

If we took a look at the in/out campaigners for a distribution of powers, we must state that there is a chance of both sides being balanced and public opinion being divided and mixed. There is a strong voice from the exit-EU campaign in the camp of the UK Independence Party. The negatives outweigh the positives by roughly half of the Conservative Members of Parliament, including some of David Cameron's cabinet ministers. David Cameron gave the freedom to his party's executive and legislative members in their decisions on how to vote. Some labour MP's are also in favour of withdrawing. Other political parties, including the Labour Party, the Liberal Democrats, the Scottish National Party and Plaid Cymru give support to keeping Britain within the EU. Large industrial enterprises and the financial sector are in

favour of staying in the EU. On the other hand, the EU is the most criticised by the small- and medium-sized enterprises (SMEs) that are sharing a feeling of bureaucratic red tape with the Brussels congestion and most of them would prefer to leave the EU. British newspapers are traditionally mostly Eurosceptic, which logically has a long-term impact on public opinion.

3. Causes and Reasons for Withdrawing from the EU

In the Brexit debate the following sticking points resonate: the financial sector, the UK's contribution to the EU budget and migration.

The City of London and financial lobby are two of the biggest proponents of, and David Cameron's ally in, the campaign to stay. The threat of a Brexit concerns financiers due to a possible scenario of the relocation of banks and financial institutions to continental Europe (such as Paris and Frankfurt) or to Ireland, if they lose any access to the internal market. London is home to the largest number of foreign banks. The financial services industry employs more than million people, being over two million people when considering the related professional services and accounts for around 12% of the total of UK government tax receipts, the largest contribution of any sector.

Proponents of Brexit argue against the high burden of EU regulations in all areas, especially in the financial, labour and market sectors. According to Koske et al. (2015, p. 29), despite Britain's membership in the EU, after the Netherlands, the United Kingdom is the second most competition-friendly country in the overall product market regulations indicator. Overall, Britain is considered to be among the least-regulated economies when measured in terms of the burden of regulations.

One of the most discussed points in the campaign is the UK's net contribution to the EU budget. In 2015, the UK's share reached almost 13% of the totals and the country ranked third place after Germany and France. According to HM Treasury (2015), the net British contributions paid to the EU Budget in the financial year 2015/2016 achieved £8.8 billion. In comparison, in the financial year 2009/2010, the net contributions represented £4,7 billion, which is almost half of the current amount. The latest figure already contains a deduction of public sector receipts (mainly from the Common Agriculture Policy and the Regional and Social Fund) and the UK rebate in the amount of £4,8 billion. Margaret Thatcher (1925-2013) negotiated this unique correction in 1984, which secured a reimbursement of 66% of a budgetary imbalance. Forecasts for the following years predicted the net contribution to be stable, at between £9-10 billion.

Together with the USA, Switzerland and China, the EU member states are the main trading partners with the UK, and 45% of British exports go to the EU. Germany, France, Netherlands, Ireland, Belgium, Spain, Italy are top trading partners with the UK. In 2014, almost 7% of the total of EU goods went to the UK. The British trade balance is significantly in deficit, particularly with the aforementioned countries, with the exception of Ireland. In practical terms, it means that the UK is an attractive and profitable market to where these economies export their products. Moreover, it entails prevailing over the biggest and strongest players in the EU. It might strengthen the British position in any future negotiations in the case of Brexit and it could define new mutually beneficial rules.

One of the main issues of the David Cameron deal was about migration. Dustmann and Fratinni (2014) note that migrants, who lived in the UK since 2001, pay more in taxes than they receive from social benefit. For many years, it was generally determined that migrants in the UK are welcomed as a lowly paid workforce and are a benefit to the British economy. The UK, with

Sweden and Ireland, were the only three countries, which from the onset did not apply any restrictions or transitional period to any labour force from new member states. In 2010, David Cameron promised to reduce net migration to the UK to less than 100,000 persons per year. But, in fact these figures have exceeded his pledge by more than three times since 2014.

4. SWOT Analysis of Potential Brexit and Economic Implications

Post-Brexit Britain will be both strengthened and weakened simultaneously. It is expected to be endangering by certain threats, notably stemming from the Scottish independent efforts and the potential split the country. On the other hand, the possibility to act more flexibly and quickly may bring interesting results in negotiating new trade and investment deals. Table 1 presents some important political and economic aspects of a potential Brexit, as summarised in the SWOT analysis.

Table 1: Economic and Political SWOT Analysis of Potential Brexit

Strengths	Weaknesses
<ul style="list-style-type: none"> -More flexibility -Less red tape: get rid of costly EU regulations, less EU regulations -More “sovereignty” in political and economic decisions -No contribution to EU budget but still some contribution to EU programmes if it joins the EEA -Effective control of migration flows -The ability to offer even more attractive tax and regulatory environment -New vision for the UK position in the EU and mutual cooperation -No hamper with Common Agriculture Policy and Common Fisheries Policy -Own seat in World Trade Organization -Reasonable Sterling weakness - benefit for UK exporters 	<ul style="list-style-type: none"> -Inability to influence European law and the pieces of legislation of the single market -Decrease in trading with EU countries and weakening of financial and economic links to European partners in the early years -Potential initial higher trade costs with the rest of the EU or new trade barriers between the UK and the EU -Higher tariff and non-tariff barriers -Drop in foreign direct investment (FDI) -Slowdown of economic growth in upcoming years -Applications of Common External Tariff by the EU if there is no agreement -Economic effect from restriction to migration policy -Harmful effect on the City of London -Weaker bargaining stand in trade agreement than within the EU -Stay outside of the block of main trading partners where the essential decisions are made
Opportunities	Threats
<ul style="list-style-type: none"> -Negotiations of new trade and investment deals - opportunity to act relatively quickly and flexibly -More orientation to Asian economies and deepening cooperation with China, Hong Kong, India, South Korea, Japan -New export opportunities -New settlement for the UK -Renegotiate lower or none-duties with third countries -“Special relationship” with the US can play a positive role in negotiating new favourable terms 	<ul style="list-style-type: none"> -Legal and business uncertainty for the first few years -Risk of instability in interim period -Scottish issue: strong efforts to gain independency and the beginning of a breakup of the United Kingdom -Disruptions of relations in Northern Ireland and its peace process -Weakening of the international standing of the UK

Source: own processing

In the long-term, the UK ranks with top economies in the world in many global indexes that assess competitiveness and entrepreneurship environments (for example, Index of Economic Freedom, Doing Business, Global Competitiveness Index, etc.). Concurrently, in the past decades, the UK absorbed the largest amount of inward FDI in the EU. In recent years, the British economy has performed well in some indicators, which can be a dichotomy for the referendum. It would be a positive action for the good mood of the British people in going to the poll and a negative action if the British people consider this action in the sense that the UK performance is good enough and the UK has no need of the European Union. Some economic figures confirm this trend. The UK records one of the lowest unemployment rates in the EU, half of the average of the EU28. The standard of living, measured by GDP per capita in PPS, is also above the average, but is still lower than it was a decade ago. The British economy is mostly growing faster than the rest of the countries in continental Europe. Public finances are slowly getting better, but are still not in a good condition and the general public debt has more than doubled in comparison with the pre-crisis level. The real danger is hidden in the UK's balance of payments. In 2014, the current account balance recorded the highest deficit in the whole of the EU at the level of 5.2%. The banking sector, however, which for the UK is very significant and important, experienced bad times after 2008 and its rehabilitation was one of the causes of the huge increase in British public finances. This sector exceeds the country's GDP by around five times.

Table 2 provides implications of Brexit for the UK economy, as published in some expert studies and analyses. Some of them suggest findings that are offered in both optimistic and pessimistic scenarios. The current author's own calculations and estimations are more optimistic. In the short-or middle-term periods, GDP would decrease by around 1-3% and would then gradually diminish. On the contrary, over the long-term period, the British economy would probably record slow growth. But, it is obvious that the size of income in the following years will also impinge on other factors (global economic performance, relations with the US, developments in the financial and banking sectors, issues with migrants, the situation in the Middle East and on various points of tension in the world).

Table 2: Brexit Economic Implications

Institution/Author	Economic Implications for the UK
CEP LSE Dhingra et al.	Case: Leaving the EU and joining EFTA Optimistic scenario: reduction of UK income at least by 2.2% Pessimistic scenario: UK income will fall by 6.3 - 9.5%
Open Europe Booth et al.	Case: different scenarios on GDP in 2030 Optimistic scenario: Total welfare gain 1.55% Realistic scenario: GDP change -0.8% to 0.6% (UK-EU FTA) Pessimistic scenario: GDP lower by 2.2%
Bertelsmann Stiftung	GDP per capita reduction of 0.6% - 3%
Boulanger, P., Philippidis, G.	Loss of 0.67% of UK per capita real income
Author's estimations	Short-term: GDP decrease by 1 - 3% Long-term: GDP fall by -0.2 % to GDP increase by 1.5 %

Source: Dhingra et al. (2015), Boulanger, P., Philippidis, G. (2015), Booth et al. (2015), Bertelsmann Stiftung (2015), own processing

For ordinary citizens, it is complicated to quantify costs and benefits. Pragmatic considerations might be replaced by current emotions, mood or instinct of the voters or enough different relevant topics in domestic politics, such as economic slowdown, ongoing refugee crisis, mid-term of election period, fears in social and political development in the country. In European history, the analogous situation was experienced by French and Dutch electorates in 2005, in the case of a referendum on the EU's draft Constitution. They both rejected it.

4.1 Brexit Consequences for the EU

Brexit is not a zero-sum game. It is probable that in the long-term, Brexit can rather pay off for Britain but not for Europe. Damages to the EU would appear at political, geopolitical and economic levels. Ideologically, the entire EU would suffer. The European Union would lose its biggest advocate of liberal thoughts, opponent of regulations, protagonist and the greatest champion in the area of the internal market, and also a defender of cutting costs in expensive and inefficient farming and fisheries policies. Defeat will also mean a loss of military and nuclear power in the club, an important trading partner, and a member in the Security Council. The balance of power will be disrupted.

Domino and spill-over effects of requests on Treaty change and of a new potential referendum could occur in other countries: Ireland (due to its specific binding to the UK), the very Eurosceptic Czech Republic, Hungary (because of the arguable migration policy of the EU), Poland (and its new Eurosceptic government), etc.

The European Union, in different intensities, has experienced several crises, both institutional and political; competitiveness; banking, financial and economic; public finance and indebtedness; and a crisis of trust (Ševčíková, 2015). Year 2015 added a new driver: the migration crisis. The phenomenon of a Brexit and its accomplishment could trigger an "exit" crisis in the forthcoming years.

5. Conclusion

The outcome of the Brexit referendum is not binding, but it is presumable that the British government will adhere to the result of the British electorate following the referendum. Leaving the European Union entails entering into uncharted waters, but not necessarily into any disaster. Predicting and quantifying the final effects are not simple operations. Many effects will depend upon the post-exit negotiation. In the short-term period, it would probably cause considerable economic and political shocks and could harm the British economy and, consequently, its international position in the world. In the medium-term, the situation will start to stabilise and the UK will continue in negotiating more favourable terms. From a long-term point of view, the effects of withdrawal could eventually be positive. Notwithstanding, for the whole of the EU and other member states, this decision would involve loss and damage. British attitudes and actions have often been the balancing element between a German-French engine. The balance of power in the European integration will be undermined and the dominance of Germany will increase even more.

David Cameron stands in a difficult situation. He must think and act not only in an economic dimension, but also with regard to the consequences of geopolitical and international relations. Scotland, as a part of the UK, is very Europe-oriented and is mostly a protagonist of staying in the EU. New tensions for another referendum in Scotland to separate from Britain could lead to a splitting of the country as scenario that is worse than the courageous step of leaving the EU, but in fact as is evident, they are communicating vessels.

To conclude, the deal between the UK and the EU did not offer fundamental reform and does not change the current EU status quo. But, it would certainly change if Brexit succeeds, because in that moment, the club will diminish its position on political, economic and strategic grounds.

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The Challenges of Migration to the European Union for Demographic Modelling

Ondřej Šimpach¹, Marie Pechrová²

University of Economics Prague¹, Institute of Agricultural Economics and Information²

Faculty of Informatics and Statistics, Department of Statistics and Probability¹

Winston Churchill sq. 4¹, Mánesova 1453/75²

Prague, Czech Republic

e-mail: ondrej.simpach@vse.cz, pechrova.marie@uzei.cz

Abstract

The aim of the paper is to discuss the impacts of recent migration to the European Union on the current modelling tools in demography. The demographic modelling has undergone a long history from component method as a matrix operator or expert estimations and expectations to Lee-Carter models based on principal component analysis and stochastic modelling. However, all models have their pros and cons. Their main weakness is that they are based on historical data. This means that they are not able to take into account unusual situations and demographic shocks. Despite that simplification of the reality is natural for all models, such big change as recent heavy migration to the EU can negatively influence the explanatory power of the models. Migration is a very important demographic component and it cannot be ignored in models or cannot be considered as unchangeable in time. Therefore, paper discusses the migration itself, the models for demographic predictions, their weaknesses and outline possible solutions.

Keywords: Demographic Predictions, Migration, European Union

JEL Classification: C32, J11, J61

1. Introduction

It is a well-known fact that the European population is rapidly ageing. Situation is although worse in the more developed western European countries, but also the countries in Eastern Europe begin to deal with the same problem. “This implies changing economic and social relations between the generations. In turn this precipitates economic change. In particular, the welfare bill in the future needs to be paid for more dependants by a smaller working population” (Lindh, 2003). Some of the population pressures might be relieved by immigration, but it must not be too high. Otherwise, it could cause the social problems because “with growing disparities between the levels of material wealth in rich and poor countries, migration appears to be an attractive option for inhabitants of less developed countries” (Rowlands, 1999). The increased migration from countries affected by wars and poor economic situation has recently raise many concerns. Beside the policy consequences, the incoming of significant number of people can influence the population structure not only from the nationality point of view, but also the age and gender structure.

Demographic analyses and population projections are typically made under the assumption that future demographic development is deterministic. However, refugees’ crisis can represent serious distortions to the models. Also, the longer is the projection horizon, the less probable

is that the assumptions of the models would hold. Therefore, the stochastic approach must be considered. Despite that it enables more precise projections of population, its assumptions might not hold in turbulent development of the reality.

Such big change as recent heavy migration to the EU can negatively influence the explanatory power of the models. Migration is a very important demographic component and it cannot be ignored in models or cannot be considered as unchangeable in time. Therefore, the aim of the paper is to discuss the impacts of recent migration to the European Union on the current modelling tools in demography. The structure of the paper is as follows. Firstly, the methods and the data about migration used are presented. In next section, there is the development of migration to the EU described and the models for demographic predictions evaluated. Last section concludes.

2. Problem Formulation and Methodology

From methodological point of view we distinguish deterministic and stochastic projections. The first one is based on predetermined assumptions. Initially they were done by expert expectations, later by the supporting statistical methods, which were further developed and refined. The expert expectations include estimates based on the recommendations of demographers and experts from the fields of sociology, political science, medicine and law. Among statistical methods belong linear and multiple regressions. Combining these two approaches one can get the expected scenarios, which also serve as an input into the calculation process of the projection itself.

The simplest projection of population can be done by log-linear regression of the population development trend. Mostly used approach for deterministic demographic projections is cohort-component method (e.g. Leslie (1945), Keyfitz (1964) or Bogue et al. (1993)), which can be enriched by the elements of the theory of probability. Cohort-component method is an old algorithm, but it is still popular tool for projection thanks to its usefulness and simplicity. For example a simple Leslie projection matrix requires only the knowledge of age structure and age specific birth and death rates. However, the results are not robust when the population changes are high or affected by other variables. Box-Jenkins approach (Box and Jenkins, (1970)) can be used for forecasting the population too. Pflaumer (1992) showed that forecasting accuracy indicates that the Box-Jenkins method produces population forecasts that are at least as reliable as those done with more traditional demographic methods.

Different approaches are stochastic projections. They are described in detail for example in Bell and Monsell (1991), Lee and Carter (1992), Lee and Tuljapurkar (1994) and Buetner (2002) and applied on the conditions of the CR e.g. by Arltová, (2011), Arlt and Arltová, (2011), and Šimpach and Langhamrová (2014). Bayesian approach for population forecasting was incorporated to Lee-Carter model by Wiśniowski et al. (2015). These projections are based on stochastic modelling of time series of age-specific demographic rates and are complemented by multivariate statistical methods. Great influence on the correct results has a sufficient length of the analysed time series (see e.g. study by Booth et al. (2005)). There are countries with detailed statistics for long period of time. On the other hand, there are also states without them as they either never published them, or gathered them because of political, economic or social circumstances that occur. Other reasons for the incompleteness of the data are territorial and political transformations, the establishment of new states and the civil and world wars.

Currently the EU is contending with problems of immigration. The problem of possible datasets distortion should be discussed as many demographic models are not able to adequately explain the migration process. "Population migration involves the relocation of individuals, households or moving groups between geographical locations" (Vitanov and Vitanov, 2016). Our paper analyses the application of the Lee-Carter model (Lee and Carter, (1992); Lee and Tuljapurkar (1994)) on the data about immigrants into the selected European Union countries obtained from Eurostat (2016c) database.

3. Problem Solution

Firstly, the process of the immigration to the EU itself and age-and-sex structure of the immigrants are analysed. Secondly, the urgency of migration issue in V4 countries and Germany is discussed. Thirdly, the possible modifications of Lee-Carter model are outlined in order to make it applicable on the projections of migration processes.

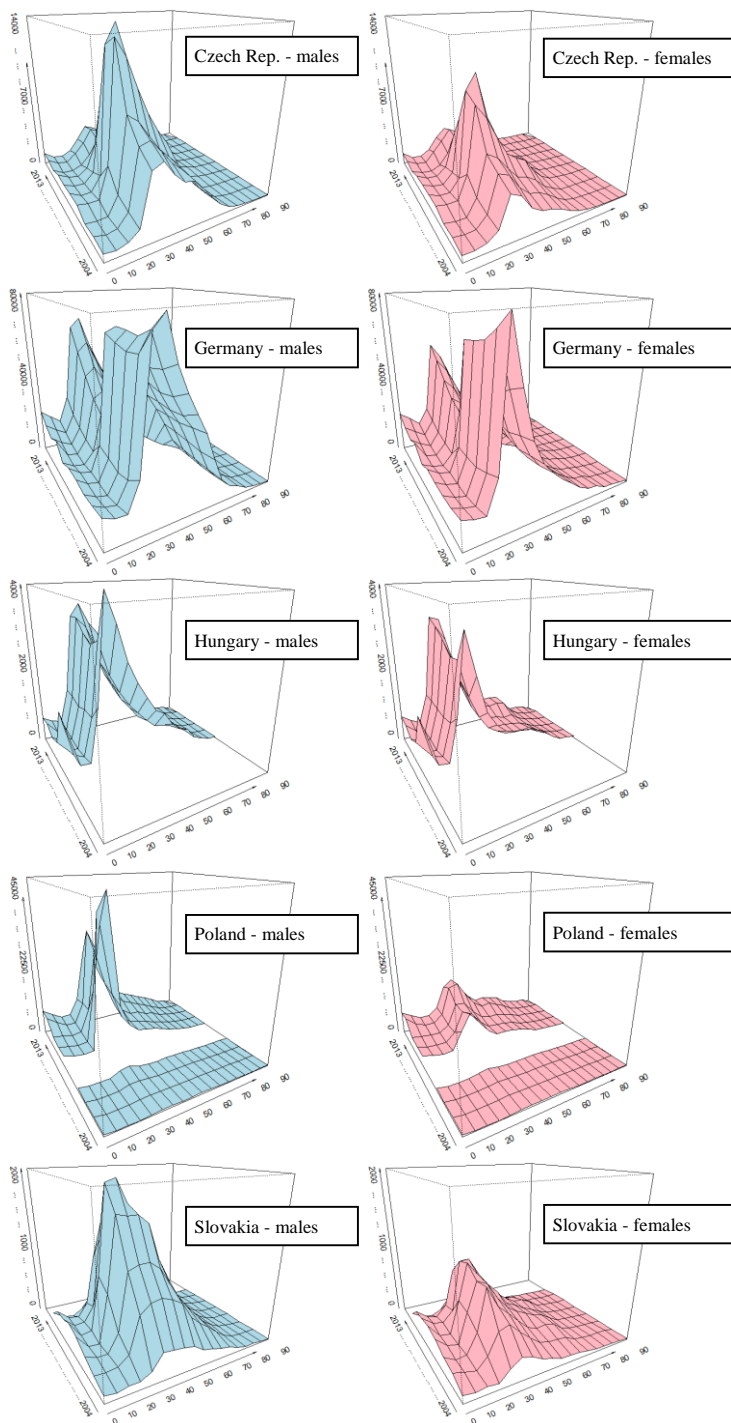
3.1 Development of Immigration to the EU

The EU is believed to attract the immigrants due to its relative economic prosperity and political stability. The number of immigrants continuously increased since 2004. Latest available data from 2013 tells that there were 3.4 million of immigrants. Germany has always been a country with highest total immigration from all EU countries, likely thanks to its good economic situation. It could have been expected that current immigration crisis would affect it the most. On the other hand, recalculating the number of immigrants per country inhabitants, the most of them are in Luxembourg (3.93%). Contrary to that, the share of immigrants on the CR's population is mild. The percentage was around 1% of the total immigration during the period 2005–2013 with exception of years 2007–2008 (1.02% and 1.04%). The shares are even lower in Hungary and Slovakia (under 0.30%). In Poland the share was the highest in 2013 (0.58%). Still, the capacity of the countries might be sufficient.

The most frequented age groups of immigrants are economically productive generations. It can be seen from Figure 1 that the peaks are between 30 to 40 years. Only for females in Poland, the number is equal for all age categories in 2004, 2005. However, later the increase in the number of population around 30 years can be observed. Surprisingly, there are fewer immigrants around 20 years old in Germany and Slovakia, than children younger 10 years. Unfortunately the recent immigration data are available on Eurostat only for year 2013 the latest. Another problem is that many European Union countries have not yet provided data about immigration to Eurostat database, because there are inconsistencies in the measurement methodology and the official system fails in providing and periodically updating the database. Hungary provided the data from 2009 to 2013 only and the Polish population lacks three-year period of 2007–2009. Hungary is very important country in the statistical point of view, because currently the large proportions of immigrants to the Western Europe flow through it.

Talking about recent immigration crisis, we shall therefore analyse the number of asylum applicants, i.e. the persons having submitted an application for international protection or having been included in such application as a family member during the reference period. So far, the problem of immigration is not that urgent in the Czech Republic. As it can be seen from Figure 2, the number of asylum applicants stays rather low in comparison to other EU member states. The share on total EU asylum applicants was the highest in March 2015, when 0.28% of all applied in the Czech Republic. Hence, we may consider the migration to the CR mild and do not have to necessarily adjust current population projections or the models of them.

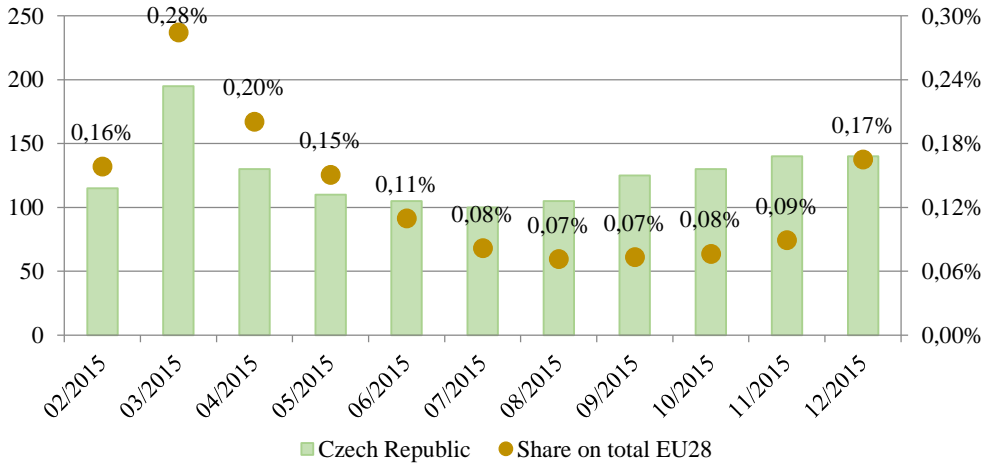
Figure 1: Number of $(x-x+5)$ -Year Old Immigrants by Sex into Selected EU Countries



Source: Eurostat (2016c); data from 2004 to 2013 with gaps, author's elaboration

Slovakia was in the same favourable situation (the highest share was 0.05% in March 2015). In Poland, the share was higher (0.95% on average from February to September 2015). However, in other EU countries the situation was different. In March 2015, almost half of asylum applicant submitted its applications in Germany. In Hungary, the share achieved even 32.02% in August 2015.

Figure 2: Nr. of Asylum Applicants in the CR (thousands) and Share on Total in EU 28



Source: Eurostat 2016, author’s elaboration

3.2 Migration in Population Projection Models

Stochastic projections of the migration process are rarely used. Mostly, the experts expectations based on the economic situation and assumed development of it are used to elaborate immigration and emigration projections. Probably only Lee-Carter model is able to project the migration stochastically. However, while it is extensively used to predict mortality and fertility, its utilization for migration projections is still mild. The challenge for the future is to adjust this model to project the migration realistically.

The basic idea of Lee-Carter model is implemented in decomposition of empirical age-and-sex specific numbers of immigrants in appropriate time periods. The model can be written as

$$I_{x,t}^{M/F} = a_x^{M/F} + b_x^{M/F} \cdot k_t^{M/F} + \varepsilon_{x,t}^{M/F}, \tag{1}$$

where age $x = 0-4, 5-9, \dots, 85+$ years (according to Eurostat publication methodology), time $t = 1, 2, \dots, T$, parameters $a_x^{M/F}$ are the age-specific immigration profiles independent of time, $b_x^{M/F}$ are the additional age-specific component that determines the change in the level of immigration in each age group when the indicator $k_t^{M/F}$ changes, and finally $k_t^{M/F}$ are time-varying parameters – the total immigration indices. $\varepsilon_{x,t}^{M/F}$ is a residual element with characteristics of white noise process, where $E(\varepsilon_x) = 0, D(\varepsilon_x) = \sigma^2, cov(\varepsilon_x; \varepsilon_x') = 0$ and $\varepsilon_x \approx N$ distribution, letters M and F denote gender. Estimation of parameters $b_x^{M/F}$ and $k_t^{M/F}$ is based on principle of singular value decomposition (SVD) of matrix of age-specific number of immigrants, as presented e.g. on the case of mortality by Bell and Monsell (1991), Lee and Carter (1992) and Hyndman and Ullah (2010). Age-specific number of immigrants $I_x^{M/F}$ at the exact age x and in time t creates $x \times T$ dimensional matrix

$$\mathbf{I} = \mathbf{A} + \mathbf{BK}^T + \mathbf{E}. \quad (2)$$

Identification of the Lee-Carter migration model is ensured by restrictive conditions

$$\sum_{x=0-4}^{85+} b_x^{M/\bar{Z}} = 1 \quad \text{and} \quad \sum_{t=1}^T k_t^{M/\bar{Z}} = 0. \quad (3)$$

Finally, the simple arithmetic average of age-specific number of immigrants by gender is calculated as

$$a_x^{M/\bar{Z}} = \frac{\sum_{t=1}^T I_{x,t}^{M/\bar{Z}}}{T}. \quad (4)$$

For the prediction of age-specific number of immigrants it is necessary to predict the values of parameter $k_t^{M/F}$ that is mostly done by ARIMA(p,d,q) models.

The first aspect of the Lee-Carter model of migration which has to be considered is that the model needs a *sufficiently long data base* that should be as stable as possible (see e.g. paper by Šimpach et al., (2014)). Instability in the development of matrix of migration time series causes the deflection of the average migration profile $a_x^{M/F}$ and thus bias the estimates of future values. In order to find the main components explaining the trend and previous development the data base must be sufficiently long.

Second issue is that because the migration has never been such discussed topic until recently *not enough attention was paid to these statistics* and most of the European states miss the quality data sets in mutually comparable datasheets.

Third aspect is related to the model itself. “The standard Lee–Carter (LC) model, which uses singular value decomposition, assumes that the errors have a constant variance over all ages” (Koissi and Shapiro, (2006)). However, this does not often hold. Therefore Koissi and Shapiro (2006) suggested fuzzy approach where the errors are viewed as fuzziness of the model structure; hence the homoscedasticity is not an issue. Only when particular European countries, which are affected by high immigration the most, update their databases into uniform and comparable form, the modified approach of the authors Koissi and Shapiro (2006) could be applied as the correction suggested by them is not susceptible to insufficient length of the analysed time series. Of course, everything depends on the data sources, because if there are no data, analysis is not possible.

4. Conclusion

The aim of the paper was to discuss the impacts of recent migration to the European Union on the current modelling tools in demography. Each model for population projection has its advantages and disadvantages, but all have common feature – they are based on historical data. When the time series of migration data is not sufficiently long or some data are missing or are inaccurate, the projections gained by the stochastic modelling might be negatively affected, i.e. biased. In this case, the expert estimations of the future are more reliable. However, this should not prevent the researches to improve current stochastic modelling in terms of migration projections. For other possible models (e.g. gravity model, human capital model or modified gravity model), used for migration forecasting see paper by Greenwood (2005). In our article we focused on Lee-Carter model based on principal component analysis and

stochastic modelling. It shall be further adjusted to be able to predict migration in a feasible way. This is the challenge for our future research.

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The Issue of the Application of Tax Losses in the Context of Effort to the CCCTB Implementattion in the EU Member States

Jan Široký

VŠB - Technical university of Ostrava
Faculty of Economics, Department of Accounting
Sokolská 33, 701 21 Ostrava
Ostrava, Czech Republic
e-mail: jan.siroky@vsb.cz

Abstract

Pierre Moscovici, as Commissioner, under who also falls the "tax" area of cooperation and coordination of taxes in the EU, promotes the introduction of the CCCTB (Common Corporate Consolidate Tax Base). This project should reduce the harmful competition in corporate taxes, consisting of "dragging tax bases." CCCTB would also likely lead to a reduction of differences between the nominal (statutory) and the real (effective) rate of corporate tax. The project assumes unification of parameters of determining the tax base, i.e. the implementation of tax losses, which is the central concept of paper. Text is, after a description of relevant concepts, focused on the analysis, statistics and then synthesizing conclusion, how the fact of taking into account the losses affects the differences between statutory and effective tax rate and whether the introduction of the CCCTB can contribute to reducing the differences between the rates. The aim of this paper is to determine whether the application of tax losses makes the difference between nominal and effective tax rate.

Keywords: EU Tax Policy, CCCTB, Statutory Corporate Tax Rate, Effective Corporate Tax Rate, Losses

JEL Classification: H20, H25, F36

1. Introduction

The cooperation in a field of the taxation has already been enshrined in the European Community establishing Treaty and also in the present (e. g. James, Nobes, 2010) taxes should help to the European Union market functioning. There are currently set limits for individual types of taxes in the European Union (Denis, Hemmelgarn, Sloan, eds., 2015): (i) personal income taxes remain in the competence of national governments, (ii) indirect taxes are in the centre of the attention and efforts for their harmonization, because they immediately influence functioning of the single market (iii) corporate taxes should promote the free capital movement and should not cause the harmful competition among individual countries, and (iv) social and pension systems should eliminate discrimination of individual states inhabitants and should not be a barrier of free setting and investment in EU member states (e. g. Sinn, 1990).

The subject of the paper is the very field of corporate taxes. Although harmonization of corporate taxes was entrenched in Art. 98 of the Treaty establishing the EEC from 1957, it is possible to state that its implementation has never been realised and a field of direct taxes is rather coordinated by the relevant directives (EUR-lex, 2003a, 2003b, 2009).

The aim of this paper is to demonstrate this issue on methods of offsetting the tax losses and to determine whether different approaches to the tax treatment of losses cause the differences between nominal (statutory) and effective (real) rate of corporate taxes. If that were the case, it is clear that the envisaged implementation of the CCCTB project (Common Corporate Consolidate Tax Base) would be successful in terms of that criterion and would lead to a reduction of differences between statutory and effective rate of corporate tax.

Methodology and solution procedure can be schematically expressed as follows:

$$(SR_{CTT} - ER_{CTT}) = f(\alpha; \beta; \gamma; \dots; \omega), \quad (1)$$

where α is the offsetting of losses, $\beta; \gamma; \dots; \omega$ are other factors affecting the difference between statutory rates and effective rates, and

$$CCCTB \rightarrow \alpha_i \rightarrow (SR_{CTT} - ER_{CTT}), \text{ where } i=1-27. \quad (2)$$

The author starts from the assumption that the different treatment of tax losses in the Member States causes the differences between the statutory and effective rate.

This paper is prepared by the method of description, deduction, studies of legislative sources of European law, the use of databases of the European Commission and Eurostat, in the end of the paper, the method of comparison and synthesis is used. With respect to the absence of data for the year 2015, a five-year research period is framed into the years of 2010 to 2014 and analysis is carried out only in 27 EU countries (excluding Croatia).

2. Materials

The paper deals with the mutual interaction between the statutory rate of corporate tax, the effective rate of corporate tax and the method of offsetting the losses, that is currently (2016) virtually open to the arbitrary will of individual Member States. It is obvious that if the difference in treatment of losses caused diversion between the statutory and effective rate, then the adoption of the CCCTB project would lead to an elimination or mitigation of these differences.

2.1 Definition of Used Terms

Usage of a principle of a common consolidated corporate tax base would be that the revenues of companies performing the activities in several EU member states would be taxed according to the same rules for determining the tax base. It should be defined as widely as possible, should allow as few exception, as possible and, at the same time, its calculation should be simple. The tax base thus obtained would then be divided among the individual member states where the company operates, in proportion that will be agreed according to defined criteria. The relevant part of the tax base would be subjected to the national corporate tax rate. The CCCTB project is described in the document COM (2011) 121, that is a proposal for a Council Directive on a common consolidated tax base for corporate income tax. (EUR-lex, 2011).

The Common Consolidated Corporate Tax Base aims to tackle some major fiscal impediments to growth in the Single Market. In the absence of common corporate tax rules, the interaction of national tax systems often leads to over-taxation and double taxation, businesses are facing heavy administrative burdens and high tax compliance costs.

In the CCCTB project (Article 46), the tax losses should be taken into account according to the same rule for all Member States: (i) a loss incurred by a taxpayer or a permanent establishment of a non-resident taxpayer in a fiscal year may be deducted in subsequent tax

years, unless otherwise provided by this Directive, (ii) a reduction of the tax base on account of losses from previous tax years shall not result in a negative amount, and (iii) the oldest losses shall be used first.

Company profit tax is historically a relatively young tax. It is interesting that already in the first years of existence of this tax, the suggestions and recommendations are beginning to emerge on how to adjust the tax not to discourage businesses from expanding further production (historically already Ricardo, 1821) and not to dump down their investments and incentives to innovate. These efforts were reflected particularly in the special tax regime of applying losses that largely persists up until the present.

In terms of tax theory, the impact of the offsetting of losses on the company's economy is dealt by the theory of investing, inclination or aversion to risk and the impact on future revenues, mostly in graphics with the appropriate mathematical apparatus (Musgrave and Musgrave, 1989, in Czech literature Kubátová, 2015). While the achieved profit is subject to tax, in case of loss from business activity the company does not take in “negative” tax, but it is allowed (if it does not cease to exist) to include an attained loss into the tax deductible expenses in the following fiscal periods, which, of course, brings with it the problem of the discounted value of loss in coming years, as in the case of depreciations (Šíroký, 2015).

The statutory corporate tax rate says little about to the actual level of taxation. For the investor's decision the effective tax rate is particularly important. Significant departure of statutory rate from the effective rate of corporate tax is mainly caused by the existence of different methods and depreciation period, the possibility of group taxation, usage of different methods for stock valuation, providing a variety of investment incentives, compensation or transmission of losses and various other tax credits or rebates.

2.2 Input Data

The European Commission uses a method of economists Devereux and Griffith (Devereux, Griffith, 2002) for calculation of the effective rate. Values of statutory and effective rates of corporate tax are shown in Table 1. The last two columns of this table contain also the possibility of offsetting the losses to previous or subsequent taxable periods.

3. Results

In accordance with the used methodology and the solution procedure, first there was analysed the narrowing, or the widening of differences between the statutory and effective rate of corporate taxes, and then the comparison of these changes with changes in the application of tax losses.

3.1 Development of the Differences between Statutory and Effective Rate of Corporate Tax in the Analysed Period

Figures 1 and 2 show the statutory and effective rates at end points of the analysed period, i.e. in 2010 and 2014.

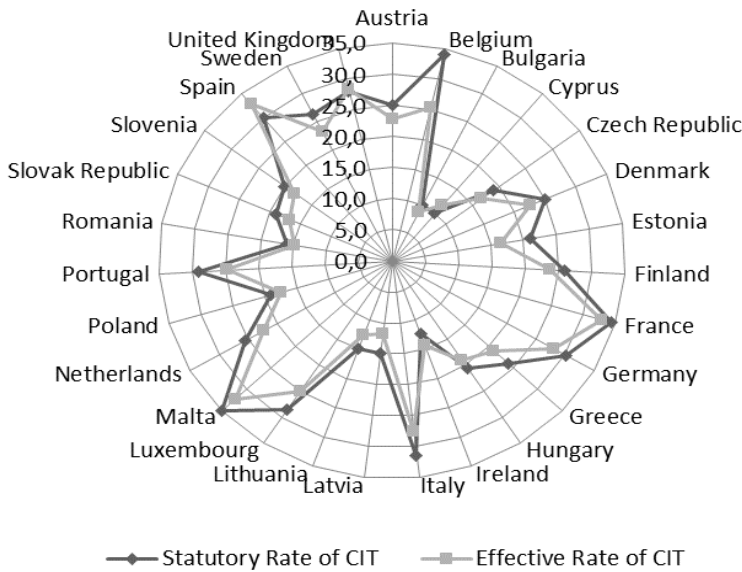
Table 1: Rates of Corporate Taxes (in %) and Offsetting the Losses (in Years)

Member State	Rates of Corporate Taxes				losses	
	2010		2014		2010	2014
	statutory	effective	statutory	effective		
Austria	25,0	22,7	25,0	23,0	1 / un	no / un
Belgium	34,0	25,3	34,0	26,7	no / un	no / un
Bulgaria	10,0	8,8	10,0	9,0	no / 5	no / 5
Cyprus	10,0	11,6	12,5	15,2	no / un	no / 5
Czech Republic	19,0	16,7	19,0	16,7	no / 5	no / 5
Denmark	25,0	22,6	24,5	22,2	no / un	no / un
Estonia	21,0	16,5	21,0	16,5	no / no	no / no
Finland	26,0	23,8	20,0	18,4	no / 10	no / 10
France	34,4	32,8	38,0	39,4	3 / un	3 / un
Germany	30,2	28,0	30,2	28,2	1 / un	1 / 5
Greece	24,0	21,0	26,0	24,1	no / 5	no / 5
Hungary	20,6	19,1	20,6	19,3	no / un	no / 5
Ireland	12,5	14,4	12,5	14,4	3 / un	3 / un
Italy	31,4	27,5	31,4	24,0	no / 5	no / un
Latvia	15,0	11,8	15,0	14,3	no / 5	no / un
Lithuania	15,0	12,7	15,0	13,6	no / 5	no / un
Luxembourg	28,6	25,0	29,2	25,5	no / un	no / un
Malta	35,0	32,2	35,0	32,2	no / un	no / un
Netherlands	25,5	22,2	25,0	22,6	1 / un	1 / 9
Poland	19,0	17,5	19,0	17,5	no / 5	no / 5
Portugal	29,0	24,8	31,5	27,1	no / 6	no / 12
Romania	16,0	14,8	16,0	14,8	no / 5	no / 7
Slovak Republic	19,0	16,8	22,0	19,4	no / 5	no / 4
Slovenia	20,0	18,2	17,0	15,5	no / un	no / un
Spain	30,0	32,8	30,0	32,6	no / 15	no / un
Sweden	26,3	23,2	22,0	19,4	no / un	no / un
United Kingdom	28,0	28,4	21,0	22,4	1 / un	1 / un

Source: Denis, Hemmelgarn and Sloan, Eds., 2015; Schelleckens, Ed., 2015.

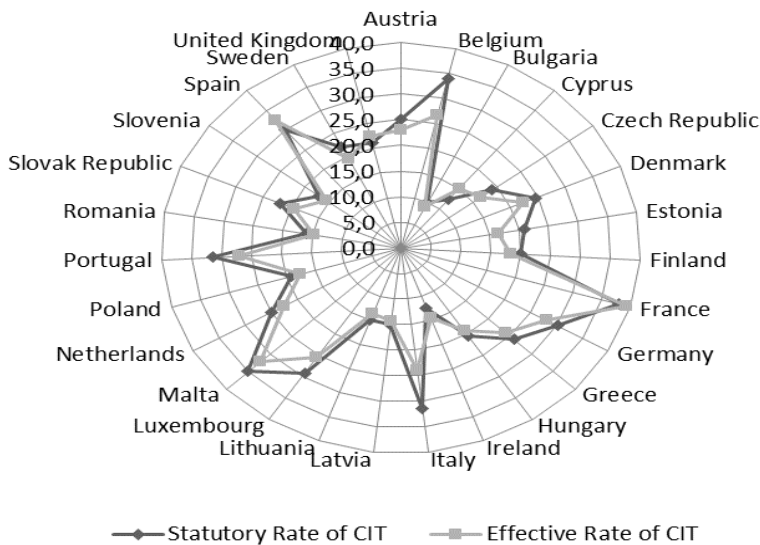
Notation: In “Losses” column, the figure in front of the slash means the possibility to deduct losses from previous years, behind the slash the possibility to deduct losses in coming years; “no” - no possibility of offsetting the losses; “un” - offsetting the losses is not limited in terms of time.

Figure 1: Statutory and Effective Rate of Corporate Tax in 2010



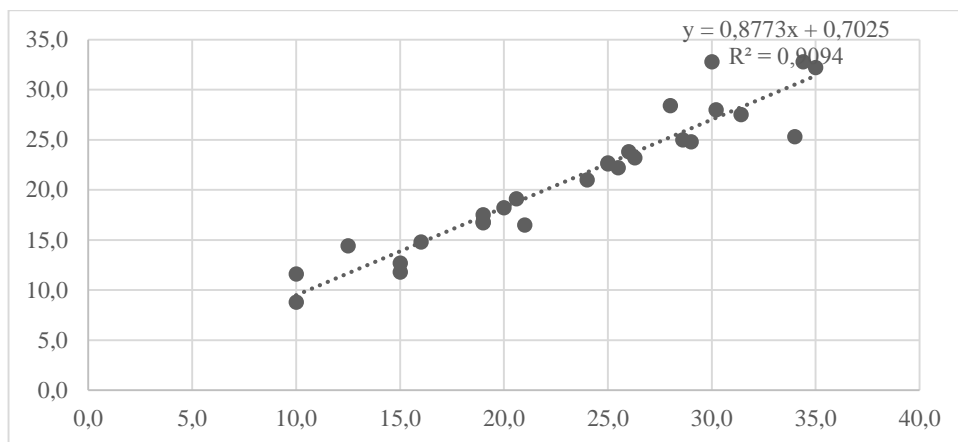
Source: Author's own processing based on data from Table 1

Figure 2: Statutory and Effective Rate of Corporate Tax in 2014

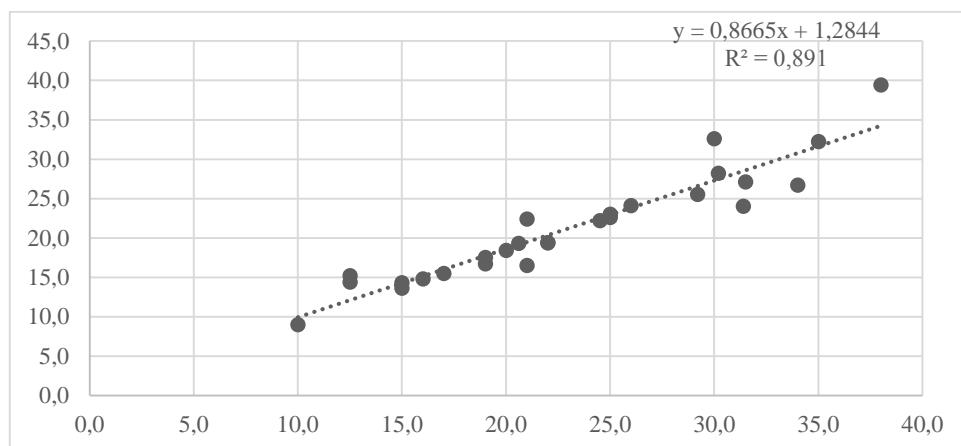


Source: Author's own processing based on data from Table 1

Evaluation of the fact whether the rates approximate or, on the contrary, their values become more distant, was done by single-stage correlation. Its results are shown in Figure 3 and Figure 4.

Figure 3: Dependence of Statutory and Effective Rates of Corporate Tax in 2010

Source: Own Calculation

Figure 4: Dependence of Statutory and Effective Rates of Corporate Tax in 2014

Source: Own Calculation

The conducted analysis can lead to a partial conclusion about the widening gap between statutory and effective tax rate (R^2 value in 2010 is the level of 0,9094 versus level of 0,891 in 2014).

3.2 Changes in Offsetting the Losses in the Analysed Period

Possibility of domestic offsetting of achieved losses into the following taxable period is permitted in all states of the European Union (EU-27) with the exception of Estonia, where the legal entities as such are not subject to tax on profits of companies in a classical conception, but to the tax on distributed profits.

In the analysed period, the changes took place in the provisions on offsetting of the losses in 12 Member States (EU-27), while in 7 countries these changes were positive for corporations, in 5 cases the offsetting of losses was made more difficult.

Crucial role in evaluation of the conducted research is played by Table 2, where the first numerical column shows the values by how much the difference between statutory and effective tax rate between 2010 and 2014 increased, or decreased. A positive value indicates that the difference has increased, which is evaluated as a negative fact (CCCTB project acceptance should reduce the differences). In the column marked as “ Δ Losses”, there are evaluated changes in the application of losses, evaluation marked “positive” means that in terms of corporations the period of the possibility of offsetting the losses was prolonged.

Decisive role in formulating a conclusion, whether the methods of offsetting the losses cause the changes in the differences between the statutory and effective rate of corporate tax, is played by the last column of Table 2. Only seven Member States achieved compliance “YES” between the changes in the application of the losses and the change of rate differences.

Table 2: Interaction between Changes in the Rates of Corporate Taxes and in Offsetting the Losses

Member State	Δ Rates		Δ Losses	Δ Rates / Δ Losses
	difference	change	change	same result
Austria	0,3	negative	negative	YES
Belgium	1,4	negative	constant	NO
Bulgaria	0,2	negative	constant	NO
Cyprus	1,1	negative	negative	YES
Czech Republic	0,0	constant	constant	CONSTANT
Denmark	0,1	negative	constant	NO
Estonia	0,0	constant	constant	CONSTANT
Finland	0,6	negative	constant	NO
France	3,0	negative	constant	NO
Germany	0,2	negative	negative	YES
Greece	1,1	negative	constant	NO
Hungary	0,2	negative	negative	YES
Ireland	0,0	constant	constant	CONSTANT
Italy	-3,5	positive	positive	YES
Latvia	2,5	negative	positive	NO
Lithuania	0,9	negative	positive	NO
Luxembourg	-0,1	positive	constant	NO
Malta	0,0	constant	constant	CONSTANT
Netherlands	0,9	negative	negative	YES
Poland	0,0	constant	constant	CONSTANT
Portugal	-0,2	positive	positive	YES
Romania	0,0	constant	positive	NO
Slovak Republic	-0,4	positive	negative	NO
Slovenia	0,3	negative	constant	NO
Spain	-0,2	positive	positive	YES
Sweden	0,5	negative	constant	NO
United Kingdom	1,0	negative	constant	NO

Source: Own Calculation

4. Conclusion

Possibility of domestic offsetting of achieved loss into the following taxable period is permitted in all EU countries, with the exception of Estonia, where the legal entities as such are not subject to tax on profits of companies in the classical conception, but to the tax on distributed profits.

Over the analyzed years 2010, and 2014, the possibility to deduct losses into future periods was not limited in terms of time always in 14 states, but these states were not the same. In six states in 2010 (five states in 2014) were allowed to “transfer” the loss into the previous periods. Concerning the differences between the statutory and the effective rate it was found that only five states (IT, LU, PT, SK and ES) noted a decreasing of the difference. When comparing concordant changes between tax rates and offsetting the losses, this result was recorded only in eight states of EU-27: AT, CY, DE, HU, IT, NL, PT and ES.

Research assumption that the changes in offsetting the losses affect the difference between the statutory and effective rate of corporate tax was rejected. As illustrated in a schematic methodology, if the equation (1) was not fulfilled, nor the relation (2) can be valid. The negative result of the premise verification led to a conclusion of the expected reality that the adoption of the CCCTB will not lead, with regard to the harmonization of the application of the losses, to the reduction of the differences between statutory tax rate and effective rate.

Acknowledgements

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Regional Disparities of the Migration Behaviour in the European Union

Ivan Šotkovský

VŠB - Technical University of Ostrava

Faculty of Economics, Department of Regional and Environmental Economics

Sokolská třída 33

Ostrava, Czech Republic

e-mail: ivan.sotkovsky@vsb.cz

Abstract

The paper deals with an analysis of recent migration behaviour development in European Union countries for the last more than twenty years. The main goal is to sort all the 28 countries on the basis of the international migration and its change during the monitored period. This problem we solve with the help of official immigration and emigration data from national statistical offices and Eurostat. We would like to explain territorial differences of the migration between European Union countries using demographic indicators as net migration and crude rate of net migration. The demographical indicators about migration movement of 28 European Union countries are processed by means of dynamic spatial typology using technics of cluster analysis.

Keywords: *European Union, International Migration, Net Migration, Regional Disparities*

JEL Classification: *C46, J11, J13, J14, R23*

1. Introduction

The main aim of this paper is to compare differences of the international migration between 28 member countries of the European Union after year 1990. We will try to recount migration process in European Union. "Migration and Migrants in Europe" was the generally theme of the scientific program for European Population Conference which was held in the year 2008 (Barcelona, Spain). This conference was organised by the European Association for Population Studies (EAPS). International migration has become the most important factor in population growth in Europe during last decades (Šotkovský, 2011).

All countries of the world have some experiences with international migration. But it is very difficult to compare migration behaviour between world countries because of different statistics to characterize migration flows. The best conditions of international migration have begun since 1976, when United Nations set up the recommendations on statistics of international migration (United Nations, 1980). Today we can use forth revised recommendation on statistics of international migration flows when we solve complicated categories of the international migration (United Nations, 1998). Many information about methodology, theory and migration data provides the Population Division and Statistical Division of the Department of Economic and Social Affairs of the United Nations Secretariat. Founded in 1946, the Population Division supports continually the Economic and Social Council and her Commission on Population and Development.

Research on migration usually use official statistical data. Those empirical data are exploited within the research project by the aid of demographic methodology and their special indicators.

It is very important to have a good knowledge of the context in which the official data was generated. The national data of spatial movement of migrants into others countries have sometimes different concepts and definitions of the external migration. Each country in the EU has its own way of recording and measuring flows depending on its administrative arrangements. EU countries have applied a common statistical definition of migration since 2008. We will analyse total number of long-term immigrants and emigrants arriving into or leaving from the reporting country during the reference year between 1990 and 2014. A lack of complete and comparable data and uniformity among countries in respect of determining who is an international migrant, emigrant or immigrant, long-term emigrant for much European Union countries makes any migration analysis a challenge. The United Nations Statistics Division (UNSD) is responsible at the international level for collecting and disseminating official national data on international migration. UNSD, Statistical Office of the European Communities (Eurostat) and national statistical offices (United Nations [online], 2016a) propose set of recommendations on statistics of international migration.

Table 1: Basic Characteristics of the EU

EU (year)	member states	area (sq km)	population (mil.)	density (inh./sq km)
1957	6	1,284,482	228.461	178
1973	9	1,640,749	297.708	181
1981	10	1,772,706	308.828	174
1986	12	2,370,680	362.387	153
1995	15	3,242,647	384.866	119
2004	25	3,991,651	459.387	115
2007	27	4,326,987	488.824	113
2010	27	4,326,987	501.102	116
2014	28	4,383,529	505.424	115

Source: author, based on Eurostat data

The change of migration behaviour depends on the many factors such as economic background, political situation, influence of natural environment, social policy or institutional touch. International migration became a greater cause of population growth in the many European Union countries (Bosswick, W., Husband, Ch., 2005). In European Union live more than 500 million (table) people now (73 % from European population, 7 % from total world population). It is projected to go on increasing, reaching 521 million in 2035 and then begins to slowly decline to 506 million in 2060 (Šotkovský, 2012).

An international **migrant** is defined as any person who changes his or her country of usual residence (most often for a period of at least a year), so that the country of destination effectively becomes the country of usual residence. United Nations recommendations for migrant statistics consider a period of stay greater than three months as a short-term migration (except in cases where the movement to that country is for purposes of recreation, holiday, visit to friends and relatives, business, medical treatment or religious pilgrimage) and greater than one year as a long-term migration (United Nations, 1998).

Each country has different data-collection system for measurement of international migration. Four major categories are:

- administrative registers,
- other administrative sources,

- border collection,
- household-based field inquiries.

We will analyse population flows of 28 European Union countries only without solve the others things as migrant's personal characteristics, „push“ and “pull” factors for migration, economic or social migrants behaviour, nationality, etc.

2. Methodology and Analytic Approaches to Study Migration

Migration refers to the number of migrants, people changing their residence to or from a given area (usually a country) during a given time period (usually one year). **Immigration** is the movement of people into a destination country to which they are not native or do not possess its citizenship in order to settle or reside there, especially as permanent residents or naturalized citizens, or to take-up employment as a migrant worker or temporarily as a foreign worker. Immigration is the number of immigrants for a given area during the year. When people across national borders during their migration, they are called migrants or immigrants (from Latin: migrare, wanderer) from the perspective of the country which they enter. From the perspective of the country which they leave, they are called emigrant or out migrant. **Immigrants** are people arriving or returning from abroad to take up residence in a country for a certain period, having previously been resident elsewhere. According to the 1998 United Nations recommendations on the statistics of international migration (United Nations, 1998), an individual is a long-term immigrant if he/she stays in his/her country of destination for a period of 12 months or more, having previously been resident elsewhere for 12 months or more. **Emigrants** are people leaving the country where they usually reside and effectively taking up residence in another country. **Emigration** is the number of emigrants for a given area during the year. Many countries have immigration and visa restrictions that prohibit a person entering the country for the purposes of gaining work without a valid work visa. As a violation of a State's immigration laws a person who is declared to be an economic migrant can be refused entry into a country. Treatment of migrants in host countries, both by governments, employers, and original population, is a topic of continual debate and criticism, as many cases of abuse and violation of rights are being reported frequently. The term economic migrant refers to someone who has travelled from one region to another region for the purposes of seeking employment and an improvement in quality of life and access to resources. An economic migrant is distinct from someone who is a refugee fleeing persecution.

Asylum is a form of protection given by a state on its territory based on the principle of non-refoulement (no repulsing/sending back) and internationally or nationally recognised refugee rights (United Nations, 1998). It is granted to a person who is unable to seek protection in his/her country of citizenship and/or residence, in particular for fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion. The special problem is to define two basic categories of inflows and outflows of non-migrants: *foreigners* and *citizens*. In general, *visitors* are usually different group of persons travelling from one country to another over short periods (less than three months).

The difference between the numbers moving in (immigrant, *I*) and moving out (emigrant, *E*) is net migration (*NM*) (1). **Net migration** is the difference between immigration to and emigration from a given area during the year (net migration is positive when there are more immigrants than emigrants and negative when there are more emigrants than immigrants). Since many countries either do not have accurate figures on immigration and emigration, or have no figures at all, net migration has to be estimated. It is usually estimated as the

difference between the total population change and the natural increase during the year. Net migration gives no indication of the relative scale of the separate immigration (I) and emigration (E) flows to and from a country; a country may report low net migration but experience high immigration and emigration flows.

$$NM = I - E \quad (1)$$

Crude rate of net migration ($CRNM$) is simply the ratio of net migration (often including statistical adjustment) in a year divided by the total population at mid-year and multiplied by 1,000 (2). The value is expressed per 1 000 inhabitants.

That is:

$$CRNM = \frac{NM}{P} \cdot 1,000 = \frac{I - E}{P} \cdot 1,000. \quad (2)$$

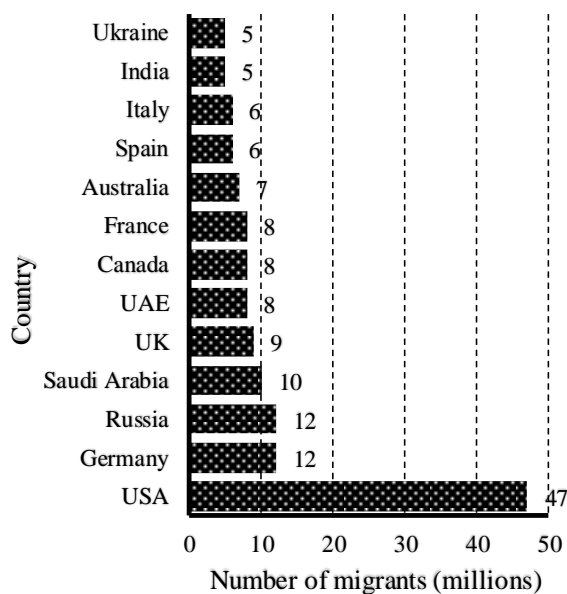
In migration statistics, data are compiled by the age, gender, marital status, native language, country of birth, and region of arrival and departure of migrants.

3. International Migration at the Global Level

An overview of trends in international migration is complicated by many facts:

- lack of a system for the continuous registration,
- diverse the meaning and scope of statistics,
- different value definitions,
- partial and context-depend availability of the statistical information,
- disunited statistical evidence and
- diversity of the time period.

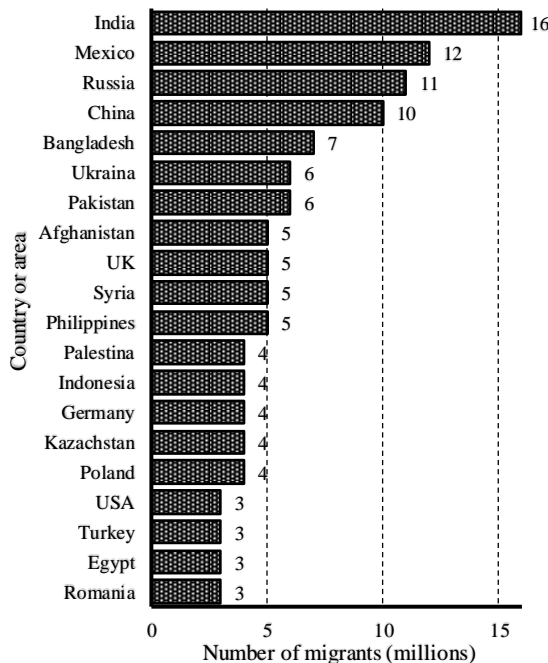
Figure 1: International Migrant Stock in 2015



Source: author, based on UN data

Experts in migration behaviour describe the late twentieth century and the beginning of the twentieth first century as “the age of migration”. It is true that international migration remains an “exceptional phenomenon not only within the world but within the Europe. Within the European Union freedom of movement became a reality in 1992. The international migrant stock increased from 75 million persons in 1965 to 153 million in 1990. The estimated number of foreign-born population was 49 million in Europe (Zlotnik, 1998). The number of international migrants has continued to grow rapidly over the past twenty-five years reaching 244 million in 2015, up from 173 million in 2000 and 187 million in 2005. Nearly 84 per cent of all international migrants live in Europe (76 million, 10 million km²), Asia (75 million, 40 million km²) or Northern America¹⁰⁷ (54 million, 20 million km²). More than 10.5 per cent of all European Union population is a portion of international migrants living in European Union (54 million as well as in USA). Most of the world’s migrants live in a handful countries. The largest number of international migrants (47 million) resided in the Unites States of America (Figure 1). Germany and Russian Federation hosted the second and third largest numbers of migrants (12 million each), followed by Saudi Arabia (10 million). The others significant European countries hosting the largest numbers of international migrant are: United Kingdom (9 million), France (8 million), Spain (6 million), Italy (6 million), and Ukraine (5 million). But Turkey became the largest refugee-hosting country worldwide (1,6 million refugees in 2014). More than 1 million refugees hosted Pakistan, Lebanon and Iran. Nearly a half of refugees came from just three countries: Syria, Afghanistan, and Somalia (United Nations, 2016b). And what are demographic characteristics of international migrants:

Figure 2: Countries with the Largest Diaspora Population in 2015



Source: author, based on UN data

¹⁰⁷ United States of America and Canada.

- a little more migrants are male (52 per cent), in Asia even 62 per cent,
- the median age was 39 years (43 years in Europe),
- most migrants worldwide have working age (20 to 64 year, nearly 72 per cent),
- 10 per cent of all migrants were children (world average is 26 per cent),
- 13 per cent of all international migrants were elderly people (age 65 and more).

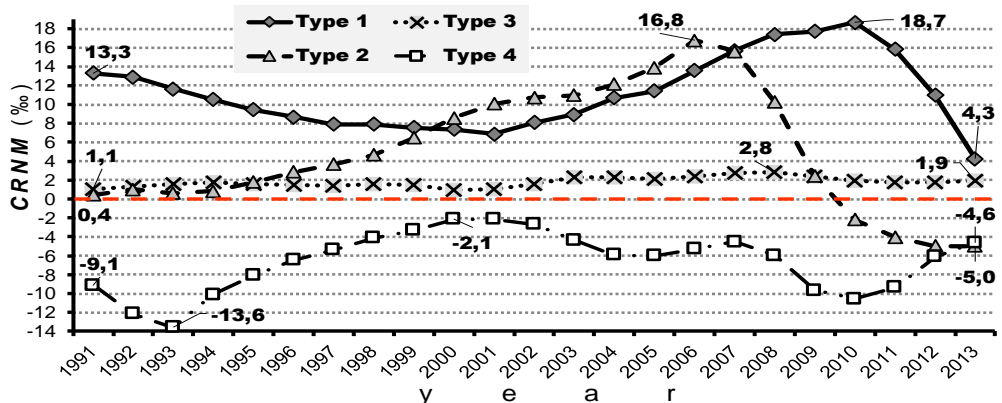
The majority of international migrants live in high-income countries and most migrants originate from middle-income countries. Nearly half of all international migrants were born in Asia (more than 100 million, outside continent live 42 million). More than 60 million of all international migrants were born in Europe (outside continent live 22 million).

Among the twenty world countries or areas with the largest diaspora populations are six countries from Europe, eleven from Asia and then Mexico, Egypt and United States of America in 2015 (Figure 2). Among the countries with the largest average annual growth rate of their diaspora populations during last fifteen years were Syria, Romania, Poland and India. The largest populations of migrants were from Mexico to United States during this period.

4. Regional Disparities Between European Union Countries

There are different approaches to define and survey the regional disparities (Melecký, 2015). We can usually differentiate three types of regional disparities: economic, social and territorial. We can think of the demographic indicators as the social disparities. The population growth was primarily caused by the natural increase for a long time of the human being history. But in many world regions, migration was a key reason of the population growth in different time period. For the last three centuries the Europe was emigration space until a half of 20th century. But for the last fifty year most European countries became immigration territory. If we analyse the change of migration behaviour by means of the crude rate on net migration (CRNM) in a longer-term perspective of the last 25 years, we can distinguish four types (Figure 3). We finally suggest to work with method hierarchical cluster analysis (Staničková, 2013) in terms of technics of the dendrogram using average linkage between groups, because we compare less than 30 spatial units. We are working with method of „centre moving average“ for three-year periods too (IBM SPSS Statistics software tool, version 23.0). Therefore on the time axis of the charts is time period from 1991 to 2013. It is suitable method for dynamic typology of the migration behaviour at the European Union countries.

Figure 3: The Types of the Migration Behaviour of the EU Countries during the Period 1990 to 2014



Source: author, national statistical offices of the European Union countries data

- Type 1 represents these countries: Cyprus and Luxembourg. They have positive and higher value for whole the period under consideration. Their long-term average of *NM* was 11,2 ‰. Net migration in Cyprus has been positive from 1983 to 2011. As from 2012, net migration has been negative, starting from -629 in 2012 and reaching -15.000 in 2014.
- Type 2 represents these countries: Ireland and Spain. They had positive and higher value of *NM* to the 2009. Then their net migration became negative and therefore the long-term average of *NM* was only 5,1 ‰.
- Type 3 represents 21 EU countries: Bulgaria, Romania, Croatia, Greece, Portugal, Czech Republic, Slovenia, Belgium, Italy, Sweden, Austria, Malta, UK, Denmark, Poland, Slovakia, Finland, Hungary, France (metropolitan area), Netherland and Germany. They had positive but very low value of *NM* for the whole duration of surveyed migration behaviour. Their the long-term average of *NM* was gently positive (only 1,8 ‰).
- Only three European Union countries (type 4) have negative value of net migration for the whole period of 25 years. Latvia, Lithuania and Estonia had the long-term average of *NM* -4,6 ‰.

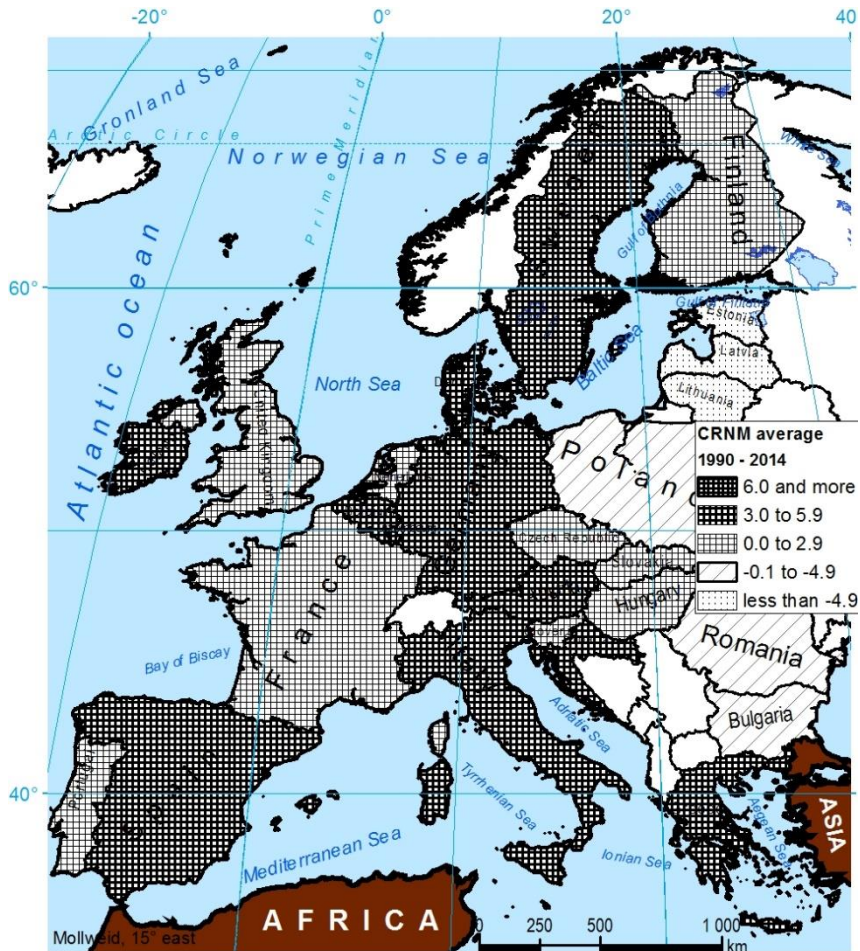
5. Conclusion

The basic knowledge about international migration are following:

- The annual value of total population growth is 2.7 ‰ in the European Union today and will be almost -2 ‰ around the year 2060 according to projection of Eurostat.
- Net migration is decisive for the evaluation of the population growth in the European Union with its weight of the two-thirds now.
- Almost two-thirds of European Union members must define the migration policy, especially immigration policy.
- Net immigration is projected to continue to be the main cause of population growth.
- The influence of the natural increase on the population growth is less and less. Beside this the net migration has increasing tendency.
- We can see the real convergence (Dvoroková, 2012) of the international migration behaviour of the European Union countries for the last 25 years.
- The highest average value of *CRNM* for the period last 25 years had Luxembourg, Cyprus (10 ‰ each), then Spain, Ireland, Austria, Sweden, Germany, Malta, Greece and Croatia (between 3 and 6 ‰). The negative long-term value of *CRNM* had 7 European Union members: Lithuania, Latvia, Estonia, Bulgaria, Romania, Poland and Slovakia (Figure). The value of *CRNM* the others eleventh EU members is gently above null but less than 3 per mille.
- The "median-variant" scenario of the U.N. Population Division remains almost the same as before - predicting a world with 9.2 billion people by mid-century, up from nearly 7.3 billion today. This means annual population growth at the level 3.4 ‰ in 2050 and this is the same level as in European Union today. It is true that population growth is diminishing due to the demographic transition and the peak of the world population size will be probably achieved at the beginning of during the 22nd century (around 2130). The peak of the European Union population must be achieved nearly one hundred years earlier (around 2030). But the big problem can be migration behaviour, namely international migration. Migrants, refugees and asylum-seekers cross into Europe each day. Without increased aid to the front line states in the Middle East and the Mediterranean, more engagement from other nations, and a plan to

integrate the influx of new arrivals in Europe, the Europe's migration crisis cannot be solved.

Figure 4: Cartogram of Average Value of CRNM in EU Countries (1990 - 2014)



Source: author (national statistical offices data)

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A Closer Look at the Definitions of Problem Loans: Analysis with Using the Data for the Czech Republic

Monika Šulganová

VŠB - Technical University of Ostrava
Faculty of Economics, Department of Economics
Sokolská třída 33
Ostrava, Czech Republic
e-mail: monika.sulganova@vsb.cz

Abstract

For some time, there exists an effort to harmonize definitions of forbearance and non-performing exposures (NPEs) within the EU and also internationally. The aim of this paper is to describe and compare concepts which are designed to measure and monitor problem loans, namely for the accounting and regulatory purposes. These approaches are built on the definitions of impairment and default, or more broadly on the setting of a common identification criterion (90+ days overdue). For the purposes of this paper, the graphical analysis of empirical data of problem loans ratios available for the Czech Republic is used. It reveals significant compliance of depicted time series obtained from CNB, IMF and BANKSCOPE databases which can be observed since 2007.

Keywords: Czech Republic, Default, European Union, Impairment, Problem Loans

JEL Classification: G21, C20, E44

1. Introduction

When a bank underwrites a loan it has to take into account the possibility that the loan can default and the bank might suffer a potential loan loss. Thus, every bank faces a *credit risk* which is an inevitable part of doing business. Bielecki and Rutkowski (2002) generally perceive credit risk as a risk associated with different events related to the process of granting loans such as changes in credit quality (including decrease or increase in a credit rating), changes in credit spreads or an event of default itself. Particularly, *counterparty default risk* arises from the fact that each party of a contract faces a possibility of an event of default of a counterparty, i.e. the possibility that counterparty fails to fulfill its contract obligations (Blaschke et al., 2001). In general, the loan whose borrower fails to fulfill its obligations, i.e. to repay in full amount and/or on time, is considered to be a *non-performing loan* (NPL).

The issue of problem loans is very topical. The last financial and subsequent economic crisis has highlighted the lack of readiness of countries to measure and monitor credit risk, which materialization has led banking systems of multiple countries to a crisis state. For a detailed overview of problem loans development in Europe before and after the crisis see e.g. Aiyar et al. (2015).

The aim of the paper is to describe and compare the concepts which are designed to measure and monitor problem loans, namely for the accounting and regulatory purposes. Both concepts are built on the definitions of impairment and default, or more broadly on the setting of a common identification criterion (90+ days overdue). However, there are substantial

differences in problem loans definitions which will be pointed out in this article. These differences in definitions make the cross-country comparison of problem loans ratios (or impaired assets in general) less straightforward. The bank-level comparison in an individual country might be problematic as well. The data of problem loans available for the Czech Republic (CR) are used to demonstrate these differences.

When assessing the bank's financial performance, problem loans influence bank's lending through 3 interrelated channels: profitability, capital and funding. Firstly, the defaulted loans affect bank's earnings and its profit through the creation of loan loss provisions (LLPs). These are created from the earnings before taxation, thus reduce the net income of bank. The financial streams associated with problem loans are usually weaker compared to performing loans as well. Secondly, the problem loans impose higher requirements on regulatory capital due to the higher risk weights on impaired assets. And if there is no sufficient amount of loan loss reserves (LLRs), which are created through provisions, the loan losses deplete bank's capital. Finally, the deteriorated bank's balance-sheet increases the funding cost, and, hence, boosts risk perception on the part of investors (Aiyar et al., 2015).

On the macroeconomic level, materialization of credit risk is associated with the economic costs which are arising from impaired assets, and which are significantly influencing economic activity. Problem loans negatively affect investment of private sector and households' consumption. Further, due to erosion in bank capital, problem loans adversely impact the volume of credit available for the private sector, and thus prolong the economic downturn (see feedback effect, e.g. Klein, 2013).

2. Non-performing Loans

If the loan is classified as a non-performing loan, then the adjustments of its recorded value have to be made in the bank's balance sheet. The recorded value should reflect the bank's evaluation on how much the bank can possibly recover from the borrower. The bank has to categorize the NPL into three following groups:

A *past due* loan refers to the situation when borrower has missed several payments of either principal or interests, and the bank has indication that debtor's ability or willingness to repay is constrained. Nonetheless, the past due loan might be fully repaid by the debtor.

A *written-down* loan is a past due loan when bank anticipates that it will not collect the full amount of loan. In this case, the bank has to adjust the value of loan in its financial statements to the value which is assumed to be recovered.

A *charged-off* loan refers to the situation when bank believes that it will collect nothing on the granted loan. Thus, the full amount of loan has to be removed from the bank's balance sheet. Even though the loan is fully charged-off, the bank might still try to collect on it. A charged-off loan decreases bank's capital if the amount of loan loss reserves is not adequate. If the accumulated amount of LLRs is sufficient to absorb loan losses then there are no effects on the bank's balance sheet as the amount which is charged-off is offset by the LLRs (Apostolik et al., 2009).

In the countries where International Financial Reporting Standards (IFRS)¹⁰⁸ are implemented the loan loss recognition and provisioning is a subject to the two different approaches: accounting and regulatory (Gaston and Won Song, 2014).

2.1 Regulatory Approach

The regulatory approach is represented by the Basel regulatory and supervisory regime which is embedded in the Basel Accords I, II and III, and in the guidelines issued by the Basel Committee on Banking Supervision (BCBS). This regime is not purely oriented on credit loss recognition and provisioning, however, it contains principles dealing with this issue. In 1997 the BCBS issued the document *Core Principles for Effective Banking Supervision* which was aimed to establish a baseline level of sound regulatory practices in the banking sector. The Core Principles are designed as the set of minimum standards, and the national regulatory bodies can put in place supplementary measures to achieve effective national supervision. Currently, there is a revised group of 29 Core Principles. The Principles no. 17 and 18 are focused on the issue of credit risk and problem assets. Particularly, Principle no. 17 requires banks to implement adequate credit risk management, i.e. to use prudent policies and processes to identify, measure, evaluate, monitor, report and control or mitigate credit risk on a timely basis. Further, Principle no. 18 states that the bank should have suitable policies on the identification and management of problem assets, and the maintenance of adequate provisions and reserves. The Core Principles are also used within the IMF and WB's Financial Sector Assessment Programme which is aimed to assess national regulatory and supervisory practices (BCBS, 2012).

The generally accepted definition of obligor default is provided by IMF which describes that asset should be classified as non-performing when (i) payments of principal and interest are past due by three months (90 days) or more, or (ii) interest payments equal to three months (90 days) interest or more have been capitalized (reinvested into the principal amount), refinanced, or rolled over (that is, payment has been delayed by agreement) (IMF, 2006, p. 46). The aforementioned definition uses the common criterion of time recognition (i.e. 90+ days overdue). However, the *IMF FSI ((Financial Soundness Indicators) Compilation Guide* did not discourage stricter national regulatory regimes. In 2007 the indicator of NPLs was redefined to ensure a uniformed classification criterion and international comparability. Within this amendment the loan is classified as non-performing if the principal or interests are 90 days overdue (IMF, 2007, p. 6). Following this definition, the amended Guide does not include the stricter national approaches compared to its previous version.

The European legislation follows the recommendations of Basel regime, and the prudential requirements for credit institutions and investment firms are embedded in the *Regulation No. 575/2013* (hereinafter referred to CRR) and the *Directive 2013/36/EU* (hereinafter referred to CRD IV.). The CRR and CRD IV. increase the amount of tasks conferred on European Banking Authority (EBA). In 2014 EBA published the *Final draft Implementing Technical Standards on Supervisory reporting on forbearance and non-performing exposures under article 99(4) of Regulation (EU) No 575/2013*. This document provides the definitions of forbearance and non-performing exposures, which represent a supplement to the Financial Reporting Framework (FINREP) defined by the *EC Implementing Technical standards (ITS)*.

¹⁰⁸ Some countries are implementing Local Generally Accepted Accounting Principles (Local GAAP). In spite of the fact that there is a preference for single set of international financial reporting standards, the convergence of accounting principles on credit loss recognition has not been sufficient yet.

The definition of non-performing exposures¹⁰⁹ builds on the existing definitions of impairment and default set by the IFRS and CRR, while being broader with this notion with the setting of common identification and discontinuation criterion (90+days overdue) to serve as a more harmonised asset quality indicator across Europe (EBA, 2014, p. 3).

The Czech Republic as the EU member has implemented the corresponding European legislation (CRR and CRD IV.), and classifies loans under the *Czech National Bank (CNB) Decree no. 23/2014*. The loan classification is standardized and includes five categories of loans: the first two categories (standard and watched loans) form a group of *performing loans*, and remaining three categories (substandard, doubtful and loss loans) are referred as *non-performing loans*. The obligor default is defined in the *CNB Decree no. 123/2007 Coll.*, as amended, as a situation when at least one of the following conditions is met: (i) it may be assumed that the obligor will not fulfill its obligations in a proper and timely manner without the creditor seeking to collect its outstanding receivable through credit protection, (ii) at least one payment of the principal or interest and fees of any obligation of the obligor towards the creditor is more than 90 days past the due date; the liable entity shall not take this condition into account if the amount past the due date is insignificant; the liable entity defines significance with regard to the amount it does not collect in writing off a receivable (CNB Decree no. 123/2007 Coll., as amended, art. 49).

2.2 Accounting Approach¹¹⁰

In countries implementing the IFRS the accounting approach to loan loss recognition is guided by the principles of the *International Accounting Standard (IAS) 39* which became effective in 2001. The concept is based on the incurred loss model which is motivated by an effort to constraint bank's management ability to create hidden reserves, i.e. to conduct an earnings management. Even though, this concept has helped to reduce the earnings management, it is criticized for insufficient and non-timely loan loss recognition (the loan loss recognition under IAS 39 is commonly called "*too little and too late*").

The impairment of loan is identified when loan loss occurs or when it is supported by the *objective evidence* of impairment. It has been pointed out that IAS 39 has not been sufficiently robust and responsive to changing credit quality conditions what might be broadly explained by the two following reasons: (i) as the IFRS is principle-based, banks use judgement in the application of IAS 39, i.e. there exist various practices in identifying objective evidence, and some banks focus more on the lagging indicators of default, (ii) the approach does not allow to take into account the projections of future credit loss events.

The EU has made a public commitment to move towards a single set of high quality global accounting standards, and has adopted certain accounting standards in the *Commission Regulation (EC) No 1126/2008 in accordance with the Regulation (EC) No 1606/2002* (hereinafter referred to as IAS Regulation). The CR as the member of EU is a subject to the IAS Regulation. The IFRS adoption status of the CR can be found in its *jurisdictional profile* as well (IFRS Foundation, 2015). According to this document, since 2005 the CR has adopted IFRS as adopted by the EU¹¹¹ for the consolidated financial statements of all companies whose

¹⁰⁹ The definition is not purely focused on the non-performing loans, i.e. it takes into account both on- and off-balance-sheet items.

¹¹⁰ The sub-section 2.2 is motivated by the work Gaston and Won Song (2014).

¹¹¹ The EU has adopted the IFRS with some limited modifications, however, the financial statements of majority of companies might be in full compliance with IFRS.

securities trade in a regulated market. Further, the IAS Regulation gives member states the option to require or permit IFRS as adopted by the EU in separate company financial statements (statutory accounts) and/or in the financial statements of companies whose securities do not trade on a regulated securities market.

The loan loss recognition under IAS 39, based on the incurred loss concept, has been challenged by the supervisory community. In response to this, the new credit loss recognition model IFRS 9 was published in 2014, and should become effective in 2018. In contrast to currently applied IAS 39, the IFRS 9 does not solely use the past and present information but also incorporates a forward looking component, i.e. that the credit loss recognition will use the information about expectations of future credit losses. Within the IFRS 9 the loan loss recognition might be potentially higher and earlier, and this new concept might closely align to the prudential standards. Although, the IFRS 9 takes into account the expected future loan losses (covered by provisions); it does not include the unexpected future credit losses (covered by regulatory capital).

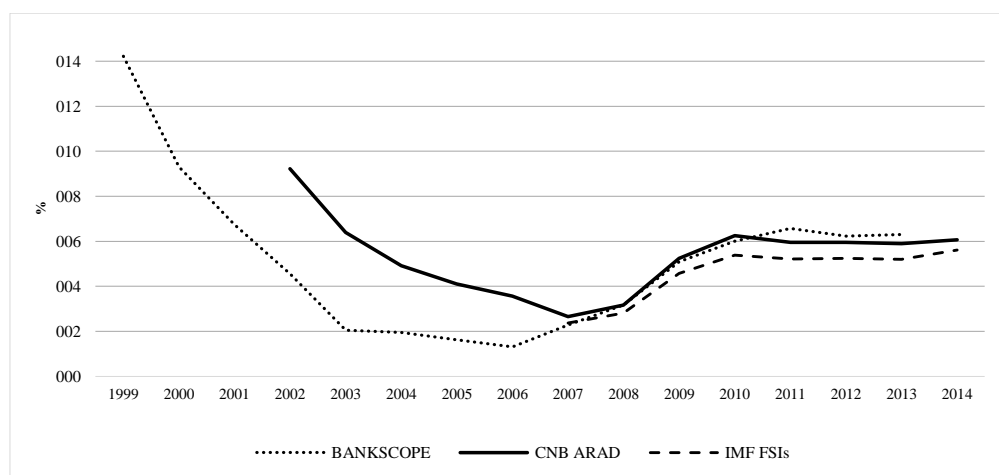
Drehmann et al. (2010) encourage banks to build up the countercyclical capital buffers (CCB) which are accumulated in the good times and diminished in the bad times. However, this CCB should not be viewed as a minimum regulatory requirement. Instead of that, it should be understood as an exceeding amount of capital which absorb losses in the bad times. The CCB should serve two objectives: (i) to strengthen the financial sector resilience and (ii) to limit the procyclicality of banking (financial) services.

3. Graphical Data Analysis

The potential differences between aforementioned regulatory and accounting approaches, and respective time series of problem loans ratios measured based on the existing definitions, are captured in the graphical data analysis.

The regulatory approach is illustrated by the time series retrieved from the Czech National Bank's ARAD database and the IMF's FSI database. The accounting approach is depicted by the time series obtained from the BANKSCOPE database. The time series of problem loans ratios (i.e. the share of problem loans to total loans) are presented in Figure 1.

Figure 1: Problem Loans Ratios (%)



Source: self-elaboration

In addition to different values of problem loans ratios, we can observe the various length of available time series. The CNB's time series of aggregate non-performing loans ratio (NPLR) is available from 2002, and it is calculated as a ratio of non-performing loans to total gross loans of all banks (excluding central bank) and subsidiaries of foreign banks operating in the CR. The CNB follows the commonly accepted identification and discontinuation criterion (90+days overdue). However, it also defines the obligor default as the situation when the obligor will not fulfill its obligation in a proper and timely manner. This enables banks to classify loan as a non-performing even if it is not past due more than 90 days.¹¹² As can be seen from Figure 1, the CNB's NPLR was decreasing until 2007. In relation to financial and economic crisis, the NPLR was raising until 2010. Since then it has been reaching stable values approximately about 6%.

We can also observe the aggregate NPLR published by IMF which is available from 2007. Besides the FSI Guide-recommended 90-day rule, the financial condition of the debtor is also used in determining loans as nonperforming loans.¹¹³ When compared to the CNB's NPLR, the IMF's NPLR follows the development of NPLR published by CNB. These two time series were almost perfectly collinear in period 2007-2014 (see Table 1). However, the depicted values of IMF's NPLR are lower than CNB's NPLR (the difference between these two time series ranges from 0.36 to 0.86%).

The last presented time series of problem loans ratio was calculated from the bank-level data obtained from the BANKSCOPE database. The data of impaired loans and gross loans of banks and subsidiaries of foreign banks operating in CR were used to compute the aggregate NPLR.¹¹⁴ The time series is available from 1999 to 2013. We can observe high values of NPLR at the beginning of the time period, and also a quite significant difference compared to the CNB's NPLR in the period 2002-2007. From the year 2007 the BANKSCOPE's NPLR has been in noticeable compliance with the NPLR series published by CNB and IMF. This is also confirmed by the correlation coefficients presented in Table 1.

Table 1: Correlations among Time Series of Problem Loans Ratios

Time series	Period	Correlation coefficient
CNB, IMF	2007-2014	0.9962
CNB, BANKSCOPE	2007-2013	0.9835
IMF, BANKSCOPE	2007-2013	0.9874

Source: self-elaboration

¹¹² The percentage shares of non-performing loans which actually are not past due or alternatively, which are past due less than 90 days, are reported e.g. in the CNB's Financial Stability Report 2014/2015, p. 40.

¹¹³ The cross-border consolidation basis (CBDI) is used in the compilation of the IMF's NPLR series, which is not fully consistent with the FSI Guide. It equals CBDI defined in the FSI Guide plus resident foreign bank branches. Data are aggregated and OFCs data are not included. The loans to central bank are excluded as well (IMF, 2016).

¹¹⁴ The BANKSCOPE database provides the data of impaired loans and gross loans for 24 banks and subsidiaries of foreign banks operating in the CR. At the beginning of available time period (i.e., in the period 1999-2004) the assets of these subjects ranged from 44-84% of total assets of the Czech banking sector. Since 2005 this share has risen to 90%, i.e. the selected 24 subjects represent the majority of the Czech banking sector.

4. Conclusion

The problem loans affect both the financial sector and the real economy. Thus, their proper measurement and monitoring is required, as well as the developing of a common definition of non-performing exposures is needed to harmonize current practices. Within the EU, the stronger requirements on the prudent behavior of banks have been applied as a part of the single rule book of the Banking Union initiatives. Within these initiatives it is also aimed to interrupt the interactions between credit risk and fiscal sustainability. Particularly, to disrupt the bounds among the national banking systems and public finances through the transfer of national governments debts and potential losses of banking systems to the supranational level. However, this transfer could be associated with increased moral hazard, i.e. it could weaken the responsibility of respective representatives for national debts and banking losses.

The aim of the paper was fulfilled by comparison of regulatory and accounting approaches to credit loss recognition, i.e. various definitions of default and problem loans were presented. Both approaches, regulatory and accounting, are built on the definitions of impairment and default, or more broadly on the setting of a common identification criterion (90+ days overdue).

In countries implementing IFRS the currently applied concept of credit loss recognition (IAS 39), based on the incurred credit loss, should be replaced by the IFRS 9 in 2018. Despite the fact that IFRS 9 does not include unexpected future credit losses, it incorporates expected future loan losses what constitutes a positive change.

The graphical analysis of problem loans ratios available for the Czech Republic revealed the differences between published values especially at the beginning of the selected time period. On the other hand, since 2007 the significant compliance of depicted time series obtained from CNB and IMF, and calculated from BANKSCOPE database has been observed. This was also confirmed by the high values of correlation coefficients of respective time series which were calculated for the period 2007-2013 (2014). These results are in accordance with the international efforts to converge accounting and regulatory approaches to credit loss recognition, and to ensure the cross-country comparability of impairment of assets.

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Informality and the Institutional Change in Kosovo

Ewelina Targosz

Faculty of Political Science
International Relations Department
Pl. Litewski 3
Lublin, Poland
e-mail: ewelina.targosz@gmail.com

Abstract

The European Integration which takes in the post-conflict and the post-communist societies in the Western Balkan states, requires promoting new rules in these societies. Applying the institutional change approach, the Europeanisation of public policies in Kosovo explains the relation between actors of the institutional change in Kosovo and the economic environment in the state. Companies in Kosovo are affected by several obstacles in their activities. Particularly, these difficulties can be observed in the public procurement services. The situation is being worsened by holes in the national law and low efficiency of responsible institutions in monitoring the whole process. These factors increase probability of corruption, strictly related to the culture of informality. The aim of this article is to present an impact of the culture of informality in the Republic of Kosovo on the European Integration process, by examining the situation from the public procurement practice perspective. The analysis uses both qualitative and quantitative method to measure the impact of informality on the change process.

Keywords: *Informality Institutional Change, Kosovo, Public Procurement*

JEL Classification: *A13, D23, D73, H41*

1. Introduction

As the Republic of Kosovo had signed the Stabilisation and Association agreement on 22th October 2015, the European Integration process of the state has been pushed forward. Therefore, compatibility of the national rule of law principles in the area of the public administration in Kosovo, as well as coherence with the EU economic criteria in terms of the free market, remains to be a significant issue for the potential candidate state, for the future. Ensuring fair and transparent conditions are critical for developing the free market coherent with EU's common market and accordant with its standards.

The EU conditionality plays a key role in the process. As stated by Othon Anastasakis, the aim of the EU is to *give way to one of development, aimed at integrating the Balkans* into its structure (Anastasakis, Bechev 2003, 4). As the economic convergence with the EU's free market, governed in accordance with the rule of law is critical to fulfil the criteria set by the EU. Due to the fact that economic activities in the post-conflict states are shaped by many social and political factors, place of the local authorities remains un-doubtful, when it comes to running businesses in the fragile post-conflict environment. In Kosovo, where the political elites and the economic environment relations are not transparent enough, a lack of transparency in the public procurement constitutes a significant barrier to entrepreneurs. Informality practices in the public procurement procedures are common and disturb private

entrepreneurs to diversify resources for running their businesses. Furthermore, it was stated in several documents, including the Stabilisation and Association Agreement signed by the Republic of Kosovo, as well as in the national documents of the Kosovan government, that the public procurement reform needs to be pushed forward. Despite the fact some improvements were made, such as inclusion of the Kosovo Anti-Corrupt Agency into the public procurement supervision process, the bidding process remains un-transparent. (Council of Europe [online],2014, p. 21)

1.1 Defining the Informality Culture

Informality could be defined as actions conducted outside the state control. This situation occurs, when goods or services delivered by market, legal and illegal, are not included into the national economy indicators. These practices are called the shadow economy sector. In terms of discussing informality existing in the public procurement system in Kosovo, it refers to actions, which are aimed to avoid meeting criteria imposed by legal provisions. (Riinvest [online],2013, 9). In relation to obstacles for business activities, presented in the introduction, the most relevant one refers to corruption and limited opportunities for acquiring public subsidies. Referring to the institutional change concept, some practices present in public bidding competition, limit access to the state public assistance in Kosovo.

1.1.1 Preliminary Findings

According to the survey conducted by the Riinvest, respondents had mentioned eight different obstacles for economic activities in Kosovo. The informality-based barriers were placed as the second most disturbing. These types of barriers include: corruption (83.7%), unfair competition (80.2%) and extortion (44.1%). Accompanied by other limitations, like limited access to the state subsidies (81.1%), the high cost of running business in Kosovo (83.7%) (Riinvest [online],2014, 33, 37- 38), informal-related obstacles establish a difficult circumstance to adjusting the economy of Kosovo to the EU conditionality.

2. Problem Formulation and Methodology

This article seeks to examine how the informality culture in the Republic of Kosovo affected the European integration process in Kosovo in the area of the public procurement. The first section of the article concerns the theoretical approach to the institutional change concept relevant to the article's topic. The next section uses the case study method to examine the situation within the bidding procedures in terms of informality practices. The last section explains the impact of informality on the European Integration of Kosovo, through application of the institutional change approach. This article uses the case study method accompanied with the quantitative data analysis.

2.1 Theoretical Approach

Changes in the post-conflict states in their economic and political dimensions are, in fact, transitions of newly established liberal ideas into policies, implemented by national and international institutions, and then the environment (including political parties and party systems, but also interest groups and NGOs). There are two of three clusters of the institutional change. The first cluster includes institutions, both national and international. The second cluster comprises the environment, such as NGOs or lobbying groups. The third cluster concerns a broad range of conditions influencing political sphere in the state. Another significant issue about the institutional change is, rather than describing origins of ideas and their compatibility to each other, to interpret how they gain importance among political elites

and the environment . The most important purpose of the institutional approach concerns how to apply ideas into policies, as well as to research consequences of these applications for political development. (Lieberman, 2002, pp. 703).

Furthermore, the concept plays the explanatory function for behaviours of actors in the process of change, taking into account a broad variety of factors. Included are such factors as interests of particular groups, power distribution. Changes between particular ideational approaches determine endogenous change within institutions, although there is no slightest shred of doubt that not all ideas can be indigenised. In spite of this limitation, the institutional change concept assumes that in general, shift occurs not interrupted. Nevertheless, it cannot be explained if any ideational or institutional developments takes a lead at some specific point, or not. As political order is not often resulted from one unified vision, rather being an effect of compromise between particular groups of interest. Therefore, new ideas or institutions do not replace old ones, but they are 'layered'. (Lieberman, 2002, pp.700-705) . Scholars distinguished four processes for measuring institutional change: layering, displacement, conversion and drift. While layering and displacement describe situations when new institutions are being created, conversion and drift are designed to the process of reshaping roles of old institutions. The one most relevant here is conversion. (Rocco 2014, pp. 39) It aims at imposing "new goals or bringing in new actors that alter the institutional role or the core objectives of an institution". (Béland 2007, p. 22). Actors reshape policies using discretionary instruments, in order to manipulate rules of institutions. The core issue of conversion is to find appropriate agents able to change institution meaning. Thus, they succeed to postpone the institutional change. (Rocco 2014, pp. 45-46).

2.2 Model and Data

In 2004, the Public Procurement Law was amended. The new amendment was kept in accordance with EU acquis. However, some delays occurred in establishing a centralised institutional system of public procurement. In 2007 a new law was adopted in order to enhance compliance within the public procurement system with the EU law. Furthermore, the regulation had launched new principles on functioning three institutions responsible for the public procurement¹¹⁵. The next step towards closer compliance with EU standards was undertaken in 2010, but the EU had criticised its provisions as incompatible with the EU acquis. Major concern was related to the fact that regulations included in the new law endangered transparency of the public procurement system, as the government did not include work results of the technical assistance working groups in the new regulation. In 2011, another amendment was adopted, extending accountability to the public procurement officials supervisors, at political and administrative level. (Riinvest, Friedrich Ebert Stiftung, Kosovo Foundation for Open Society [online], 2013, pp. 25,26).

2.2.1 Model Calibration

The public procurement in Kosovo constitutes approximately one fifth of the national economy in Kosovo. As the value of public procurement deals accounted roughly for 800 million euro, the public procurement system constitutes an important potential source of financing for economic activities in Kosovo with a share of public procurement deals estimated at approximately 14%. Furthermore, the majority of companies are forced to rely on public assistance in order to maintain their businesses. Thus, risk of corruption increases. Due to

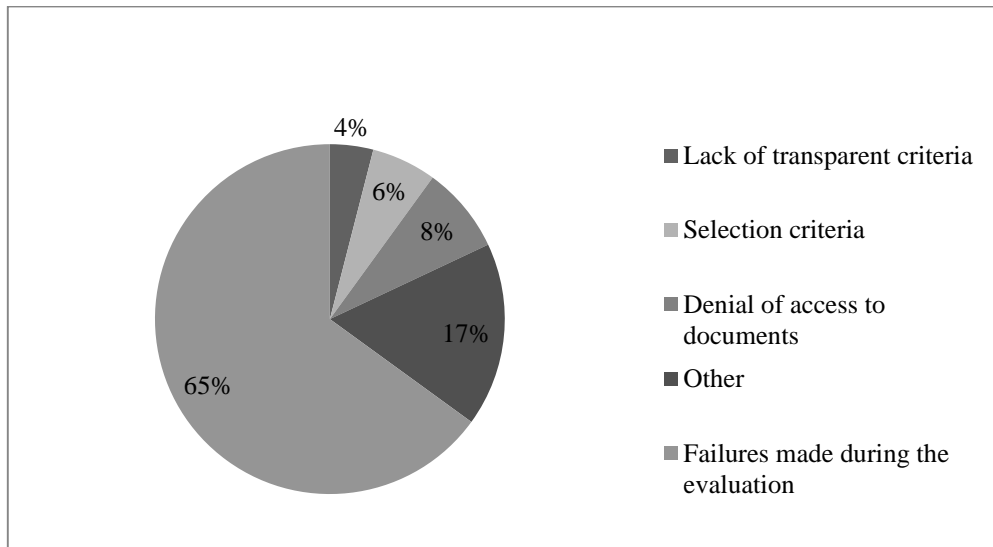
¹¹⁵ Public Procurement Regulatory Commission (a regulatory body); Public Procurement Review Body, a quasi-judicial body and the state-led Central Procurement Agency.

political pressure on the public tender procedures, it disturbs economic development in Kosovo. But also, informal practices prevent the economy of Kosovo from adjusting into the European standards. (Group for Legal and Political Studies [online], 2012, 8) Informality exists at both central and the local level of government in Kosovo. (Riinvest, Center for International Private Enterprise [online], 2012, p. 28).

The most fragile issue regarding the public procurement is related to uncertain and vague criteria. Tenders are often prepared in favour of some particular operator or a group of operators. In fact, many potential bidders are excluded from participation in a bid. Political links make the informal criteria of choosing a bid winner. (Group for Legal and Political Studies [online], 2012, pp. 9-10). Lack or limited information on the bid announcement can create a convenient environment for such actions. According to the data from 2014, 10% of interviewed companies claimed that the bidding criteria was not clear enough. (Kosova Democratic Institute, Transparency International Kosova [online], 2015, pp. 13-14).

As private sector entrepreneurs struggle to provide financial resources for their activities, in many cases, the state remains to be a main purchaser of goods and services provided by them (Riinvest [online] 2012, pp. 54). Therefore, one of the crucial problems related to the public procurement in Kosovo is an accessibility to the information on a tender. The following graph presents the most frequent type of complaints received by the Procurement Review Body:

Figure 1: Types of Complaints Received by the Public Procurement Review Body in 2014



Source : Kosova Democratic Institute, Transparency International Kosova, indeks-i-transparences-ne-prokurimin-publik, March 2015, pp. 13-14, <http://www.kdi-kosova.org/publikime/13-indeksi-i-transparences-ne-prokurimin-publik.pdf>

Figure 1 presents the percentage share of particular types of complaints to the Procurement Review Body. As seen in the graph, the largest amount (65%) of claims in 2014 were caused by the failures occurred within the evaluation process. 17 % of all submitted complaints concerned various nonspecific reasons. 8% of bidders claimed that they were unable to view offers submitted by other competitors.

According to the Balkan Investigative Reporting Network's report, the business environment in Kosovo with strong ties to politics, are being awarded tenders. For instance, in the municipality of Skenderaj, a company "R&Rukolli", which is owned by a member of the political security team, was chosen in the competition. The value of procurements given to the company estimated at 5 million euros from the Skenderaj, and another 15 million euro from other municipalities, governed by a ruling party. Moreover, the successful company failed to employ a civil engineer and a geodesist, which was required by the public procurement law. The "R&Rukolli" refused to admit these allegations. In another case in Peja a company had been granted a tender. They were a low-experienced firm in the field of physical security to secure local government owned buildings. A contract valued thousands of euros. The firm's owner had supported the PDK in the elections in 2013. (Balkan Investigative Reporting Network [online], 2014, pp. 11-13).

Nevertheless, other significant problem occurred, owing to unclear merit condition, stated in the bidding offer. The criterion which prevailed in the majority of tenders is the price. The success rate of the requirement was estimated at 85% total number of cases in 2010. In comparison, in 2012, this criterion constituted 66% (American Chamber of Commerce [online], 2012, pp.11). Moreover, according to the report from 2014 of the Kosovo Foundation for Open Society, lowest price remains to be an important problem in the bidding procedures. (Kosovo Foundation for Open Society [online], 2014, pp.55).

Nevertheless, especially when it comes to the services sector, the price condition can be hardly compared. Also, this condition leaves some space for corruption risks, concerning officials responsible for supervising the bidding procedures. In some cases, bidders underestimate a factual value of the goods or service included in offer, with a view to being granted a contract. Other criterion applied which may endanger objectivity in the public procurement procedures, is requirement called 'most economically advantageous tender'. In this regard, the public procurement officials may be at risk to use this condition as a measure of discretion, favouring some competitors. (Riinvest, Center for Private International Enterprise [online], 2012, pp. 28-31).

Another sign of informality in the bidding procedures might be a practice of cancelling bid announcements. The Balkan Investigative Reporting Network researched 168 institutions, in charge of supervising the public procurement procedure. Some of the procurement law provides an opportunity for local companies to be chosen for a tender executive, if a gap between local and foreign tender competitors did not exceed ten points. For instance, 23 % of 1,387 contract announcements were cancelled. The research shows that there are two types of situation; first due to the fact that the winner does not respond in regard of 185 cancellations; and as a result of opinion issued by the Anti-Corruption Agency (four cancellations). According to the report, the Agency recommended 17 competitors to be rejected, in 13 cases it was mentioned as a reason for cancellation. Another reason for cancelling the tender was stated as absences or a limited reason has to why the tender had been cancelled, most of the mentions refer to the procurement law abuses. The rest of the cancelled cases were annulled as the budget estimations were overestimated in 70 cases. The bid announcements often failed to provide information on the contract value. (Balkan Investigative Reporting Network [online], 2014, pp. 6-7). According to the data from 2014, institutions often cancel a bid, referring to business confidentiality clauses. (Kosova Democratic Institute, Transparency International Kosova [online], 2015, pp. 13-14).

Moreover, in many cases, bid publishers avoid providing competitors with the specific value of tenders offered. Tender announcements included a length of contracts, but publishers failed

to report the contract value. There are firms which are totally dependent on the public tenders. In this case, obstacles faced by these companies are more harmful to them, as bidders are not treated equally. As has been already stated in the article, links with political elites of Kosovo play a role of informal criteria, which seriously limit access to the public contracts. (Riinvest [online] 2012, pp. 54).

Referring to the business running obstacles, entrepreneurs in Kosovo marked unavailability of public subsidies, which, without a doubt, public procurement tenders are, establish an institutional barrier that restrains developing business opportunities. (Riinvest, Center for International Private Enterprise [online], 2014, 45).

Informality appears to be tightly linked to corruption, which makes another salient obstacle for private sector in the state. As a result of this dependence mentioned above, firms often refrain from making complaints, mostly owing to the fact that there exist fear that they would not be able to be granted with a public contract in future. The public procurement system often struggles with double standard applications. The road construction sector in Kosovo is perceived as the one of the most corrupted. Because of significant financial resources allocated by the government in the last two years, criticism emerged as the corruption allegations within the sector occurred. Due to an investigation conducted by EULEX in 2010, the Ministry of Transport was accused of violations concerning the procurement procedures. Namely, some companies were refused tenders as they did not deliver all required documents, while some other companies were granted a bid, without being expected to do so. Under such circumstances, these state dependent companies are in fact pushed to pursue clientelism practices. On the other hand, clientelism increases costs of running business, thus decreases quality of delivered goods or services. (Riinvest [online], 2014, 54-55) Furthermore, it remains to be extremely contrary to the rule of law principle.

3. Problem Solution

The European Commission emphasised in its “Progress Report” regarding Kosovo that in spite of some improvements made in the centralisation of the public procurement system, the Kosovan authorities fail to combat corruption in the public procurement procedures. Moreover, the Commission stressed that restricting the political influence on the tender procedures was needed. On the one hand, it was said that authorities kept national law on public procurement accordant with the EU *acquis*. On the other hand, Kosovo still lacks appropriate provisions on providing security for bidding procedures, especially in terms of ensuring equal opportunities both national and international competitors. Nevertheless, while the Kosovan authorities succeeded in conducting transposition of the EU law into domestic law order, implementation of its provisions remains a challenge. (European Commission[online], 2015, 41- 42).

As a result of poor implementation, accompanied by unclear merit criteria, cancellations of tenders, the public procurement did not contribute to enhance domestic companies’ capacities in order to compete with European firms in the common market in future. The failure of adjusting the economic environment in Kosovo was caused by specific conditions, which are common in the post-conflict, but also in the post-communist societies. Informal practices existent in the public tenders result from tight connections between economy and the politics.

In some particular sectors, such as road construction, the informality exerts even stronger impact, as the state remains to be only one client to firms operating within its frames. As the public procurement links both economic freedoms issue with the rule of law implementation,

both these spheres are still fragile and interrupt economic development in Kosovo. The institutional change, understood as achieving coherence with the European standards of carrying out economic activities, has been disturbed by the institutional change actors who manipulate rules imposed by the national law. Thus, manipulating the rules of the public procurement through cancelling tenders, avoidance of providing full information to participants, or imposing vague criteria aims to postpone the change within domestic institutions. Using discretion power serve the institutional change actors to protect their interests and prevent the public institutions from creating equal opportunities for all those who act in the frames of the local economy.

4. Conclusion

Taking into account all factors in the previous section, informality exerts a very strong impact on the European Integration process of Kosovo, in terms of convergence with the EU common market, but also in terms of the rule of law principle implementation. All arguments presented in the article confirm that the informality culture accompanied by weak implementation of the national law maintain unfavourable conditions for business activities.

In spite of some moderate progress, the public procurement system, which is an important measure of public policies, seems to be a factor postponing the European Integration of Kosovo, rather than an instrument of institutional and economic change. Furthermore it also reveals that some political criteria, such as the rule of law implementation are not fully executed. Thus, the impact exerted by the informality culture in Kosovo spreads not only into the public sphere, but produces some implications for the economy. Moreover, informality in the public procurement prevents the public subsidies system from being supervised. Therefore, fulfilment of the provisions stated in the Stability and Association Agreement concerning the public procurement will be a challenge and may be difficult to combat it in future it may also lead to abuses in terms of spending the EU assistance.

In fact, its influence hinders the progress of the European Integration in the state, owing to institutional and economic factors mentioned in the article.

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Analysis of the Sources of the European Union Crisis

Helena Tendera-Właszczuk

Cracow University of Economics, European Economic Integration Department

Jean Monnet Centre of Excellence

ul. Rakowicka 27

Kraków, Poland

e-mail: tendera@uek.krakow.pl

Abstract

The European project, understood as a process of political integration within the EU, is still perceived by many as an innovative (experimental) form of making political decisions that significantly influence the conditions of the EU functioning. There is no doubt that creating the euro zone or Western enlargement were much more political than economic decisions. The economic crisis as well as the immigration crisis has started new debate on Europe. There is no doubt that the present situation it is the most serious crisis in the history of European integration. This paper demonstrates that the present European integration hybrid model is the main reason for the EU crisis. Crisis in the EU has been permanently observed on each stage of the integration process. It will be shown that the citizens of member states still comprehend the political life in a state-mode way and they consequently expect their politicians (representatives) to perform actions that promote the national interest and their particular well-being first, rather than the common interest of Europeans. The debates is focused not only on the economic integration, but on a long-term vision on the future of the EU and further steps to strengthen European Union.

Keywords: *European Integration Model, European Union Crisis, Future of the EU, Governance in the Euro Zone, Immigration Crisis*

JEL Classification: *F02, N84, O52*

1. Introduction

In 2000, the European Union entered a period of debate over its future shape and the possible further scenarios for the integration process. The debate began with the drafting of the Treaty establishing a Constitution for Europe, intended to introduce significant changes to the European Union and its Member States and to base the functioning of the union to a greater extent on federal principles. The failure to ratify the treaty, its rejection, the subsequent drafting of the Lisbon Treaty, and the latter's entry into force coincided with the global economic crisis, whose repercussions significantly impacted the economic and social conditions within the union. At the same time, the crisis has laid bare a clear deficit of political leadership in the European project, and exposed the difficulties in establishing a political vision for the future character of the European Union and its role an position in the world.

For more than sixty years now, EU member states have been debating about the best model of European integration (Hallstein, 1962, Streeten, 1964, Iszkowski, 2009). The two competing visions are championed by Germany, which envisions the future Union as a federation, and France, which prefers to opt for a confederation. From the start, a major point of controversy has centered on the role of the nation state in the integration process and the powers that it

would have to turn over to the union level. Another issue has concerned the division of powers between EU institutions that represent different interest groups. Currently, the European Union is taking on more and more federal characteristics.

2. Problem Formulation and Methodology

The global economic crisis has exposed the weaknesses of the European project (European Commission, 2013). A question has arisen whether the EU is able to counteract negative external phenomena and prevent the internal processes of disintegration. The issue has attended the European integration process ever since its outset. The article attempts to identify the sources of the crisis of the European project.

The purpose of this article is to analyze and assess the integration model that has taken shape since the 1950s, identify its weaknesses and its influence on the current state of the EU, and to envision future scenarios for European integration.

A popular opinion within academic discourse holds that the European project is an extremely risky enterprise, basically doomed to failure due to internal inconsistencies but continuing nonetheless (Konopacki, 2006, Habermans 2012). Despite the successive revisions of the treaty law, intended to improve the efficiency of EU institutions and bolster the democratic character of the organization as a whole, the European project still requires improvement and is far from desirable or even stable in the eyes of all entities involved in its construction (Barcz, 2010). The question remains open: is it possible to effectively incorporate the national interests of member states into the EU's reason of state?

The current crisis of the European idea stems in large measure from the failure of EU member states to adopt a single coherent model of integration. The current situation represents a trade-off between two rival, federal and confederal, models of integration that have been in competition since the beginning of the process. An incoherent, hybrid model has evolved and largely contributed to the current crisis of the European Union, which is the central argument of this article.

The research method here adopted involves a literature survey and its critical analysis, a study of treaty regulations and strategic documents that lay out the policy of the European Union in selected areas and the analysis of reports and statistical data. It concludes with a synthetic presentation of study findings.

3. Problem Solution

3.1 The Crisis of the European Project – a State of Emergency or a Permanent Situation?

From the very outset, European communities have experienced a number of crises of greater or lesser intensity, each of which had a limited or major impact on the subsequent functioning of the political project. The following, to name but a few, should be mentioned (Tendera-Właszczuk, 2014):

- the failure to achieve consensus regarding the establishment of the European Defense Community,
- the empty chair crisis of 1965,
- the renegotiation of the membership conditions of Great Britain and the referendum on its exit from the European Communities in 1975,
- French-British rivalry,

- French-German rivalry,
- the crisis of the integration process in the 1970s and the 1980s, brought about by the global economic crisis and characterized by increasing administrative, technical, and fiscal barriers to the cooperation between Member States,
- the failure to introduce institutional reforms in the Amsterdam Treaty, which were necessary in connection with the planned Eastern expansion of the EU,
- difficulties in the ratification of the Treaty of Nice,
- the failure to ratify and the subsequent rejection of the Treaty establishing a Constitution for Europe,
- the global economic crisis starting in 2008, which has revealed the weaknesses of the European construction, especially the state of public finance in Member States and the functioning mechanisms of the euro zone,
- the immigration crisis and the mass influx of refugees underway since 2014, which has exposed the weak points of the Schengen zone and the Common European Asylum System,
- the tense political situation in Eastern Europe that has also revealed a deficit of political leadership in the European Union and the lack of a common conception of preventing political crises in Europe and around the world.

These examples clearly demonstrate that the crisis within the EU is not an incidental occurrence, sparked by an external factor, but a permanent situation due, among other factors, to the lack of a common vision of the European project (Konopacki 2006). Many issues that plague the EU, especially in terms of its efficient and effective functioning, stem from the failure of the member states to agree on and adopt common premises and priorities regarding the integration model. This applies both to the political doctrine and the model of economic integration (Tendera-Właszczuk, 2014).

3.2 Conceptions and Visions of the European Integration Model

One of the basic issues is whether the European Union is an economic or a political project (Landau, 1976, Matusik, 2009, Iszkowski, 2009). Initially, in the 1950s, political motivations prevailed, as the integration process was informed by the need to ensure peace and security in Europe, overcome mutual hostility and animosity after the Second World War, come together to prevent the threat of communist expansion, and to shape a common identity in the international arena. These goals could only be achieved through economic cooperation, initially targeted at post-war reconstruction and subsequently at building a center of global economic power.

Throughout the history of European integration, political goals often prevailed over economic objectives. Decisions concerning the admission of new Member States, above all, were always political. This holds true for countries at a much lower level of economic development, such as Ireland, Greece, Spain, Portugal, as well as the countries of Central and Eastern Europe. These decisions were often linked to providing assistance in bolstering democracy and the rule of law after periods of time during which these values were undermined (Greece, Spain, Portugal, and the post-communist countries). Similarly, political goals informed the decision to expand the euro zone to countries that did not meet the convergence criteria of Maastricht, Greece being the most serious and economically costly example of the policy.

While the important role of politics in the successive expansions of the EU causes no serious objections, the adoption of a political perspective to guide key economic decisions can raise a few eyebrows. Many problems of the European Union, especially in terms of its efficient and

effective functioning, stem from the failure of the Member States to agree on and adopt common premises and priorities regarding the model of integration. This applies both to the political doctrine and the economic integration model. The current situation in the EU is clearly caused by the fact that economic objectives were not allowed to take precedence over political ones.

For decades now, the EU has debated its failure to achieve the goal of increasing membership and simultaneously strengthening integration, moving through its successive stages, from the customs union to an economic and monetary union. This was possible during the first two expansions: Great Britain, Ireland, and Denmark in 1973, and Greece in 1981, all joined a customs union. Countries admitted later, however, had to face a much greater and constantly increasing burden of adjustments to the higher stages of integration. This gave rise to the concept of two-speed integration, first proposed by Tindemans in the 1970s, following the first expansion. The concept distinguished between the countries that, thanks to the high level of development and mutual integration, could be said to constitute the “center” of the group, and the much less developed Ireland, still unable to meet the objectives laid down in the Treaty of Rome (establishing the European Economic Community). The accession of new countries at a much lower level of economic development further intensified the process of division into Member States able and willing to realize common integration objectives and all the rest.

One more time, an issue arose that remains unresolved to date: should the group function as a broad community of mutually cooperating countries that respect their separateness and constitute an international system of nation states, or should it move towards increased federalization? The federal vision of European integration requires states to give up certain sovereign national rights. The failure to resolve this essential and fundamental controversy lies at the root of the many failures of the European Union. If failure is defined as an inability to realize an objective, failure is a now permanent state of the EU.

3.3 Changes to the European Structure in Light of the Treaties

Since the 1950s, there has been an ongoing debate about the model of European integration (Barcz, 2010, Iszkowski, 2009, Matusik, 2009, Konopacki, 2006, Piontek, Karasiewicz, 2009, Streete, 2001). Various visions have competed, with two basic conceptions, the confederal and the federal model, at the forefront. The moot point in the debate concerns the function of the nation state in the integration process and, in particular, the restriction of its legislative autonomy for the sake of supranational institutions. Another basic issue regards the scope of competence of EU institutions and their influence on legislation in view of the fact that each represents a different interest group (Barcz, 2010, Iszkowski, 2009). The idea of a Europe of Nations, championed by Charles de Gaulle, assumed that Member States would have the final say in decision-making, with only very limited prerogatives delegated to the supranational level. The proposed visions of the federal model, on the other hand, were very different: Spinelli called for the creation of a European federal state, Monnet, on the other hand, proposed a gradual advance toward a federation through forging real bonds between countries based on their shared interests.

The founding treaties establishing the European Coal and Steel Community, the European Economic Community, and the European Atomic Energy Community, never adopted a common vision of the European integration model. However, the confederal model first took precedence. Only very limited powers were granted to the Parliament (earlier: the Parliamentary Assembly). Deputies represented the national parliaments of Member States and the institution did not have any direct influence on the decision-making process. Procedures

did not allow it to introduce amendments to the drafts of secondary law acts, and the Council could, by unanimous vote, force through its position even against the will of the Parliament. Accordingly, it was the Council of Ministers, which represented the interests of individual Member States, that held the greatest sway over decision-making.

The Merger Treaty, which entered into force in 1967, incorporated certain elements of the federal model by introducing the common Commission of the European Communities which represented the interests of the community as a whole.

The Single European Act further deepened the process of European federalization by introducing the principle of qualified majority voting in the Council and granting greater prerogatives to the Parliament. Other federal innovations included the adoption of a single internal market, the implementation of a number of new policies at the community level, and a number of changes to budget principles (fund-raising, introduction of multi-year financial frameworks).

The Maastricht Treaty constituted a turning point in the advance towards the federal model, by introducing the 2nd and 3rd pillar of the European Union: the Common Foreign and Security Policy, and Justice and Home Affairs. The move did not involve a new division of powers between Member States and the supranational institutions, since the cooperation on matters within the 2nd and 3rd pillar was based on the principle of intergovernmental cooperation.

The adoption of the co-decision procedure further reinforced the role of the Parliament in the legislative process. Other important decisions that clearly indicated the growth in strength of the federal vision include the name, European Union, the common citizenship, and the decision to introduce an economic and monetary union, adopt a common currency, and establish the European Central Bank. Countries that adopted a common currency lost their sovereignty in terms of shaping financial and monetary policy.

The Amsterdam Treaty, on the other hand, introduced a new post, that of a representative of the union for foreign affairs and security policy.

Based on the Lisbon Treaty, the European Union acquired legal subjectivity and became an international organization. The treaty invested the European Council with institutional status and defined its prerogatives, establishing the post of the President of the European Council. In addition, it strengthened the role of the European Parliament and created the High Representative of the Union for Foreign Affairs and Security Policy, who heads the Council for Foreign Affairs and acts as the deputy president of the European Commission.

The Lisbon Treaty introduced, effective as of 1 November 2014, a new voting mechanism in the Council of the European Union that replaced the principle of triple majority with the principle of double majority. The principle of double majority in qualified majority voting means that a decision must be approved by at least 55% of members, each of which enjoys one vote, representing countries with the combined population of no less than 65% of the total population of the European Union. The system strengthens the position of the original Member States, the EU 15, in the legislative process, allowing them to take decisions without the participation of new members, which was impossible under the Nice system (Barcz, 2010). The power of the new countries has now diminished also because they can no longer block decisions (as they do not meet the population requirement). They could still do so under the Nice system (Tendera-Właszczuk, 2012).

3.4. The Hybrid Integration Model – an Assessment

The analysis clearly indicates the prevalence of federal over confederal elements. The system at hand thus represents a trade-off between two competing visions; it can be referred to as a hybrid integration model and combines federal and confederal features.

Confederal elements include (Tendera-Właszczuk, 2014):

- Respect for diversity and national identity,
- Support for cultural and linguistic diversity,
- The principle of subsidiarity,
- Elements of decision-making based on the principle of unanimity,
- Institutions that represent the national interests of Member States, such as the Council of the European Union and the European Council,
- The decisive role of the Council of the European Union (equal to that of the European Parliament) in the decision-making process and secondary legislation,
- The role of national parliaments in secondary legislation (the yellow and orange card procedure).

Federal elements include (Tendera-Właszczuk, 2014):

- The status of the European Union as an international organization,
- Legal subjectivity,
- Supranational institutions such as the European Commission, the European Central Bank, the European Parliament, the Court of Justice of the European Union, the European Court of Auditors,
- The Committee of Regions and the European Economic and Social Committee, based on the principle of social participation,
- The post of the President of the European Council with wide-ranging powers, colloquially referred to as the president of the European Union,
- The post of the High Representative of the Union for Foreign Affairs and Security Policy,
- The post of the European Ombudsman,
- The diminished role of unanimity in the decision-making process and an increase in importance of qualified majority voting,
- The move away from the principle of triple majority towards the principle of double majority in qualified majority voting,
- The strong role of the European Parliament in secondary legislative process,
- The implementation of common policies and the reinforcement of the principle of the exclusive competences of the union,
- The adoption of the principle of the primacy of community legislation and the direct effect of the norms of European law,
- The introduction of the common budget and multi-year financial frameworks,
- The strengthening of the role of the European Commission in terms of controlling the budget policy of Member States,
- The principle of granting common citizenship, an EU citizenship, to all EU residents,
- The implementation of an economic union and the introduction of a common currency,
- Common symbols that were not laid down in the Lisbon Treaty: the EU flag, the EU anthem, the Europe Day.

As shown above, subsequent revisions of EU treaties have not finally settled the issue of the integration model. The hybrid model makes it impossible to achieve consensus on many essential issues that act as a source of conflict within the union, and does not allow it to rise to the challenges posed by the global crisis. These issues include, to name but a few (Tendera-Właszczuk, 2014):

- The conflict between the net payers and net beneficiaries of the EU budget,
- The inability to implement certain elements of the single internal market,
- The lack of participation of some countries in the Schengen zone,
- The monetary union does not include all Member States (the opt-out clause, derogations),
- No common position on the fiscal compact,
- No common position on the fiscal and banking union,
- No common energy policy,
- Widening disproportions in the development of regions and countries: inability to meet the goal of economic, social, and territorial cohesion,
- No common position on the further expansion of the European Union (e.g. the accession of Turkey),
- No common position on the distribution of immigrants and the functioning of the Schengen zone.

In light of the crisis, the question resurfaces: will the EU be a broad community of mutually cooperating countries that respect their separateness, or will it continue to move towards further federalization? (Niedziółka 2010, Konopacki, 2006. Iszkowski, 2009). The federal vision of integration requires states to give up certain sovereign national rights. The failure to resolve this essential and fundamental issue lies at the root of the many failures of the European Union. The European project still requires improvement and is far from desirable or even stable in the eyes of all entities involved in its construction (Tendera-Właszczuk, 2014).

3.5 The possibility of Realizing the Federal Model of Integration – an Assessment

The global economic crisis has clearly demonstrated that the current hybrid model of integration, which combines federal and confederal elements, is unable to rise to the challenges posed by unfavorable external and internal phenomena. It is thus necessary, once again, to take up the debate about the most beneficial vision of integration (Barcz j., 2010, Godino, Verder, 2014). A lot suggests that the EU will continue to move towards the further strengthening of bonds between its Member States and approximating the federal model. The process seems to have been underway already for a while, proceeding in a gradual, stepwise fashion, without any explicit political declaration on the part of Member States as to the further political integration of the union. This is due, on the one hand, to the unequal division of powers within the EU and the dominant position of Germany. As the strongest partner and the largest contributor to the EU budget, as well as a global trade power, Germany holds the greatest sway over the common currency and gradually implements its preferred model of integration. Secondly, any attempt to persuade the societies of all Member States to accept the federal option is bound to fail. National identity is widely considered much more important than European identity, and there is widespread fear of losing national sovereignty to EU institutions. The federal model of integration is most vehemently opposed by Great Britain, which enjoys a strong position in the EU, and has already announced it will renounce its membership if further integration scenarios do not meet its expectations.

A federation, which establishes a political union based on a structure of supranational institutions, runs the risk of allowing stronger states to dominate the weaker ones; supranational institutions may also advance interests opposed to the national interest of individual Member States.

There is no doubt, however, that a federal model would be much easier to run and could contribute to a considerable increase of EU's competitiveness in the international arena (Niedziółka, 2010).

4. Conclusion

Surveys conducted as part of the Eurobarometer report that studied European attitudes towards the integration process show that only 51% of EU residents view the future of the EU in an optimistic light. This holds true for the residents of 18 out of 28 member states, and the degree of optimism varies across the continent. As many as 82% of all Luxemburg citizens are optimistic about the future, followed by the residents of Ireland (72%), Germany (71%), as well as Poland, where the percentage of positive responses exceeds 60%. The greatest pessimism is reported in Czech Republic (34%), Cyprus and Austria (36%) (Eurobarometer [online], 2016).

In this context, it is worth reconsidering possible scenarios for the development of the European Union and the desired final shape of the EU (Habermans J., 2012, European Commission, 2013, Wessels W., 2013).

In response to crises, the Communities have often decided to move up to a higher level of integration. Difficulties have pushed Member States to make a move forward. This is what happened in the 1980s and the 1990s, resulting in the adoption of the Single European Act and the Maastricht Treaty. Will the current crisis have a similar result? The great champion of the federal model, José Manuel Barroso, leaned towards this solution, claiming that, in the current situation, it is necessary to rise above purely national interests and strengthen cooperation towards achieving the common interests of the union.

It is also possible that control over the integration process and its development will be taken over by the strongest Member States. This is the scenario we witness today, with the most important role in the EU played by Angela Merkel. Until recently, it was the Merkozy duo, but the election of a new president of France resulted in the reins being taken over by Germany alone.

Yet another scenario envisions a gradual process of disintegration. This scenario was considered already in 2012, sparked by the question of Greece's continuing membership in the eurozone. A possibility was then raised that Greece might leave the EU (referred to as GREXIT).

An alarming scenario is also linked to the growing separatist tendencies within Member States, such as the result of the referendum held on 9 November 2014 in Catalonia, which seeks independence from Spain. Similar moods prevail among the Basques, the Walloons, and the Flemish. In this context, the result of the Scottish referendum is a cause for optimism; on 14 September 2014, most citizens of Scotland voted in favor of remaining part of Great Britain. A worrying trend, however, can be observed in the British attitude to the European integration process. David Cameron is currently negotiating the position of Great Britain, announced in 2013, with regard to the revision of its treaty obligations towards the European Union

(Emerson 2013). Scheduled for 2016, a referendum on the membership of Great Britain in the EU can bring far-reaching consequences for the future of the union.

Multi-speed Europe has now become a fact and the segmentation of the European Union is permanent. The hybrid model of integration that has evolved since the 1950s out of the federal and confederal models shows that the growing crisis within the EU cannot be overcome; it is a permanent process and any possible solutions will merely constitute stopgap measures addressing current problems caused by external or internal factors. The European project, however, is and has always been a political construct. For this reason, as long as there is enough support for the project and political will, the process of European integration will continue.

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Sectoral Specialization as a Source of Competitiveness: Case Study on ICT Sector in V4+ Countries

Kamila Turečková

Silesian University in Opava
School of Business Administration in Karvina
Department of Economics and Public Administration
Univerzitní náměstí 1934/3
Karviná, Czech Republic
e-mail: tureckova@opf.slu.cz

Abstract

This paper is based on sectoral specialization in context of regional competitiveness on example of Information and communication technology sector in Visegrad group plus countries. Present research based on results of measurement of sectoral specialization is an attempt to find out the position of Information and communication technology sector and its development in the Poland, Czech Republic, Slovakia, Slovenia, Austria and Hungary against EU for the period 2000 – 2014 via Gross Value Added data provided by Eurostat. There are used and combined standard economic-geographical methods and statistical measures of sectoral specialization. It is calculated using The Herfindahl Index for specialization and The Krugman Specialisation Index. It was discovered that no country of V4+ countries is significantly specialized in ICT activities in European area but Hungary is the most ICT specialized country of all selected group of countries.

Keywords: *Index, Information and Communication Technology, Specialization*

JEL Classification: *L86, P25, P52, R12*

1. Introduction

Sectoral regional specialization and geographical concentration of sectors are two closely interrelated phenomena since they reflect the similar reality base on the identical production structures. It is “two sides of the same coin” (Aiginger and Rossi-Hansberg, 2006). Regional specialization in the context of economical sector expresses the share of regional selected sector in the sector of the overall economy in hierarchically higher geographical area. The high level of specialisation in the sector is reflected in sector’s competitiveness what is defined as the ability of the particular economic sector to defend and/or gain market share in open international markets, relying on price and/or quality of their products (European Commission [online], 2004). If we add the concept of external competitiveness of the economic sectors to the concept of internal aggregate competitiveness, the “strong” sector is reflected in a positive trajectory of the main macroeconomic indicators with an emphasis on productivity, which sustained growth. This growth is a prerequisite for achieving positive results at the macroeconomic level. There is no doubt that the geographical specialization in any economic sector brings, either directly or indirectly, significant economic and social benefits for the particular economy and society.

The aim of this article is to evaluate the Visegrad group countries plus (V4+) regions in the context of their regional sectoral specialization concerning the economic branch of

Information and communication technology (ICT) characterized by NACE Rev. 2. To define the regional disparities in the relevant sectors an empirical result was used. This analysis was performed in the period 2000 through 2014 on the basis of the Gross Value Added data of the economic sector and NUTS0 region provided by Eurostat. The selected methods including the traditional economic-geographical methods were used the Herfindahl index for specialization and the Krugman Specialisation index to express territorial.

The article is organized as follows. The Section 2 describes the chosen methodology that measures specialisation its sectoral level, specifically in the ICT sector, in Poland, the Czech Republic, Slovakia, Slovenia, Austria and Hungary. The Section 3, Problem solution, presents concrete basic empirical results on economic of ICT in selected countries in years 2000 to 2014. It also provides us with a comparison between analysing the regions in its specialization in ICT sector. The Section 4, the conclusion, provides us with concluding comments, and it highlights some of the major conclusions from the analysis provided.

Regarding the methodological perspective, present research is based on economic-geographical methods which are part of Economic geography. The discipline (New) Economic Geography was strengthened in 1990s as a synthesis of the new theory of trade, Myrdal, respectively Hirschman theory of cumulative causes and neoclassical location theory (Šimanová and Trešl, 2011, Baldwin et al., 2005). The concept of competitiveness is based on regional competitiveness in combination on sectoral competitiveness. This sectoral competitiveness is also transform on microeconomic level where, for example, ICT has a positive effect on the international competitiveness of firms (Pena-Vinces, Capeda-Carrion and Chin, 2012). Muntean, Nistor and Nistor (2015) emphasize a role of ICT for the firms in example of firms in services sector when firms using appropriate information and communication technologies reaching increasing competitiveness and operational efficiency in particular business.

Regional competitiveness is a reflection of the quantity and quality of the structure of economic entities and subjects in the region (Nevima, 2014). These allow the region to be in the desired area (in the required field) better than others. (Capacity of) Regional competitiveness is a combination of Theory of comparative advantage (David Ricardo, 1956), Porter's concept of competitive advantage (Porter, 1990) and Theory of X-inefficiency (Leibenstein, 1966). Competitiveness of the sector of the economy is also supported by the inherent "the attractiveness of the sector in the country" where the sector or country have a set of elements, characters, relationships and characteristics, which enables them to overcome others in the ability to generate higher national income and attract more permanent factors of production (Turečková, 2014). This attractiveness of the sector usually has a form called "soft externalities" (Benes, 2006). According to Kitson, Martin and Tyler (2004), referring to Alfred Marshall, these benefits are characterized by a triad of externalities which is comprised of a skilled workforce, supporting and related industries and transfer of knowledge, experience and information. This creates a "special atmosphere", supported by the existence of public goods (knowledge, skills, common information), which creates conditions for the formation of wanted mostly - positive externalities reducing costs. This dynamic information dissemination, knowledge, technological processes and practices and innovation improves the competitiveness of the system itself (for example sectors as defined) and is also reflected in the growth of competitiveness of businesses and other entities participating in it.

2. Methodology, Measurement of Sectoral Specialisation and Data

The ICT sector is defined in the NACE Rev. 2 in Section J - Information and communication activities (services); (Information and Communication) (CSO, 2014). ICT sector is analysed in the countries known as V4+. This specific group of countries defined on territorial level NUTS 0 includes Poland, the Czech Republic, Slovakia, Slovenia, Austria and Hungary. For interregional comparison and the required calculations are also provided data for the whole EU (28). The period in which the analysis was performed covers the years 2000 – 2014 and the data regarding Gross Value Added (GVA) at constant prices of all NACE activities and especially of only ICT sector, all for NUTS 0 regions. The empirical calculation is based on take-over public data from Eurostat (Database of General and regional statistics; Regional statistics by NUTS classification). The software used was MS Excel. All calculations and graphical analysis is author's own work.

The analysis of regional specialization of ICT sector in V4+ country is primary based on the Herfindahl index for specialization and the Krugman Specialisation. The first statistical measuring methods used here are the well-known indicators of regional specialization – the Herfindahl index for specialization (H_i^S):

$$H_i^S = \sum_{j=1}^m (g_{ij}^S) \quad (1)$$

where

$$g_{ij}^S = \frac{X_{ij}}{\sum_{j=1}^m X_{ij}} \times 100 = \frac{X_{ij}}{X_i} \times 100 \quad (2)$$

and where i – region; j - sector (branch); X – total (national) gross value added (GVA); X_{ij} - GVA in sector j in region i ; X_j - total GVA in sector j ; X_i - total GVA in region i ; g_{ij}^C – the share of region i in the total national value of branch j ; g_{ij}^S – the share of branch j in the total value of region i .

The Herfindahl index increase with the degree of regional specialization in particular sector. If the value of index equals 1, the sector j is entirely concentrated in one region i , which means that the region i specializes in only one economical sector. The lower limit values are defined as $1/n$ for concentration and $1/m$ for specialization, i.e. all regions (sectors) have an equal share in sector j , respectively in region i . It is necessary to calculate with equally large regions to preserve the comparability and objectivity, since the size of the region influences the final value of index. For more information about statistical measurement of specialization by Herfindahl index see Campos (2012), Goschin et al. (2009) or Rhoades (1993).

The second here used indicator applied is the well-known Krugman Specialisation index (K_{ij}^S) at period t . Here modified for one economic sector:

$$K_{ij}^S(t) = \sum_{j=1}^m V_{ij}(t) - V_j(t) \quad (3)$$

where

$$V_{ij}(t) = g_{ij}^S(t) \quad (4)$$

and where $V_{ij}(t)$ is the share of sector j in country i at period t ; $V_j(t)$ is the share of sector j in the EU (28) country without country i .

The Krugman Specialisation Index is a relative measure of specialization that is applied to compare one economical sector/region with the rest of the EU. Its values range from limit values 0 to 2. If the index equals 0, it means identical territorial/sectoral structures (the sectoral structure of the economy in the respective country is identical with the rest of the EU, i. e. the country is not specialised in analysed sector. If the value of index equals max limit, it demonstrates totally different sectoral structures in context of the rest of EU and this respective country is strongly sectorally specialised. It is in reverse to the index value approaching -2. (Palan, 2010, Turečková and Martinát, 2016, Čutková and Donoval, 2004)

3. Problem Solution

Here are present the results of sectoral specialisation in selected group of country. In context of theoretical approach it is claimed that regions with higher level of specialisation in particular sector have in this economic sector also its competitive advantage.

Table 1: Values of Herfindahl Index for Specialization, 2000 – 2014, EU (28) & V4+

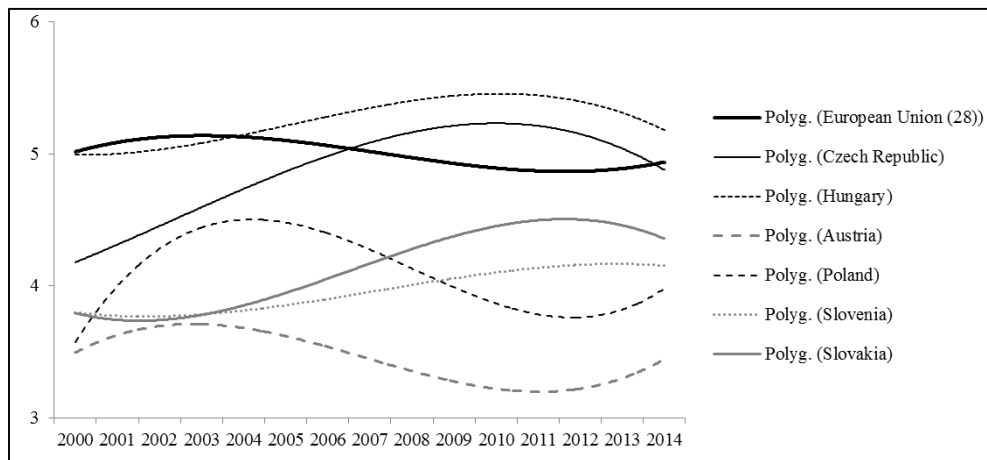
GEO/ TIME	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
European Union (28)	4.94	5.12	5.25	5.12	5.16	5.06	5.00	4.99	4.95	4.99	4.87	4.89	4.91	4.90	4.90
Czech Republic	4.22	4.26	4.49	4.68	4.50	4.86	5.04	5.23	5.16	5.31	5.13	5.15	5.12	5.05	4.92
Hungary	5.05	4.86	5.06	5.27	5.07	5.14	5.19	5.41	5.39	5.65	5.42	5.31	5.33	5.40	5.18
Austria	3.33	3.71	3.90	3.82	3.59	3.59	3.49	3.35	3.29	3.27	3.21	3.32	3.31	3.37	3.31
Poland	3.52	3.93	4.44	4.45	4.72	4.40	4.20	4.07	4.22	4.10	3.90	3.76	3.80	3.88	3.91
Slovenia	3.78	3.92	3.62	3.71	3.77	3.96	4.01	4.01	4.01	3.91	4.07	4.09	4.28	4.20	4.11
Slovakia	3.62	3.92	3.82	3.84	3.88	3.92	3.92	4.09	4.02	4.73	4.48	4.44	4.70	4.27	4.38

Source: author's calculations

Table 1 summarizes relevant values of found Herfindahl index for ICT sector for V4+ countries between years 2000 – 2014. Based on the Herfindahl index for specialisation, the most specialised country in ICT activities was Hungary nearly followed by Czech Republic. These two countries also developing ICT more that the average of all 28 members of EU (4.9 in 2014). From this point of view the worst in ICT sectoral competitiveness in chosen group of countries was Austria where only less than 3.5% (2014) of all economic activities was related to ICT.

Figure 1 is completed aforementioned Table 1. There are shown trends (based on polynomial function on level 3) of developing ICT specialisation in each V4+ countries in comparison with EU. The most stable ICT branch during analysed period was in Slovenia, the dynamic development in ICT sector was in Poland and in Slovakia the ICT sector strengthen by about 20% (in Czech Republic it was about 17%).

Figure 1: Trends of ICT Specialization Based on Herfindahl Index for Specialization, 2000 – 2014, EU (28) & V4+



Source: author’s calculations

Results which were obtained applying the Herfindahl index for specialization confirm sectoral orientation of each region which can be seen in the Table 2. Data from Table 2 can be explained here as this way: the value of index close to 0 means the same ICT sector in particular region as the rest of the EU countries and the value of index close to 2 or -2 demonstrates different structure of ICT than in EU countries. The Czech Republic had the same share of ICT as was the average of EU in 2014 while Austria was the worst. Hungary was the only one country of the analysed group of countries where ICT activities doing more than is usual for EU.

Table 2: Values of Krugman Specialisation Index, 2000 – 2014, V4+

GEO/ TIME	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average
Czech Republic	-0.73	-0.68	-0.45	-0.26	-0.45	-0.09	0.10	0.29	0.22	0.37	0.19	0.22	0.18	0.11	-0.02	-0.07
Hungary	0.11	-0.08	0.12	0.33	0.13	0.20	0.25	0.47	0.45	0.72	0.49	0.37	0.39	0.46	0.24	0.33
Austria	-1.65	-1.26	-1.07	-1.15	-1.39	-1.39	-1.50	-1.64	-1.70	-1.72	-1.78	-1.67	-1.69	-1.63	-1.68	-1.64
Poland	-1.45	-1.03	-0.52	-0.50	-0.22	-0.55	-0.76	-0.90	-0.75	-0.87	-1.08	-1.23	-1.19	-1.11	-1.08	-0.95
Slovenia	-1.16	-1.02	-1.33	-1.24	-1.17	-0.98	-0.94	-0.94	-0.93	-1.04	-0.87	-0.85	-0.67	-0.74	-0.83	-1.05
Slovakia	-1.32	-1.03	-1.13	-1.10	-1.07	-1.03	-1.03	-0.85	-0.93	-0.21	-0.46	-0.51	-0.24	-0.67	-0.57	-0.87

Source: author’s calculations

Considering results of sectoral specialization based on the Herfindahl index and also on Krugman index (low value of both indexes) there cannot be said that some of the selected V4+ countries are specialized in ICT activity really significantly.

4. Conclusion

This article deals with analysis of regional sectoral specialization in NUTS0 region of V4+ countries in years 2000-2014. The Herfindhal index for specialisation and The Krugman Specialisation index were applied to define specialization in particular regions and in context of EU (28) average. High level of sectoral specialisation in country is reflected in the competitiveness of a country in a given economic sector.

The major findings of this analysis were that the ICT activities that form the ICT economic sector do not tend to concentrate in one specific country in all the respective V4+ countries. The country most specialised in ICT activities was Hungary but because of low value of both chosen indicators, albeit positive, the difference from EU average is not significant. The least specialised country from V4+, in the economic branch of ICT, was Austria. The share of the ICT sector of Czech Republic is most consistent to European (EU) share of ICT in all economic sectors.

The ability of countries to be in a certain economic activity better than others is a source of competitive advantage and further development. Therefore it is appropriate to increase the concentration of economic sectors in these economies. This present research is part of a broader analysis of concentration of the economic branches in the EU in order to determine how specific concentrations sector contributes to economic growth.

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Trade with BRICS: Effect of Transportation Costs

Bohdan Vahalík, Lenka Fojtíková

VŠB - Technical university of Ostrava

Faculty of Economics, Department of European Integration

Sokolská třída 33

Ostrava, Czech Republic

e-mail: bohdan.vahalik.st@vsb.cz, lenka.fojtikova@vsb.cz

Abstract

This paper reports on panel gravity estimates of aggregate bilateral trade flows between the EU member countries and BRICS over the period 1995-2013 with special focus on variables representing transport costs. Standard gravity model uses standard measure for distance as proxy for transport costs. This paper provides modifications of distance employing new possible variables as proxy to transport costs, such as real distance and average port distance between selected countries and compares it to traditional approach of Great Circle Distance method as well as to other alternative methods. The gravity model brought interesting contradictory results in the sense of distance. It validates classic distance approach employing real values and categorical variables. Transport costs expressed by oil price reached expected values as well. The effect of real distance and average port distance was found insignificant and trade costs show positive effect.

Keywords: European Union, Gravity Model, International Trade, Transport Costs

JEL Classification: C33, F14, F62

1. Introduction

Over the last decades, the impact of international trade on the economic performance of countries as well as on the international political relations greatly increased. This effect can be explained by the large amount of globalization factors such as international politics, development of new technologies in various industries and services etc. The extensive liberalization of economic relations between countries caused by reducing taxes and tariffs lowers business costs and positively impacts on the development of trade relations. National governments reduce and eliminate trade barriers through negotiation of bilateral or multilateral trade agreements. The vast advances in technology and innovation in the fields of transport, infrastructure, information and communication technologies have caused a significant reduction of transport costs. Growth of international division of labour, utilizing the comparative advantages of individual countries, the growth of international mobility to minimize the barrier between supply and demand in the form of distance and liberalization of international trade relations have significant positive effect on the growth of international trade in the global economy.

This paper reports on panel gravity estimates of aggregate bilateral trade flows between the EU member countries and BRICS over the period 1995-2013 with special focus on variables representing transport costs. The paper is organized as follows: the first section introduces basic literature review about the gravity model and various approaches to deal with distance issues. Section two introduces the methodology of gravity model approach as well as the data

used for this paper. The section of problem solution shows panel estimates for fixed effect gravity model in the manner of different ways of expressing transport costs as well as using categorical variables to show difference in distance intervals.

1.1 Literature Review

Gravity model has been one of the most widely used research tools of international trade over the past 40 years. The reason for its success is considerable empirical stability and explanation force of international trade flows. Since the establishment of the gravity model in the 60's, an extensive body of literature dealing with the theoretical as well as empirical explanation of the force of gravity model was created.

Before the gravity model of international trade invention, there was the neoclassical economy defining international trade based on the theory of comparative advantage, the new international economy explaining trade flows among countries within monopolistic competition and economies of scale. However, neither of them was able to explain the size of the trade flows. The gravity equation of international trade was emerged by Jan Tinbergen (1962) during 60's. Tinbergen proposed the application of the Newton's function of the gravity force to international trade flows where trade between two partners is affected by their sizes and proximity (Head, 2003). Since that time, the gravity equation is used in many types of research such as trade, foreign direct investments, regional economics, migration etc. Tinbergen's work was followed by Poyhonen (1963), Linnemann (1966) or Leamer and Stern (1970). This model is able to empirically estimate the value of trade flows among countries. The whole theory behind the gravity model is based on international trade flows where all countries produce their goods which sell on the international markets where other nations buy by their consumption structure in proportion to their income. Missing theoretical foundations were huge obstacle for gravity model. Therefore, Anderson (1979) was the first who provided clear microeconomic foundations of the gravity model. He employed the product differentiation by country of origin assumption. Bergstrand (1985) built theoretical foundations of the gravity model on the theoretical relation between trade and factor endowments. Helpman and Krugman (1985) enriched gravity foundations by new trade theory. Thus there were created many ways of the theoretical foundations such as microeconomics foundations (Anderson, 1979), home preferences by Anderson and Van Wincoop (2003, 2004), increasing returns to scale (Krugman, 1981; Helpman, 1981; or Evenett and Keller, 2002), monopolistic competition (Dixit and Stiglitz, 1977), factor-endowment theories (Deardorff, 1998).

A lot of empirical research was made on the determinants of international trade using gravity equation. The authors use many approaches to estimate wide range of variables that influence trade flows among countries such as population, area, common border, common language, colonial linkage, trade agreements, wealth, exchange rates and many other economic, social and natural variables. Therefore, the literature review provided here will focus only on variables used in gravity equation used in this paper. Trade is represented by export in the most cases (see Eger 2002; Baltagi, Egger a Pfaffermayr, 2003; Aiello, Cardamone, Agostino, 2010) sometimes also by imports (Lampe, 2008). But according to Baldwin and Taglioni (2006), microeconomic foundations of the gravity model describe a modified function of expenditure, where expenditure of one country used to acquire goods that are produced by other countries. Therefore, they propose an average value of four bilateral flows which is used in this paper. The modelling of gravity equations uses many control dummy variables which usually serve to catch unobserved effects of the distance variable. For example, McCallum (1995) or Anderson and Van Wincoop (2003) apply the gravity model to estimate border effect on

trade, the effect of linguistic distance among countries influencing bilateral trade flows was observed by Rose (2004) or Lohmann (2011). The existence of a common language between countries is a result of historic development, particularly for trade between developed and developing countries. Some authors use variables relating in particular to colonial bonds in the past (Melitz 2007), but also currently (Eicher and Henn, 2011). Carrère (2006) or Subramanian and Wei (2007) analysed the influence of WTO membership on bilateral trade flows between developed and developing countries. Other empirical studies explained the effect of Free Trade Agreements on trade flows (Baier and Bergstrand, 2007). The gravity model is very often used to analyse trade policy instruments such as tariffs which can have very negative impact on bilateral trade flows. The effect was already analysed in studies of Fukai et al. (2003), Wilson et al. (2003) or Lee and Park (2007).

One of the main problems of gravity model has been the right approach to measure the influence of distance on trade. Geographic distance is usually defined as the geographic distance between the capitals of the countries surveyed, which are usually the main economic centres of the countries. Geographic distance was already suggested in the original work of Tinbergen (1962), and this variable can be found in almost all gravity equations. Economic theory assumes negative impact of distance on trade. The reason is the growth of transport costs caused by increased distance. These costs, however, also reflected the rising costs of obtaining information on foreign markets, costs of searches for business partner, administrative costs, etc. The most common method for measuring the distance is the Great Circle Distance approach, which approximates the shape of the Earth and calculates the minimum distance between two points along the Earth's surface. However, such approach is highly undervalued. For example, in the case of air transport, the flight routes are not based on the shortest distance. In the case of maritime transport, which represents the largest part of the world haulage, this method does not capture the real indirect routes, which are limited by natural barriers in the form of land or ice. From a microeconomic perspective, the cost of packing, loading and unloading goods are fixed and thus independent of the distance, while the international shipping cartels often set a minimum price of transport, taking into account transport distance. For this reason, it could be expected that the distance will have little impact on the volume of exchanged goods. However, the Head (2003) using hundreds of gravity equations based on data from the period 1928 to 1995 found that the average distance coefficient reached 0.94, which means that doubling the transport distance decreases mutual trade almost half. Leamer and Levinsohn (1994) concluded that the average effect of distance has a value of 0.68. In his work, he stressed that the identification of the effect of distance on bilateral trade is one of the clearest and strongest empirical knowledge in economics. Also Hummels (2007) points out that the size of transport costs may explain the distance. Behar and Venables (2011) confirmed the significant impact of distance on trade between countries, taking as one of the variables the fuel price, which proportionally increases transportation costs. Bikker (1987) used to measure the actual distance of maritime routes between countries. Many mathematical proposals for distance measurement are summarized in the work of Head and Mayer (2002) and Mayer and Zignano (2011). Most studies involving a large sample of countries from around the world showed that the method of measuring the distance does not matter and all methods generally have very similar results. However, results may have been inconsistent in the case of regional trade analysis (Disdier and Head, 2008). Brun et al. (2002) augmented this approach by infrastructure, oil prices and trade composition. Behar and Venables (2011) introduced approach of measurement of transaction costs as a difference between FOB and CIF prices.

Due to above mentioned reasons, we propose new distance approach based on a real distance between two capital cities measured by the shortest maritime routes including transport on the ground. As the second approach we propose new averaged port distance which measures the averaged shortest distance between three main maritime port of the country (the biggest three cities in the case of Russia). There were selected three main maritime ports for goods in the EU such as Rotterdam, Antwerp and Hamburg.

2. Problem Formulation and Methodology

Panel gravity model is widely used approach to study international trade flows. One of the main problems of gravity model have been the right approach to measure transport costs which depend on obtaining reliable data. For this reasons, there have been proposed several methods of indirect measurement of the influence of distance. This paper employs new approach of real distance and average port distance between selected countries and compares it to traditional approach of Great Circle Distance method as well as to other alternative methods introduced in the literature review.

2.1 Model and Data

This paper reports on panel gravity estimates of aggregate bilateral trade flows between the EU member countries and BRICS over the period 1995-2013 with special focus on variables representing transport costs. That creates a panel model with 140 pairs-of-countries during the time period of nineteen years. The data on bilateral trade, gross domestic product for each country and trade costs were obtained from UNCTAD database and most favoured nation tariffs from World Bank database. Dummy variables and distance values are available on CEPII database and the oil prices on US EIA. The real distance variable and average port distance variable were calculated via SeaRates. Bilateral trade flow is defined by Baldwin and Taglioni (2006), who used an average of four variables representing the volume of trade between countries in the form of:

$$trade_{ij} = ((x_{ij} \times x_{ji} \times m_{ij} \times m_{ji})^{\frac{1}{4}}) \quad (1)$$

where x represents bilateral export and m bilateral import between countries i and j . The standard gravity equation is kept in panel log-log form, except dummy and categorical variables, as:

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 \ln dis_{ijt} + \varepsilon_{ijt} \quad (2)$$

where $trade_{ijt}$ is the current bilateral trade flow between EU countries i and BRICS countries j i.e., the total trade volume between two countries in time t by equation 1 in USD. Variable gdp_i and gdp_j represents the size of the trading countries through indicators of current gross national product in USD. The variable dis_{ijt} represents distance between two countries of the pair as a proxy variable transportation costs in kilometers. Variable ε_{ijt} represents the error term which captures unobserved factors which can influence bilateral trade such as regional disparities of different level of competitiveness (Melecký, Staničková, 2011). The core of gravity equation was extended by other factors influencing international trade as:

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 \ln dis_{ijt} + \beta_4 Z_{ijt} + \beta_5 \ln mfn_{-w_{it}} + \beta_6 \ln mfn_{-w_{jt}} + \varepsilon_{ijt} \quad (3)$$

where variable $mfn_{w_{it}}$ represents weighted average percentage value of most favourite nation tariff rate on imports of country i , and $mfn_{w_{jt}}$ is a weighted average parentage value of most favourite nation tariff rate on imports of country j . The variable Z_{ijt} represents a vector of control dummy variables:

$$Z_{ijt} = contig_{ijt} + comlag_{ijt} + colony_{ijt} + col45_{ijt} + landlocked_{ijt} + ex_cmea_{ijt} + wto_{ijt} + eu_member_{it} \quad (4)$$

The variable common language $comlag_{ijt}$ takes the value 1 if countries of the pair have common language, 0 otherwise. The variable $colony_{ijt}$ takes the value 1 if countries of the pair used to have colonial relationship in the past, 0 otherwise. The variable $col45_{ijt}$ takes the value 1 if countries of the pair have had colonial relationship or were part of other country of the pair after the year 1945, 0 otherwise. The variable $contig_{ijt}$ takes the value 1 if countries of the pair have common borders, 0 otherwise. The variable $landlocked_{ijt}$ takes the value 1 if at least one country of the pair does not have access to the sea, 0 otherwise. The variable ex_cmea_{ijt} takes the value 1 if both countries of the pair used to be the members of the Council of Mutual Economic Assistance which expired in 1991, 0 otherwise. Dummy variable wto_{ijt} takes the value 1 if both countries of the pair are the members of the World Trade Organization, 0 otherwise. Last dummy variable eu_member_{it} takes the value 1 if the country is the EU member in given year, 0 otherwise.

The paper deals in detail with the distance variable, therefore there are eight gravity models concerning wide range of proxy variables of transactional cost. As it can be seen in the equation 3, most of the literature uses distance calculated by Great Circle Distance method to minimize transactional costs. This approach, however, abstracts from many geographic and administrative obstacles and thus greatly distorts real costs. Therefore, we suggest to measure real distance between countries (capital cities) using real transport routes. Almost 90 % of EU external bilateral trade with BRICS countries depends on shipping (not the case of Russia). Therefore, we measure real maritime shipping distance $rdis_{ijt}$ using SeaRates database as it is shown in equation 5. In the equation 6, we use averaged port distance variable apd_{ijt} between the EU and BRICS countries using SeaRates database employing only distance between the three biggest ports in each country (biggest cities in the case of Russia) in kilometers. Behar and Venables (2011) introduced approach of measurement of transaction costs as a difference between FOB and CIF prices in USD. Most of exporting countries report trade flows exclusive of freight and insurance (FOB) and importing countries report trade flows inclusive of freight and insurance (CIF). Therefore, transport costs can be calculated as the difference of both flows for the same bilateral trade (tc_{ijt}). We used this transport costs approach in the equation 7. Oil price is very important factor driving contemporary world economy and trade. Oil products are the main fuel for modern shipping. Therefore, we also introduced approach of Brun et al. (2002) who proposed to use oil price in USD oil_p_t as a proxy for transport costs in equation 8.

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 \ln rdis_{ijt} + \beta_4 Z_{ijt} + \beta_5 \ln mfn_{w_{it}} + \beta_6 \ln mfn_{w_{jt}} + \varepsilon_{ijt} \quad (5)$$

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 \ln apd_{ijt} + \beta_4 Z_{ijt} + \beta_5 \ln mfn_{w_{it}} + \beta_6 \ln mfn_{w_{jt}} + \varepsilon_{ijt} \quad (6)$$

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 \ln tc_{ijt} + \beta_4 Z_{ijt} + \beta_5 \ln mfn_{-w_{it}} + \beta_6 \ln mfn_{-w_{jt}} + \varepsilon_{ijt} \quad (7)$$

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 \ln oil_{-p_t} + \beta_4 Z_{ijt} + \beta_5 \ln mfn_{-w_{it}} + \beta_6 \ln mfn_{-w_{jt}} + \varepsilon_{ijt} \quad (8)$$

To get detailed knowledge about distance effect, we created categorical variables for distance, real distance and average port distance. In the case of distance variables, as it is described in the equation 9, we created four categorical variables for distance in intervals: up to 2000 km, up to 5000 km, up to 10 000 km and over 10 000 km. In the case of real distance variable, we had to increase interval for each categorical variable as: up to 5000 km, up to 10 000 km, up to 20 000 km and over 20 000 km (equation 10). The last variable of average port distance was categorized in the same manner (equation 11). Due to unobservable exogenous and endogenous properties which are hidden in the error term of each equation, we ran equation 12 which does not contain any variable of distance as in previous cases and we used categorical variables for BRICS countries to observe the influence on trade of their properties. In this case, the Brazil was used as reference variable.

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 dis_{-cat_{ijt}} + \beta_4 Z_{ijt} + \beta_5 \ln mfn_{-w_{it}} + \beta_6 \ln mfn_{-w_{jt}} + \varepsilon_{ijt} \quad (9)$$

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 rdis_{-cat_{ijt}} + \beta_4 Z_{ijt} + \beta_5 \ln mfn_{-w_{it}} + \beta_6 \ln mfn_{-w_{jt}} + \varepsilon_{ijt} \quad (10)$$

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 apd_{-cat_{ijt}} + \beta_4 Z_{ijt} + \beta_5 \ln mfn_{-w_{it}} + \beta_6 \ln mfn_{-w_{jt}} + \varepsilon_{ijt} \quad (11)$$

$$\ln trade_{ij} = \beta_0 + \beta_1 \ln gdp_{it} + \beta_2 \ln gdp_{jt} + \beta_3 j_{-cat_t} + \beta_4 Z_{ijt} + \beta_5 \ln mfn_{-w_{it}} + \beta_6 \ln mfn_{-w_{jt}} + \varepsilon_{ijt} \quad (12)$$

Early gravity equations were used to analyse cross-sectional data which results were biased because of the heterogeneity of trade relations between individuals. Therefore, the panel data models are more appropriate (Nowak-Lehmann et al., 2007). The problem with biased results was solved by fixed effects in the model (Anderson and Van Wincoop, 2003). The fixed effects models allow having individual intercept for each country-pair and indicating the effect of variables that are time invariant or specific across all individuals in the estimation (Hanoušek and Kočenda, 2014). In general, most empirical studies show that fixed effect models tend to provide better results. But for example, Brun et al. (2002) admits the possibility of random effects models if it is necessary estimate time-invariant effects. Therefore, all equations of gravity model were estimated using panel fixed effect and random effect model. According to Hausman test, it was decided to use fixed effect as more appropriate model of estimation. For that reason, all the results presented in this paper are valid for fixed effect model.

3. Problem Solution

Table 1 shows gravity panel estimations for aggregate trade flows by different types of transport cost. The standard regressors, as gross domestic product of country i and country j show the expected positive sign. All equations clearly show that the size matters because the elasticity of gross domestic product variable for the EU countries is twice as high as for BRICS countries. Higher standard of living and economic size in the EU countries have bigger influence on bilateral trade with BRICS. Both variables are highly significant at 0.1% level in all equations. In the first model, according to equation 3, the distance representing transport costs shows significant negative value for bilateral trade between the EU and BRICS. The negative influence of distance on trade is even higher than positive influence of economic size. This shows that distance is very important factor for international trade. In the model 2, according to equation 5, the real distance variable is used as a proxy to transport costs. Due to geographical conditions, the real distance between selected countries is up to three times higher than the distance measured by Great Circle Distance method used in the previous model. Therefore, we would expect much stronger negative influence of this variable on bilateral trade. The model 2, however, shows very small positive insignificant effect of this variable. But this equation also recorded high drop of intercept and change of some control variables (for example *common border*). Due to the model setup and countries selection, the bulk of the negative effect of real distance variable passed to changes of other variables. The model 3, according to equation 6, employing averaged port distance variable representing transport costs has high negative effect on bilateral trade flows. Unfortunately, the panel regression evaluated this effect as insignificant. Model 4, according to equation 7, includes the difference of export prices and import prices as proxy to transportation costs. Also in this indicator was expected negative value. But the elasticity is significantly positive which means that the growth of difference between export and import prices (transport costs) has a positive effect on bilateral trade flows. Model 5, according to equation 8, includes oil price with negative but insignificant influence on trade. All advanced equation containing different variables to express transportation costs brought very unlike results in comparison to traditional gravity equation in model 1. There are big differences of intercept in all cases of advanced gravity equations.

Table 1: Gravity Panel Estimation with Different Types of Transport Cost

	Model 1 (Eq3)		Model 2 (Eq5)		Model 3 (Eq6)		Model 4 (Eq7)		Model 5 (Eq8)	
lgdpi	.7420	***	.7420	***	.7420	***	.6206	***	.7420	***
lgdpj	.4729	***	.4729	***	.4729	***	.2423	***	.4729	***
contig	.2990	*	.9137	***	.9072	***	.8120	**	.9072	***
comlag	.0990		.1031		.1029		.1976	**	.1029	
colony	.7847	***	1.0800	***	1.0784	***	.7970	***	1.078	***
col45	.6975	***	.5623	***	.5630	***	.2971	**	.5630	***
ex_cmea	1.3093	***	1.4969	***	1.4969	***	1.2581	***	1.4952	***
wto	.4564	***	.4564	***	.4564	***	.3819	***	.4564	***
eu_member	.2129	***	.2129	***	.2129	***	.1712	***	.2129	***
lmfn_w_i	-.4014		-.4014		-.4014		-.3168		-.4014	
lmfn_w_j	-.3810	***	-.3810	***	-.3810	***	-.2781	***	-.3810	***
ldis	-1.0175	***								
lrdis			.0074							
lapd					-.7696					

ltc							.3094	***		
loil_p									-2.2756	
_cons	-9.7724	***	-19.1599	***	-11.9978	**	-15.3323	***	-18.3094	***
R_sq	0.8670		0.8605		0.8605		0.8935		0.8605	
Cont. for t	Yes		Yes		Yes		Yes		Yes	
Cont. for j	Yes		Yes		Yes		Yes		Yes	
Obs.	2 660		2 660		2 660		2 660		2 660	
legend: * p<0.05; ** p<0.01; *** p<0.001										

Source: author's calculations.

Table 1 contains also results for other control variables. All equations reflect positive effect of common border existence between trading countries. The advanced equation containing different approaches of transport costs measurement, especially shows very positive effect of common border which is similar to the economic size of the EU countries. On the other side, the effect of common language has no significant effect on bilateral trade between selected countries. There is only one exception which shows significant positive effect in the model 4. The variables representing colonial relationship between countries in the past or common country has significant positive effect on their bilateral trade. In most cases, the influence of common past relation is valued higher than the effect of economic size. Another sign of how the current development of foreign trade depends on links between countries in the past, is the membership of former Eastern bloc countries in the Council of Mutual Economic Assistance. This variable has absolutely the strongest effect of all variables in gravity equation on bilateral trade between selected countries. It shows that bilateral trade during observed period 1995-2013 was highly driven by trade and political relationships in the past and that is very significant for new member states which joined the EU after 2004. The WTO membership has also significant positive effect on bilateral trade between EU and BRICS countries. The model shows significant positive effect of the EU membership on trade with BRICS. Last two variables represent weighted average tariff rate (most favourite nations) applied by EU countries and by BRICS countries. As it was expected, tariffs have negative effect on bilateral trade. The tariffs applied by EU countries have higher but insignificant negative effect on trade with BRICS countries. Therefore, we cannot assume that EU tariffs create a barrier to bilateral trade with BRICS on five percent confidence interval. On the other side, the significance of BRICS countries' tariff rate coefficient is very high which shows real negative effect for their imports.

Because the previous table has not brought clear results, we extended our gravity equations by categorical variables in the case of the distance variable (model 6), real distance variable (model 7) and averaged port distance variable (model 8). The results in the table 2 show significant positive effect of the economic size. The influence of the EU member countries is higher than the effect of economic size of BRICS. These results are consistent with table 1. To understand the differences of results of categorical variables of distance, it is important to know that there is a big difference between classic Great Circle Distance approach and real distance and averaged port distance approach. According to the first approach, the closed trading country of the European Union is Russia, following by India, China and South Africa. Brazil has the longest average distance to the EU countries. But in the case of real distance and averaged port distance approach, the ranking of countries is following: Russia, India, Brazil, South Africa, while there is huge distance gap for China, which is the farthest country. The model 6, according to equation 9, shows that the increasing distance interval grows its negative effect on the volume of mutual trade between the EU and BRICS. Considering that the

influence of the first category (up to 2000 km) is zero, distance in the interval from 2000 to 5000 km negatively effects bilateral trade by value -0.4712. It means that countries within this interval can expect lower value of bilateral trade by 0.47 %. The elasticity value for the interval from 5000 to 10000 km is slightly more negative. The last categorical coefficient for distance is also negative, but substantially higher than in the previous cases. The results of model 6 match expectations of economic theory that the growing distance between countries has a negative effect on their trade. The results also show transportation cost growth is exponential, and thus increasing distance rises the growth rate of transport costs. The model 7, using equation 10, shows only insignificant but interesting results. The coefficients of categorical variables decrease with increasing distance. That means that the negative effect of real distance is the weaker, the farther the countries are from one another. Therefore, it is important to know what is behind the results. If we consider that the last categorical variable contains bilateral trade between the EU and China, the bilateral trade can be influenced of other factors. First of all, trade is measured in monetary values, therefore the effect depends on structure of bilateral trade. The second reason can be hidden in increasing returns to scale. Model 8, according to equation 11, includes categorical variables of average port distance. In this case, the direction of coefficient is negative, but as in the previous case, the power of negative effect is less negative with increasing distance. Moreover, the negative effect of third interval looks very strong and significant because it contains most of the countries.

Table 2: Gravity Panel Estimation with Categorical Variables

	Model 6 (Eq9)		Model 7 (Eq10)		Model 8 (Eq11)		Model 9 (Eq12)	
lgdpi	.7420	***	.7379	***	.7420	***	.7420	***
lgdpj	.4729	***	.4723	***	.4729	***	.4729	***
contig	.7247	***	.9652	***	.9072	***	.9072	***
comlag	.1143		.1194		.1029		.1029	
colony	.9520	***	1.1234	***	1.0784	***	1.0784	***
col45	.6594	***	.51987	***	.5630	***	.5630	***
ex_cmea	1.2037	***	1.4668	***	1.4952	***	1.4951	***
wto	.4564	***	.4649	***	.4564	***	.4564	***
eu_member	.2129	***	.2157	***	.2129	***	.2129	***
lmfn_w_i	-.4014		-.4032		-.4014		-.4014	
lmfn_w_j	-.3810	***	-.3768	***	-.3810	***	-.3810	***
ldis_cat								
up to 5 000 km	-.4712	***						
up to 10 000 km	-.5085	***						
over 10 000 km	-.8257	***						
lrdis_cat								
up to 10 000 km			-1.1102					
up to 20 000 km			-.9416					
over 20 000 km			-.6661					
lapd_cat								
up to 20 000 km					-1.5766	***		
over 20 000 km					-.4789	***		
j_cat								
India							1.1113	***
China							1.0997	***
Russia							1.5766	***
South Africa							-.1880	***

_cons	-18.4872	***	-18.0414	***	-17.5139	***	-19.0904	***
R_sq	0.8640		0.8621		0.8605		0.8606	
Cont. for t	Yes		Yes		Yes		Yes	
Cont. for j	Yes		Yes		Yes		Yes	
Obs.	2 660		2 660		2 660		2 660	
legend: * p<0.05; ** p<0.01; *** p<0.001								

Source: author's calculations

We run last equation to explain differences in results of distance coefficients. The last model 9, according to equation 12, does not contain any variable of distance, but categorical variables for BRICS countries. The reason why we employ only BRICS control variables is that the average distance within the EU countries is not significantly different. The results of last gravity equation prove that country matters. We use Brazil as a reference country. The results show higher value for trade between the EU countries and India, China and Russia in comparison to Brazil, but lower value of trade with South Africa. The highest value was reached by Russia, which is given by geographical proximity, the EU dependence on Russian energy sources and economic size. But the coefficient value of China and India is very similar. The reason is that despite the fact that India is closer to the EU countries, China is much bigger economy and more important trading partner. The results of control variables are very similar for equation containing categorical variables as it is in the table 1. Common border, colonial relationship between pair of trading countries as well as common state and EU membership show positive effect on bilateral trade. The membership in past and present trade organisation has also significant positive effect. But common language shows no significant effect as well as trade tariffs from the side of EU countries. On the other side, tariff barriers applied by BRICS countries on EU exports shows significant negative effect.

4. Conclusion

This paper reports panel gravity estimates of aggregate bilateral trade flows between the EU member countries and BRICS over the period 1995-2013 with special focus on variables representing transport costs. This paper provides modifications of distance employing new possible variables as proxy to transport costs, such as real distance and average port distance and compares them to traditional approach of Great Circle Distance method as well as to other alternative methods. All equations confirmed the validity of gravity model. There was found that the effect of the EU economic size is approximately twice as high as the effect of economic size of BRICS countries. Distance, calculated according to Great Circle Distance, shows significant negative value for bilateral trade between the EU and BRICS and its negative influence on trade is higher than positive influence of economic size. This shows that distance is very important factor for international trade. The literature uses also oil price or difference between FOB and CIF prices of goods as proxy to the transport cost. Oil price shows moderate negative effect, however the difference between FOB and CIF prices shows significant positive effect. We expected that the new proposed approach of real distance variable and averaged port distance variable, which values are two to three times higher, will show significantly higher negative effect on trade. Unfortunately, our expectation was not confirmed. We extended the gravity equations by categorical variables in the case of the distance variable, real distance variable and averaged port distance variable. The result show that the increasing distance interval grows its negative effect on the volume of mutual trade between the EU and BRICS and that it raises the growth rate of transport costs. The results of gravity equation with categorical variable of real distance show inverse relation between distance and trade. That means that the negative effect of real distance is the weaker, the farther

the country from one another. The reason for this effect is China because its bilateral trade with the EU is so high, that distance does not play any significant role. Another reason is that international trade is measured in monetary values, therefore the effect depends on structure of bilateral trade and there is also the reason for increasing returns to scale. This can be applied also for averaged port distance results. The other reason is controlling for BRICS countries where a high probability of collinearity with distance variables exists.

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Attitudes to the Modern Technology in the Selected Countries of the EU

Jana Valečková

VŠB - Technical University of Ostrava

Faculty of Economics, Department of Marketing and Business

Sokolská třída 33

Ostrava, Czech Republic

e-mail: jana.valeckova@vsb.cz

Abstract

The aim of this paper is a typology of customers (or users) of the modern technology. Typology is based on the attitudes to the modern technology, concretely attitudes to the mobile phones (smartphone; using the social networks; application downloading; mobile phone features). Research is focused on Generation Y. Members of Generation Y are people who were born between years 1980 and 1996. This generation use modern technology in their personal and professional life. They are part of virtual communities. The paper deals with a comparison of attitudes of Generation Y in selected countries of Central Europe. Generation Y attitudes are analysed using the cluster analysis. Cluster analysis is used to build the typologies of users.

Keywords: Cluster Analysis, Factor Analysis, Generation Y, Smartphones, Typology

JEL Classification: A14, C10, M31

1. Introduction

Paper is focused on customer typology from Generation Y. The aim of this paper is a construct a typology of customers of the modern technology in Czech Republic and Poland. It is focused on the Generation Y. It is concentrate on the attitudes to new technologies, especially using the smart phones, the Internet, social media (Facebook, Twitter, etc.) and the attitudes to new product or applications. Introduction is divided into the three parts. First part contains information about differences between Poland and Czech Republic, second part contains information about new technology and third part contains information about Generation Y.

Information Communication Technologies (ICT) using is competing advantage for each company in this time. Modern information system helps to improve the quality of customer service. The main tools used by ICT are computers, Internet, websites, mobile devices and information systems. Mobile devices will be a key tools to communicate. There are the overview of use the mobile devices in companies of selected countries of the EU; BE (65 %), CZ (79 %), DE (70 %), FR (67 %), PL (61 %), FI (88 %) and NO (83 %). Bajdor (2015)

Paper focuses on the comparison the results in Czech Republic and Poland. These countries have some similar culture but there are also differences. Hofstede described the differences which are based on dimensions of culture. Differences are in relationship to risk and in the long-term orientation. Czech people are more long-term oriented than Poles. Czech people have greater risk tolerance than Poles. Other dimensions of culture are similar in both countries; power distance (above average), individualism (above average), masculinity (above average), and hedonism (low), (Hofstede Centre [online], 2016a), (Hofstede Centre [online],

2016b). For example Czech Republic and Poland have the most registered marks of quality in V4. (Velčovská and Sadílek, 2014)

Waste electrical and electronic equipment is one of the priority waste streams of the European Union. Average total life of Czech mobile phones is surprisingly long, about 7.99 years. Mobile phones are the most often sold house appliance. (Polák and Drápalová, 2012)

Czech and Polish children and young can be located among the EU average in PC, smartphones and tablet equipment ownership. (Tomczyk and Kopecký, 2016)

There are certain risks in the use of modern technology by the young generations. Poland and Czech Republic are similar in terms of young users' awareness regarding e-threats and that the level of risky behaviours decreases. (Tomczyk and Kopecký, 2016)

Members of Generation Y are people who were born in eighties and nineties. They were born between years 1980 and 1996. Generation Y were influenced by new technologies during their adolescence and later. Using modern technologies during their childhood was not usual, (Van den Bergh and Behrer, 2011). Generation Y is more positive about image and trust in the EU (Pawlasová, Spáčil and Valečková, 2014a). Members of Generation Y are positive about economic situation in the EU (Pawlasová, Spáčil and Valečková, 2014b).

Attitudes to modern technologies affect the style of shopping, the choice of shops or information resources. 57 % of Generation Y in Czech Republic are medium users of online shopping, they buy online several times a year (minimum is once a year). 16 % of Generation Y buys less than once a year. 10 % of Generation Y had no experience with online shopping. 17 % of them make online buying once a month or more. (Krbová and Pavelek, 2015)

2. Problem Formulation and Methodology

This chapter contains information about data collection methodology and about methods of data analysis.

2.1 Data Collection

Attitude to the new technologies can be different according to the generation. Generation Y is the most technologically flexible generation. This generation has their own finances and they are very important target group for producers of mobile phones, tablets, and personal computers.

Previous chapter contains information about the differences between Czech Republic and Poland. These differences are mainly in relationship to risk and long-term orientation Czech Republic and Poland. They are also identical in the following: power distance, individualism, masculinity, and hedonism. Research is focused on the attitudes. Based on analysis of attitudes can be define the typology of customers on the market in Czech Republic and in Poland. It is possible to compare different markets; finding differences and finding identical characteristics. Research is focused on identifying the attitudes of modern technologies of Generation Y on the market in the Czech Republic and on the market in the Poland.

Analysis is based on primary and quantitative data. Data was obtained by questioning (electronic). Population is defining as people from Generation Y from Czech Republic and Poland. Members of Generation Y are people who were born between years 1980 and 1996. Data was collected in December 2015. Sample contained 257 respondents from the Czech Republic (Generation Y) and 105 respondents from the Poland (Generation Y). It is not

balanced sample. Balance was conducted in the SPSS programme. Applied quota is 50 % for each country.

Primary research contain question on the gender and age. It was primarily focused on the attitudes. Attitudes were measured on seven-point scale. Value 1 expressed agree and value 7 expressed disagree. This interval was chosen with regard to the methods of analysis (factor analysis and cluster analysis). It is recommended to use the seven-point scale. There are eleven statements for analysis, namely:

- Q1 - If I need the find the information so I first use my smartphone.
- Q2 - I rely on myself in decisions.
- Q3 - I am interest in a new information and communication technologies.
- Q4 - I listen to music from MP3 or cell phones the most often.
- Q5 - If I am not online so I feel cut off from information.
- Q6 - I check my account on Facebook continuously.
- Q7 - I am interest in each new product on the market.
- Q8 - I am interest in remarkable application. I download it immediately.
- Q9 - If I am away from home or work so I am connected to the Internet constantly.
- Q10 - I very often use social networks (Twitter, LinkedIn, etc.) besides Facebook.
- Q11 - I have cell phones near me.

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 (eleven) factors. Factor analysis was also used to compare outcomes in different countries (Czech Republic and Poland), results of new factors and comparison of incorporating the variable into new factors (identity and diversity in Czech and Poland). Cluster analysis will be used for the design typology of consumers on the technology 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 (1) to identify underlying dimensions or factors, (2) to identify a new, smaller, set of uncorrelated variables (3) 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, 2012).

Factor analysis is similar to multiple regression analysis. Factor analysis model may be represented as (Malhotra, 2012).

$$X_i = A_{i1}F_1 + A_{i2}F_2 + A_{i3}F_3 + \dots + A_{im}F_m + V_iU_i \quad (1)$$

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

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, 2012)

The second step of analysis contains the creation of a typology of the consumer for Czech Republic and for Poland (using cluster analysis). Types of consumer were created from the factor score. Typologies were created based on hierarchical clustering methods (Ward's method and Squared Euclidean distance). Types of customer are further characterized by gender and age.

There are used the Pearson's chi-square test to find out dependency of opinions about the modern technology (typology) on the gender and age. 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 22 program. All testing is performed at the 5% significance level.

3. Problem Solution

Data analysis was carried out for the Czech Republic and for the Poland separately. Results are presented in Chapter 3.1 (Czech Republic) and in Chapter 3.2 (Poland). Chapters include a design of typology for each monitored country. Typology proposals are compared at the end of the chapter (3.3).

3.1 Czech Republic

This subsection contains the results of research in the Czech Republic. Subsection contains outputs of factor analysis and description about typology of customers.

3.1.1 Reduction of Factors

Research included eleven factors. Dimensional reduction was conducted to reduce the factors. It was used a factor analysis, extraction by principal components method, rotation Varimax. New factors were created using Eigenvalue rules (Kaiser's rule), Eigenvalues greater than one. Factor scores were created using regression.

Table 1 contain information about Kaiser-Meyer-Olkin measure. Coefficient has value 0.818. 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.		,818
Bartlett's Test of Sphericity	Approx. Chi-Square	638,666
	df	55
	Sig.	,000

Source: author's calculations

Conducted a factor analysis there are created three new factors. It was created by using eigenvalues rules. Three new factors explained 54.2 % of total variance.

Table 2: Rotated Component Matrix – Czech Republic

	Component		
	1	2	3
Q10	,710		
Q7	,704		,346
Q8	,650		
Q9	,593	,440	
Q3	,535		,400
Q6		,778	
Q5	,360	,712	
Q11		,680	,386
Q2			,667
Q4			,532
Q1	,351		,523

Source: author’s calculations

First factor includes Interest in new technologies and applications. The second factor includes the Internet and mobile phone addiction, and the last factor includes classic phone use, see Table 2. Created factor scores are used as input variables for a typology (results in 3.1.2 Typology of Consumers in Czech Republic).

3.1.2 Typology of Consumers in Czech Republic

Hierarchical cluster analysis was used to determine an appropriated number a clusters. It was used a Ward’s method and interval measure, concretely Squared Euclidean distance. Using these methods, it was decided to create the four clusters of customers.

Cluster were named according to the answers as follows; offline addicted, smartphone first, impressible and independent. There are 34.6 % of offline addicted, 30.4 % of smartphone first, 26.1 % of impressible and 8.2 % of independent. Average responses for each attitude questions are set out in Table 3.

Table 3: Attitudes to Technology by Typology in Czech Republic

Mean	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
QCL_1											
offline addicted	3,831	2,640	3,787	2,955	5,506	5,022	5,562	6,034	5,787	6,674	1,809
smartphone first	1,897	2,333	1,833	1,769	2,974	2,679	2,756	3,269	2,500	4,410	1,218
impressible	4,000	4,224	3,552	3,642	3,075	2,463	5,045	5,269	4,313	5,955	1,478
independent	4,000	3,333	3,095	4,143	5,571	5,619	4,286	4,952	4,762	3,429	4,810
Total	3,298	3,020	3,071	2,871	4,098	3,682	4,463	4,898	4,310	5,525	1,788

Source: author’s calculations

Cluster called as offline addicted are not interested in new applications or technology, they do not use social networks but they are depending on their mobile phone. Second type, called smartphone first, has these attitudes: the necessary information finds first one in smartphone, they must have a phone near, if they are not online so they feel cut off from information. If they are away from home or work so they are connected to the Internet constantly. The third cluster, called impressible, they rely on the decisions of other person and they are not interest in a new information and communication technologies. The last one, independent, they may not have a phone near. If they are online so they do not feel cut off from information.

Dependence between typology and gender and age is tested using Chi-Square test. Statistical testing is carried out at the 5% significance level. Significance equals 0.026 for gender. There is statistical significance between typology and gender. Significance equals 0.072 for age.

There is not statistical significance between typology and age. Crosstabs for typology and gender is in Table 4. Smartphone first prevail in the categories of women. Impressive prevail in the categories of woman.

Table 4: Typology of Consumers by Gender (Czech Republic)

	gender		Total
	man	woman	
offline addicted	33,6%	35,9%	34,9%
smartphone first	38,2%	24,8%	30,6%
impressible	18,2%	32,4%	26,3%
independent	10,0%	6,9%	8,2%

Source: author's calculations

3.2 Poland

This subsection contains the results of research in the Poland. Subsection contains outputs of factor analysis and description about typology of customers.

3.2.1 Reduction of Factors

Research included eleven factors mentioned. It was used a factor analysis to reduction these factors, extraction by principal components method, rotation Varimax. New factors were created using by Eigenvalue rules (Kaiser's rule), Eigenvalues greater than one. Factor scores were created using regression again.

Coefficient KMO measure has value 0.651. Data are suitable for processing by factor analysis. It confirms the Bartlett's test of sphericity. Signification is less than 0.05. Correlation coefficients are not zero.

Table 5: Rotated Component Matrix – Poland

	Component				
	1	2	3	4	5
Q8	,870				
Q7	,804				
Q5	,687				
Q9	,658		,392		
Q3		,826			
Q11		,795			
Q6			,854		
Q2				,859	
Q1	,466		,319	,609	
Q4					,763
Q10			,366		,714

Source: author's calculations

Eigenvalue for five new factors (from eleven) is 72.3 %. The inclusion of issues into the five new factors can be seen in Table 5 in rotated component matrix.

3.2.2 Typology of Consumers in Poland

Clusters of consumers were estimated based on hierarchical clustering, Ward's method and interval measure, concretely Squared Euclidean distance. Using these methods, it was decided to four clusters of customers.

Generation Y in Poland is divided into the following segments. Typology is based on attitudes to modern technology. The first type is called stereotyped (23.7 %), the second type is smartphone addicted (33 %), the third type is independent (19.6 %) and the last one is

Facebook addicted (23.7 %). Average responses for each attitude questions are set out in Table 6.

Table 6: Attitudes to Technology by Typology in Poland

Mean											
Cluster Number of Case	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
stereotyped	2,91	2,48	2,70	5,00	5,35	3,57	6,09	6,52	4,22	5,57	2,26
smartphone addicted	1,69	2,03	2,47	2,75	2,44	3,09	3,44	3,63	2,44	4,75	1,25
independent	2,63	3,00	3,53	2,26	3,89	5,00	3,84	4,11	3,16	5,47	3,21
Facebook addicted	3,00	4,57	2,83	3,35	2,65	2,52	3,43	4,26	3,00	5,70	1,52
Total	2,47	2,93	2,81	3,33	3,46	3,44	4,14	4,56	3,13	5,31	1,94

Source: author’s calculations

Stereotyped consumers are not interest in new products on the market or in new applications. They do not listen to music from mobile phones. They do not need mobile phones to get information. Smartphone addicted consumers use a smartphone to get information first one. They must always have mobile phones near. Independent consumers may not always have mobile phones near. They do not control constantly his account on Facebook. The last one, Facebook addicted, check account on Facebook continuously. But they are not users of other social networks. They are influenced by others.

Dependences between typology and gender and between typology and age are tested using Chi-Square test. Statistical testing is carried out at the 5% significance level. Significance equals 0.014 for gender. There is statistical significance between typology and gender. Significance equals 0.435 for age. There is not statistical significance between typology and age.

Table 7 contains distribution of gender and typology of consumers in Poland. In smartphone addicted predominates in men's category. Group stereotyped and Facebook addicted predominate in women's category.

Table 7: Typology of Consumers by Gender (Poland)

	Gender		Total
	man	woman	
stereotyped	14,3%	27,5%	23,7%
smartphone addicted	57,1%	23,2%	33,0%
independent	10,7%	23,2%	19,6%
Facebook addicted	17,9%	26,1%	23,7%

Source: author’s calculations

3.3 Compare Czech Republic and Poland

The last part of analysis contains compare the attitudes to modern technologies in Czech Republic and Poland. There was used the t-test for independent groups (Czech Republic and Poland). Statistical testing is carried out at the 5% significance level.

Same variances are in these questions: (1) I rely on myself in decisions, (2) If I am not online so I feel cut off from information, (3) I am interesting in each new product on the market, (4) I am interesting in the remarkable applications. I download it immediately, (5) I very often use social networks besides Facebook, and (6) I have cell phones near me.

Same variances are not in these questions: (1) If I need the find the information so I first use my smartphone, (2) I am interest in a new information and communication technologies, (3) I listen to music from MP3 or cell phones the most often, (4) I check my account on Facebook

continuously, and (5) If I am away from home or work than I am connected to the Internet constantly.

The second step of t-test is testing of means. There are questions where means are not same in Czech Republic and Poland. Different attitudes are in these assertions: (1) If I need the find the information than I first use my smartphone (Sig. 0.000), (2) I am interest in a new information and communication technologies (0.036), (3) I listen to music from MP3 or cell phones the most often (Sig. 0.045), (4) If I am not online than I feel cut off from information (Sig. 0.002), (5) If I am away from home or work than I am connected to the Internet constantly (Sig. 0.000).

The average values for each questions can be seen in Table 8. Table contains highlighted cells where there are found differences between Czech Republic and Poland.

Table 8: Compared Monitored Countries

Mean											
country	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Czech Republic	3,296	3,019	3,062	2,860	4,089	3,689	4,469	4,895	4,309	5,523	1,805
Poland	2,520	2,914	2,724	3,290	3,462	3,394	4,133	4,610	3,152	5,392	1,886
Total	2,913	2,967	2,893	3,070	3,776	3,542	4,300	4,751	3,728	5,458	1,845

Source: author's calculations

4. Conclusion

The aim of this paper was a construct a typology of customers (or users) of the modern technology. Analysis is based on primary and quantitative data. Data was obtained by questioning (electronic). Typology was based on the attitudes to the modern technology, concretely attitudes to the mobile phones. There were eleven questions about attitudes. Based on the responses there were created typology of consumers in Czech Republic and Poland. There were eleven parts; If I need the find the information than I first use my smartphone. I rely on myself in decisions. I am interest in new information and communication technologies. I listen to music from MP3 or cell phones the most often. If I am not online than I feel cut off from information. I check my account on Facebook continuously. I am interest in each new product on the market. I am interest in remarkable application. I download it immediately. If I am away from home or work than I am connected to the Internet constantly. I very often use social networks (twitter, LinkedIn, etc.) besides Facebook. I have cell phones near me.

Consumers from Generation Y in the Czech Republic were divided into the four groups, namely offline addicted, smartphone first, impressible and independent. 34.6 % from population (Generation Y) are offline addicted. They are dependent on the mobile phone but without Internet. 30.4 % of Generation Y is addicted on smartphone and they are using Internet very often.

Poland consumers from Generation Y were divided into the four groups too; stereotyped, Smartphone addicted, independent and Facebook addicted. There are 67 % addicted consumers – smartphone addicted (33 %) and Facebook addicted (23.7 %). It is a greater ratio than in the Czech Republic.

Knowledge attitudes to new technologies are important to select media to communicate with the Generation Y, targeting and persuasion. It is necessary to estimate the adoption of new products.

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Global Public Goods and Integration

František Varadzin

College of Social and Administrative Affairs
Department of Economic and European Integration
Vítězslava Nezvala 801/1
Havířov, Czech Republic
e-mail: varadzin@vsss.cz

Abstract

The paper is focused on two levels of the contemporary world problems. The first level is theoretically categorical. It aims to show the need to develop economic concepts so that the terms used would correspond to the actual economic processes. The adequate terminological reflection of the world enables us to better understand the logic of its functioning. The second level is oriented on the existence of a need to bring into accord the relationship between global public goods and the development of integration. The author of the article concludes that un-clearing and ignoring these relations are among the causes, nevertheless not the only one, decisive and significant, affecting negatively the current state of integration processes in the EU.

Keywords: Public Goods, Global Commons, Integration, International Economic

JEL Classification: A00, A13, F00, F5, H00

1. Introduction

The current world is hit by a series of crisis phenomena that take place at different levels of man's social being. In society there are evident economic crises affecting both the realm of the real, and also monetary economy, accompanied by the law of uneven development changing the position of the national economies in the global economy. At the same time a dangerous social differentiation within the world and social systems of countries occurs.

With these changes, technological progress brings additional pressure on the structure of social arrangements, social upheavals lead to the emergence of war conflicts, both in the form of various rebellions, civil wars, approximating the possibility of threats of the worldwide conflict. Socio-political conflicts are taking place already in the new environment, the internet, infrastructure changes, new technologies, etc.

The progress of crises in the various areas of the world economic system is modified by the original specific cultural norms of individual cultures. We can observe other responses in the area of Latin America, Africa, Asia, Europe, North America and Australia. Obviously, the continents are internally differentiated, see e.g. a Muslim or Hindu world, Russia and Europe, etc.

As empiricism shows, concurrently there is no simple causality and synchronicity between the economic, political, social and cultural processes. Each of them is reflected at a given time in the various areas with different power and impact. It is therefore very challenging to agree on universally acceptable recipes that would help the world to move in an optimal trajectory.

One of the elementary instruments, which in our opinion may help, is to clarify the thought categorical apparatus, by means of which we are describing the present world and trying to comprehend it. Therefore, one category is in the center of attention here, which is trying to point out the advancing internationalization and globalization trends-international public goods.

2. Public Goods within the Economic System

From the point of view of economic thinking we can find the roots of the ideas about the necessity of the existence of goods which do not yield a profit already in the work of one of the founders of classical political economy D. Hume¹¹⁶, on the other hand they are necessary for the life of the community. The systematic examination of public goods on the basis of the contemporary standard economy is linked with the contribution of P. A. Samuelson from 1954 (Samuelson, 1954).

He still uses the terms "collective consumption goods" and "private consumption goods" and defines a precondition for the efficiency of the economy here, where the marginal rate of substitution must be equal to the rate of production capabilities of public goods.¹¹⁷

Essentially what occurs here is the redistribution of income while the existence of the "invisible hand of the market" by the state can lead to the growth of the overall welfare.

According to later Samuelson's ideas, despite the social welfare problems, it is likely to create the desired configuration of the indifference curves, reflecting thus the welfare function (Seligman, 1968). In his classic work *Economics* Samuelson moves from the concept of "collective consumption goods" to public goods defined by the rivalries and exclusion (see Samuelson, Nordhaus, 2010; Musgrave, Musgraveová, 1994). In terms of the traditional concept it means that an entity, who consumes the public good, does not decrease the benefit for another entity and simultaneously he/she does not exclude it from the consumption of this good (e.g., public lighting, protection of public order, etc.).

Exclusion (non-exclusion) is associated with various terms and conditions expressed by the proprietary rights. These are the result of various causes, resulting from the economic, normative, technical and institutional reasons. Owing to the fact that property rights constitute the social structure and grow from it, it is possible to change it by political decisions. Rivalry (non-rivalry) indicates that the consumption of the good decreases the benefit of consumption of another entity and non-rivalry is the hallmark of pure public goods. Private goods are opposite, at this time there is a both exclusion and also rivalry. What holds true for club goods is that rivalry is equal to zero, yet non-exclusion applies to non-members, e.g. payments, coded TV broadcasts. For commons¹¹⁸ non-exclusion and rivalry applies.

¹¹⁶It is a work from 1739 *The Treatise of Human Nature*. He published here his views on the need for a holistic understanding of the movement of society, while using various analytical methods see HUME, d. *Sočiněníja in 2 tomach*. Moskava: Musl, 1968. Tom 1 "Traktat o čelovečeskoj prirode".

¹¹⁷By the marginal rate of substitution Samuelson means for this case a situation, in which the subject shall give up a certain number of units of private goods, so that he/she would obtain the unit of a public good. In the case of the marginal rates of production capabilities marginal costs of public goods are considered, expressed in units of private goods. Total consumption is then the sum of the consumption of consumption goods $X_1; \dots X_n$ and common consumption goods $X_{1+n}; \dots X_{n+m}$.

¹¹⁸The origin of the term commons is anchored in English history. Originally it denoted a common use of land by rural society (pastures, watering places, etc.). This term was later transferred to the goods, when it refers to a theoretical non-exclusion accompanied by a reduction in the benefit of using by other entity

When determining the characteristics of public goods, and their operation within the economic system we should not exclude the phenomenon of the *free riders*. In other words, based on non-exclusion, attempts are made here by individual entities not to pay the cost of these goods. Therefore, we can agree with the concept of qualifying the need to use non-market forces (taxes) to cover the costs (Schiller, 2004). The reason for this is economic rationality, as with private payments there would be a reduction of production of public goods and thus a decrease of the well-being of society.

We can consequently regard public goods in a modern society as the "second nature" of human existence, which is part of the quality of man's life (roads, lighting, administrative and social infrastructure, etc.). Provision of public goods is determined by the nature of the society, the amount and structure of resources that it has available and of course the instruments and forms of the redistribution of the created product.

The notion of a cheap state having small resources available allows only a limited solution of the scope of the problem. As indicated by a number of studies (Piketty, 2015; Keller, 2011), inequality as a result of the non-regulation of the current market mechanism leads to a reduction of the overall welfare. To maintain the social bearability of the situation the market share of public goods is irreplaceable. Therefore, the legitimization of the state and its intervention also occurs in the economy.

In terms of the functioning of the economic system the market launch in many areas has had a positive impact only if the cost savings are greater than the decline in the general welfare for the reasons of a lower provision of public goods. Additional compensations keeping the total benefit in the society must be less than the cost savings (health care, post office, sports, etc.).

It shows that the "Trickle Down Effect"¹¹⁹, which should lead to the growth of the wealth of the middle- and low-income groups has not been confirmed.¹²⁰ As questionable are the notions that the privatization of public services will lead to the growth of efficiency and profitability. At the same time the crisis of 2007-2009 increased the degree of social uncertainties, subsequently it only reinforced the position of monetary institutions to the detriment of the non-monetary sector.

Instability is so fundamental that the erosion of the status of goods in the world economic system takes place. It's not only about the so-called "failed states" or the highly indebted

(crowded highways, schools, etc.). In the Czech context a joint ownership was transformed into of the "general ownership". Terminologically "mixed goods" is used for commons. It doesn't, however, precisely put the content of restrictions of public goods well. It would also be possible to use the term incomplete public goods.

¹¹⁹The idea is that thanks to the stimulation of supply by using tax cuts there will be an increase of the wealth of the highest income groups. On the basis of the additional stimulation of demand for goods and services, they will further stimulate the economy. Thus wealth will "permeate" through low-income groups in the faster growth of the economy, without the intervention of the state. The founder of this theory was G. Simmel, German sociologist, who claimed that the lower class mimicked the higher class and there is an "interflow" of innovations and life style downwards.

¹²⁰See *Income, Poverty and Health Insurance Coverage in the USA 2011*. Washington DC: US Government Printing Office, 2012. Here officially published data clearly indicate that after the introduction of the Reagan tax savings in the mid-1980s led to a decline in the share of GDP of all pentyl groups with the exception of the highest income group. See Table A-Z, p. 40.

countries, but about the possible effects of the disputed contracts, which are in the stage of the conclusion or approval (TTIP, TTP, TISA).¹²¹

3. Global Public Goods

One of the moments of the solution to the growing instability of the world is the awareness of the existence of global public goods and their purposeful security. We are not dealing here with the salvable tool with universal validity, but rather their definition and result-oriented development can create with great probability a space for the solution of the problems complicating e.g. the development

By the global public goods those goods are meant whose benefit (operation) is not limited to one country.¹²² They have the same properties of non-exclusion and non-rivalry as pure public goods. Among them, we can rank a clean natural environment, climate stability, peace and security, protection against epidemics, international law, transport (sea, air, and universe), cyberspace, etc. In this concept we also separate commons that have partial or complete rivalry.

Global commons are theoretical concept for goods generally available however limited. This leads to the fact that they are becoming the subject of a competitive fight. Most often this term is related to the natural resources of the planet, which are beyond the control of individual states and are used by them together. As for example the river flows used along with states, irrigation equipment, the use of the resources of the seas etc.

Thus international club goods may exist. Goods serving members of this club will arise within the international economic system. As an example of building a common EU, the Galileo system can be given, along with systems of trade preferences, measures allowing the international movements of persons, etc.

The concept of global public goods came into existence in the second half of the 20th century (Stern, 1968), and extended on the earlier intellectual traditions dealing with common ownership. The United Nations¹²³ became the center of the elaboration of this concept. Ideas were heavily influenced by issues of natural resources. The current concept of global public goods was presented in a comprehensive form of UNDP by Inge Kaul, Isabele Grunberg and Marc A. Stern.¹²⁴

The external effect is a crucial property of public goods from the standpoint of economic theory, i.e. the consequences of the existence of these goods affect more participants. In the case of a positive effect, there is no reason to limit this impact, or exclude some of the entities.

¹²¹What is interesting is the fact that these contracts arise outside the WTO and its systems of GATT and GATS. From the published "fractions", it seems that the common denominator is the effort to weaken the role of the state as an entity of the world economy. See the *Trade in Services Agreement (TISA)*. Financial Services Annex Wikileaks release. June 19, 2014. UR<https://wikileaks.org/tisa-financial/Wiki-Leaks-sekret-tisa-financial-annex.pdf>. *Transatlantic Trade Investment partnership*. ec.europa.eu/tradepolicy/infocus/ttip. *The Transpacific Partnership*. tpp.mfat.govt.nz/text. Moreover, it is clear that even the contemporary state policy is under the influence of multinational companies and the higher social classes. Vich GILENS, m.-PAGE, b. i. *Testing Theories of American Politics: Elites, Interest Groups and the Average Citizen*. <https://scholar.princeton.edu/sites/default/>.

¹²²The term global is used here as an umbrella term, encompassing processes taking place at the international, multinational, transnational, and global levels.

¹²³See *The World Conversations Strategy. Living Conversation for Sustainable Development*. Gland: IUCN - UNEP - WWF, 1980. There is a chapter 18, The Global Commons.

¹²⁴See *Global public Goods. International Cooperation in the 21st Century*. New York: OUP, 1999.

In general, we can classify them using the above mentioned principles, see Table 1.

Table 1: International Public Goods Classification

Spillover range	Pure public	Impure public	Club	Join products
A cross border	Forest privet prevention Groundwaterpollution cleanup	Waterways, Rivers Highways Local Parks	Electric grid Information networks Piece keeping	Medical aid Technical assistance Internet connectivity
B cross border	Wetland preservation Lake cleanup Toxic waste cleanup	Acid rain reduction Fisheries protection	National parks Irrigation system Lakes	Foreign aid Disaster relief Drug interdiction
A Regional	Animal disease control Flood control Weather forecast	Regional parks Treatment of endemic disease	Free trade zone Common market Shipping lanes Financial stability	Regional peacekeeping Military forces
B Regional	Lead emission reduction Forest conservation	Reduction in emissions of volatile organic compounds Agricultural research	Transnational parks Barrier reefs	Cultural norms Bioprospecting
A Global	Ocean pollution cleanup Monitoring station Word court	Electromagnetic spectrum allocation Satellitetranspositions Postal service Disease control	Air corridors Internet Shipping lanes Financial stability	Foreign aid Baster relief Drug interdiction
B Global	Ozone shield protection Global warming prevention Disease eradication Knowledge generation	Overuse of antibiotic Ocean fisheries Antarctica protection Revolution making	Geostationary orbits Polar orbits	Tropical forest preservation Space colonies United Nation Poverty alleviation

A) intrageneration, B) intergeneration

Source: Public goods for economic development. Vienna: UNIPO, 2008, p. 14

The fundamental problem for global public goods is a way of financing them. To a lesser extent it is manifested in common goods and club goods. They usually arise by agreement (NATO, United Nations, etc.). The majority of net global public goods have not got a cost recovery mechanism secured. There is a general principle here-each state is waiting for the costs to be borne by others. Just to get an idea it will do to read the history of meetings in Kyoto, Rio de Janeiro, Paris, etc. It is clear, however, that this is one of the central points of a rational foreign policy (Martens, Hain, 2002).

4. Integration and Global Public Goods

From our point of view, the basis of integration processes is the fact of the internationalization of the forces of production. In other words, national economies are becoming too close and are not able to cover the entire scope of the reproductive process (Varadzin, 2013). This, of course,

corresponds to changes at the level of political, cultural and scientific organizations, which grow up from the structure of the economy and at the same time affect them retroactively.

If public goods are seen as a standard part of the economic life of the country, then the process of internationalization emphasizes the need of the international understanding of public goods. Integration cannot be interpreted only as a mutually advantageous cooperation, however, it must also be established in the form of institutions ensuring the financing and organization coping with public goods within the geographical integration region.

It is a question of the concept and the specific forms, how these international public goods should be fulfilled and funded. It should not, however, lead to ignoring the necessary functional security. Then there is a risk of the integration grouping i.e. its potential will not be fulfilled, or in an extreme case there will be a disruption to the development needs of the countries participating in the integration process. As an example we can mention the club goods of duty free movement of goods within the EU. From the standpoint of economic theory there is public club good offered, which allows producers to take advantage of the 400 million market instead of the limited domestic market.

The author of this paper is neither a political scientist nor a lawyer and therefore knowingly waives his considerations about the ways of the organizational construction of the institutions securing public goods in the integration grouping. He has a single remark to make in this context. If the content and functional content is not precisely defined, Seneca's statement holds true "The Wind is never favorable to those who don't know they are going."¹²⁵

In terms of financing we can agree to the following methods:

1. Internalization of external effects, based on market-based approaches, or the system of international taxes, duties and fees. We are dealing here, for instance, with the introduction of tradable certificates to specific quantitative amounts of substances harmful to the natural environment. Introduction of international taxation (e.g. the Tobin tax on financial transactions) is the subject of long-term discussions. So far, the results are zero as well as it is a case of a proposed International conference on tax organization in Monterrey. The same results have suggestions related to forced levies in favor of global commons (air transport, protection of the world's seas).
2. The resources of the public institutions, come either from national budgets or resources of international organizations. In the first case, e.g., it is the financing of the measures against epidemics from resources of the national ministries, providing development assistance connected with the conditions allowing to keep or develop the global public goods. Some states establish special funds for this purpose (Francais pour l'Environnement Mondial Fund). In the second case, the United Nations and the system of organizations that are associated with this institution, or other public organizations or private organizations. For example, in the United States in the late 1990s of the 20th century there were 47.000 private foundations with assets of 385 billion US dollars (Martens, Hein, 2002). This category includes also a considerable part of the EU budget.

¹²⁵"Ignoranti quem Portum petat nullus suus Ventus est". Epistulae ad Lucillum ne 71.3

5. Conclusion

The current view of the integration is going through the transition. The mounting crisis phenomena lead to the realization that many of the facts are insufficiently realized and understood. Therefore, measures are declared and implemented, which are of very contradictory nature, yet not accepted by the public. As an example we can mention the example of the free movement of persons within the EU as a regional public good and population migration as a phenomenon in the world economy.

Therefore, in our opinion, a thorough theoretical development is necessary. For instance in extended Baldwin's and Wyploszova's study on the European integration there is not a single sub-chapter relating to the relationship to global public goods (Baldwin, Wyplosz, 2008). A theoretical view of integration in our consciousness reflects only part of the reality, and if this paper inspires everyone to a reflection on these problems, then it has fulfilled its goal.

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Members of the European Union as a Single Economic Unit and its Spatial Autocorrelation

Roman Vavrek¹, Eva Ardielli², Jaroslav Gonos³

University of Presov^{1,3}, VŠB - Technical University of Ostrava²

Faculty of Management, Department of Management¹, Faculty of Economics,

Department of Public Economics², Faculty of Management, Department of
Economic Sciences and Economy³

Ul. Konstantinova 16^{1,3}, Sokolská třída 33²

Prešov, Slovakia^{1,3}, Ostrava, Czech Republic²

e-mail: roman.vavrek@unipo.sk, eva.ardielli@vsb.cz, jaroslav.gonos@unipo.sk

Abstract

One of the objectives of the European Union, which was founded in 1993, is to construct Europe as a single economic space, which will have a strong growth and a competitive economy. One of the basic indicators through which it is possible to compare countries or regions, is gross domestic product (GDP), respectively gross national income (GNI) per capita. The aim of this paper is to identify the homogeneity of these indicators in the European Union as a whole and at the level of change caused by the accession of new countries in years 1973, 1981 a 1986, 1995, 2004 a 2007. Results identify whether a nation's resources are put to capital creation or declining toward abroad too. To identify the presence of spatial structure is used MORAN index which is complemented by classical statistical methods as one-way ANOVA, K-W test or correlation coefficients.

Keywords: European Union, GDP, GNI, Spatial Autocorrelation, Spatial Maps

JEL Classification: F41, F43, F62, C21

1. Introduction

The European Union (EU) countries are considered to be one of the world's most prosperous economic areas, however there are large economic disparities between its member states. Income disparities in the EU countries are important field of research of a number of authors, e.g. Le Gallo and Ertur (2003) or Ertur and Koch (2006). They are also the main reason of practising of EU regional policy which aims to support the competitiveness of EU countries (Ramajo et al., 2008).

The paper is focused on measuring of income disparities using GDP and GNI per capita in the EU countries and assessing of their development during the economic integration process in Europe. Homogeneity of these indicators in the EU is evaluated by usage of MORAN index which is complemented by classical statistical methods, see Haining (2003).

1.1 Theory of Economic Integration

Economic integration means that the economies of different countries are linked and the trade barriers are eliminated within an area, see Balassa (1961) or Allen (1963). Integration according to Machlup (1977) is the process of combining separate economies into a larger economic region. Machlup (1977) designated also the first user of the term "economic integration", which was E. Heckscher in book Mercantilism from 1931. Finally, in the

contemporary economic theory the economic integration is defined as the unification of economic policies between different states through the partial or full abolition of tariff and non-tariff restrictions on trade taking place among them prior to their integration, see Baldwin and Wyplosz (2008).

The goal of the economic integration is the promotion of mutual trade and the increasing of the level of welfare, while leading to the increase of economic productivity of the states (Dalimov, 2009). According to the established economic theories of D. Ricardo the trade between the countries means the benefit of all countries involved (the principle of comparative advantage). Economy of scale is according to Krugman (1980) also the justification for economic integration, since some economies of scale may require a larger market than is possible within a particular country.

Besides these economic reasons, the primary reasons why economic integration has been pursued in practice are largely political, see Hosny (2013). For example the European Economic Community (EEC) was created to integrate economies of France and Germany in order to avoid war. So, there are economic as well as political reasons why nations pursue economic integration. This is one of the reasons for the development of economic integration such as ASEAN, NAFTA, SACN, the EU or the EEC, see Mongelli (2008).

Economic integration can take many forms. According to Balassa (1961) there are four different stages of economic integration:

- Free Trade Area (FTA) - at least two states partially or fully abolish custom tariffs on their inner border,
- Customs union (CU) - unified tariffs on the exterior borders of the CU,
- Common market (CM) - add to a FTA the free movement of services, capital and labour (at the beginning of 1993, the EU achieved the status of a CM),
- Economic union - combines customs union with a common market.

The most advanced type of economic integration is the Economic Union, where the monetary and fiscal policies of member states are harmonized and sometimes even completely unified. The example are the countries of the EU using a single currency, see Baldwin and Wyplosz (2008). According to Rodrik (2000) the more advanced integration steps are typically accompanied by unification of economic policies as tax or social welfare benefits, further by reductions in the rest of the trade barriers, introduction of supranational bodies and developing of political union (final stage of integration).

1.2 Economic Integration Effects

Economic integration involves at least two countries to abolish customs tariffs on inner border between the states (Allen, 1963). This causes a number of effects. Among the main benefits for the integrating countries is a free access to markets of the other member states and the increase of productivity. According to Dalimov (2009) growth of economy (specifically the GDP) depends than on the level of development as well as a scale of integrating states. For instance, if there are two states being economically integrated, than the larger is the size of economy the less it receives from integration. The same principle is observed regarding the level of development of integrating states. Productivity in the unified area is increased more in less developed states, see (Dalimov, 2008).

According to Hosny (2013), economic integration also has no war consequence. E.g. the EU has started with agreement between rival states during World War II (France, Great Britain,

Belgium and Luxemburg on the one hand and Italy, Germany on the other hand). This confirms that economic integration unites nations and leads them to prosper with each other.

1.3 Economic Integration in EU-Countries

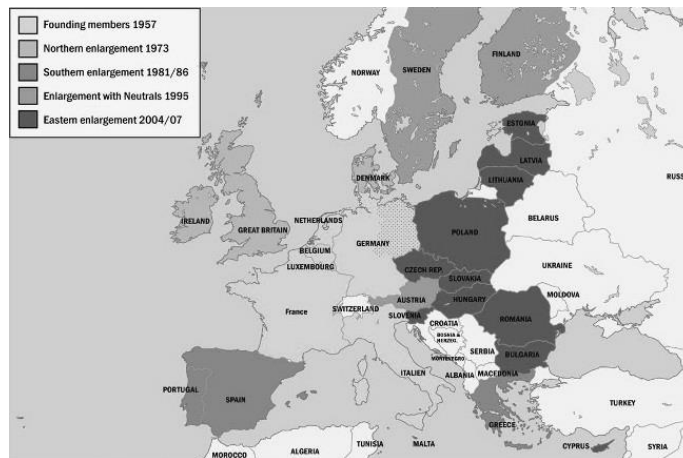
The fundamentals of economic integration in EU were laid out by the Treaty of Rome. This treaty created a single economic area where companies and consumers of member states have equal access to all its formerly separate markets. From the Treaty of Rome (January 1958) to the Maastricht Treaty (November 1993), Europe moved gradually but unambiguously towards closer economic integration, see Laursen (1991).

In 1994 was formed the European Economic Area (EEA) in order to extend the EU's provisions on its internal market to countries in the European Free Trade Area (EFTA). EU legislation relating to the internal market becomes part of the legislation of the EEA countries once they have agreed to incorporate it, see European Parliament (2015). However, Switzerland chose not to ratify the agreement following a negative referendum in the country. In 1995 Austria, Finland and Sweden joined the EU. Iceland, Norway and Liechtenstein remained in the EEA. The 10 new Member States that joined the EU in 2004 automatically became part of the EEA, as did Bulgaria and Romania when they acceded to the EU in 2007, and Croatia in 2013, see Mongelli (2008) and Baldwin and Wyplosz (2008).

2. Methodology

EU countries (with the exception of Croatia, which has become part of the EU in 2013) have been divided into 5 groups - Founding members (1957), Northern enlargement (1973), Southern enlargement (1981/86), Enlargement with Neutrals (1995) and Eastern enlargement (2001/07). Its structure is described by figure 1.

Figure 1: Country Groups of Individual EU Enlargements



Source: www.eu.euroiuiris.sk

Differences between countries are monitored by selected moment characteristics. Due to failure to fulfil conditions of ANOVA analysis, these differences are tested by Kruskal-Wallis test:

$$Q = \frac{12}{n(n-1)} \sum_{i=1}^I \frac{T_i^2}{n_i} - 3(n+1) \quad (1)$$

with: n - the total number of observations across all groups
 n_i - number of observations in group i
 T_i^2 - rank (among all observations) of observation in group i

Normal distribution of monitored parameters has not confirmed. Therefore, is as mean value for other statistical analysis use median. It is resistant to outliers. Median is used in spatial autocorrelation too. For monitoring of spatial relationships between the state enlargements is used MORAN index:

$$I_i(d) = \frac{x_i - \bar{x}}{\frac{\sum_{j=1, i \neq 1}^n w_{ij}(d)}{n-1} - \bar{x}^2} \sum_{j=1, i \neq 1}^n w_{ij}(d) (x_j - \bar{x}) \quad (2)$$

with: d - critical distance
 n - number of spatial units
 x_i - value of phenomenon of i -th spatial unit
 \bar{x} - average value
 $w_{ij}(d)$ - weight of i -th unit and d -th distance

The comparison was realized using 2 variables - GDP per capita and GNI per capita. The reference period was 2000 - 2013.

Analyses are performed in the MS Excel and statistical software Statgraphics and Statistica.

3. Results and Discussion

The first step of our analysis is to identify homogeneity of individual state enlargements of the EU (based on figure 1). The countries are evaluated individually according to the above-mentioned parameters.

Table 1: Differences between Countries in the Enlargement Groups

	GDP per capita		GNI per capita	
	test	p-value	test	p-value
Founding members	32,272	< 0	41,122	< 0
Northern enlargement	8,373	0,015	9,671	< 0
Southern enlargement	18,640	< 0	15,935	< 0
Enlargement with Neutrals	2,689	0,261	2,155	0,340
Eastern enlargement	78,699	< 0	79,752	< 0

Source: author's calculations

As we can see in table 1, the enlargement groups are heterogeneous according to both parameters. Countries of fourth enlargement (1995) constitute an exception - GDP per capita and GNI per capita are similar in reference period.

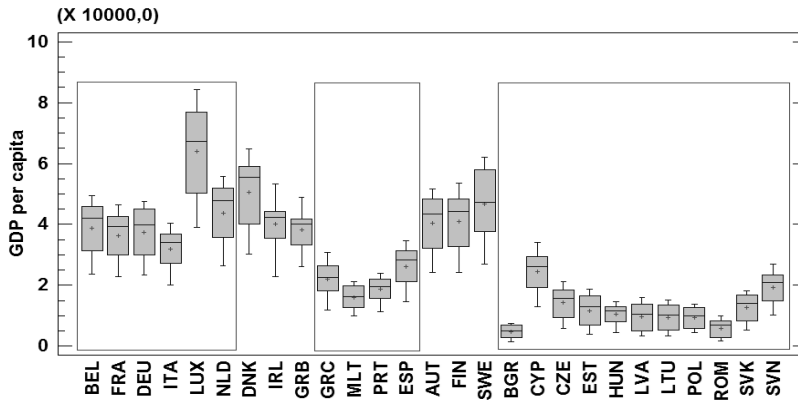
For this reason, in the further part the analysis is realized from the perspective of the individual countries.

3.1 Analysis by GDP per Capita

GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is used for purpose of comparison of the performance of individual economies. We conclude significant

differences in evaluation of EU countries. It is substantiated by rejection of null hypothesis of Kruskal-Wallis test (316,586; $p \leq 0,01$).

Figure 2: GDP Per Capita - Comparison of Individual Countries



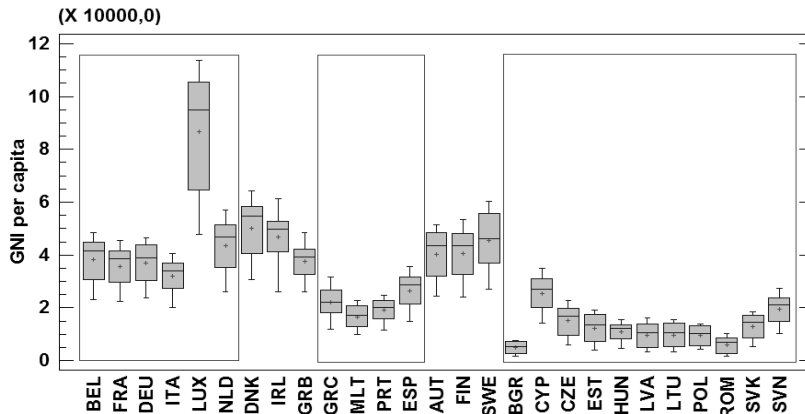
Source: author’s calculations

Highest ranked country is Luxembourg, which also has the highest range. GDP per capita in each country is leftward skewed ($\alpha < 0$), i.e. below average values are prevailing (complemented by the absolute difference of mean values). Country with the smallest median is Bulgaria, the largest variability is observed in Romania ($v_{ROM} = 52,51\%$). In comparison of individual median of each country with median of EMU, resp. EUU, we confirm above-mentioned differences between enlargement groups and individual countries.

3.2 Analysis by GNI per Capita

In practice, the GNI per capita is used more often in countries that have a higher volume of foreign investments. GNI is the sum of value added by all resident producers plus any product taxes not included in the valuation of output plus net receipts of primary income from abroad. By usage of GDP per capita, Kruskal-Wallis test confirms significant heterogeneity of individual countries (318,184; $p \leq 0,01$).

Figure 3: GNI Per Capita - Comparison of Individual Countries



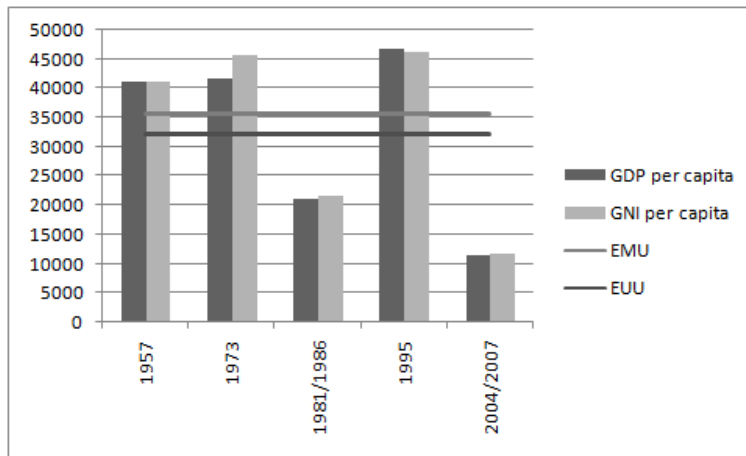
Source: author’s calculations

In comparison of individual countries according to GNI per capita we can see very similar trends as by characteristics with the previous parameter. The dominant country is Luxembourg. Other countries are composed (in terms of individual moment characteristics). In comparison of individual median of each country with median of EMU, resp. EEU, we confirm above-mentioned differences between enlargement groups and individual countries. We follow the composition of the Eastern enlargement and the dominance of Luxembourg.

3.3 Spatial Autocorrelation of Enlargements

We expect that EU membership brings a positive impact, externalities, which are reflected in the performance of individual economies. We can conclude that results obtained are substantially similar. Above-average rated are founding members and the countries of southern and eastern enlargement.

Figure 4: Comparison of Enlargements Via Median



Source: author's calculations

In terms of geographical distribution of these regions, despite the differences identified above, it is not possible to confirm the statistical significance of spatial autocorrelation. MORAN index in each case evaluates these results as random, resp. spatially uncorrelated ($Moran_{GDP} = 0,013$, $Moran_{GNI} = 0,025$).

4. Conclusion

Evaluation of countries according to GDP, GNI is often used method. Its advantage consists in simple and basic comparison of national economies (not groups of countries). It is not possible to find a homogenous group in the structure of the European Union from a perspective of macroeconomic or social characteristics. Despite the intention to create a single European area we can see significant differences between individual countries, which largely determine the fulfilment of this vision. For more detailed results we recommend to compare countries based on several parameters. It is not possible to say that the EU membership has automatically a positive impact on economic performance. The future issue could be a matter of benefits of entry or exit from the European Union. At the same time, the differences between above-identified groups of countries are considerable. Although the GDP and GNI are different indicators, their content differences did not affect the results of individual analyses.

Acknowledgements

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Consumer Attitudes Towards Food Quality Labels in Selected European Union Countries

Šárka Velčovská, Petra Klapilová Krbová

VŠB – Technical University of Ostrava

Faculty of Economics, Department of Marketing and Business

Sokolská třída 33

Ostrava, Czech Republic

e-mail: sarka.velcovska@vsb.cz, petra.klapilova@vsb.cz

Abstract

The aim of the paper is to compare the insight from consumers into food quality labels in selected countries of the European Union – the Czech Republic and the United Kingdom and to show how consumers are familiar with quality labels, how they are perceived, and if they have influence to food products purchases. In the first part of the paper, the term “quality label” is defined and food quality labels in the Czech Republic and the United Kingdom are introduced. In the next part, the results of marketing research are presented. A total of 350 respondents, 200 of Czech and 150 from the United Kingdom were interviewed. Two Czech national labels, two British national labels and three labels included in the European Union quality scheme were chosen as the objects of the research. Pearson’s Chi-square test of independence was calculated to determine whether significant differences do exist in the way consumers perceive the food quality labels based on their socio-demographic characteristics.

Keywords: Attitudes, Consumers, Czech Republic, European Union, Food Quality Labels, United Kingdom

JEL Classification: D18, M31, Q18

1. Introduction

Food quality and food safety are strongly discussed topics in the last years. Consumers have become more critical in their food choice and they show increased interest in origin, composition, methods of production and other quality attributes of food products. The effort to provide consumers a higher food quality and a guarantees of 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.

For the usefulness and effectiveness of these quality assurance schemes, consumers must be aware of their existence and they must also trust them. In some countries, however, the current trend in food products labelling with quality labels has led to the situation that instead of easier orientation of consumers in food quality, the effect is rather opposite. A large number of food quality labels cause consumer confusion (Horáček [online], 2014).

In accordance with this problem, the paper is aimed to analyse how consumers are familiar with quality labels, how they perceived them, and if the labels have influence on food products purchases. The research was conducted in two EU countries, the Czech Republic (CR) and the United Kingdom (UK). The aim was to know and compare the situation in the CR with a

developed country where the food assurance schemes have a long tradition and which is also a member of the EU and therefore respects the same food quality norms.

2. Literature Review

There are many research studies dealing with consumers' attitudes to food quality and quality labels (e.g. Grunert, 2005; Klánová, 2015; Maehle et al., 2015; Van Rijswijk and Frewer, 2008; Velčovská and Del Chiappa, 2015; Verbeke, 2005; Verbeke et al., 2012; Verbeke and Ward, 2006). According to data of TNS Opinion & Social network from 2012 within Special Eurobarometer survey carried out in the 27 member states of the EU on the sample of 26 593 respondents, the vast majority of EU citizens (96%) regard quality as important to them when buying food (98 % in the CR, 96 % in the UK) and 71% say that the origin of food is important. Eighty percent of Czech consumers consider the geographical origin of food products to be important, while in the UK it is substantially lower (52 %). Two thirds (67 %) of EU citizens (67 % in the CR, 63 % in the UK) check food purchases to see if they have quality labels that ensure specific characteristics, but few do this consistently (22 % in the EU, 15 % in the CR, 24 % in the UK). Overall recognition of individual food quality logos is low, while knowledge of these logos varies widely between EU member states. Only a small minority of EU citizens are aware of the three logos of EU food quality assurance schemes with 15 % aware of the TSG logo (20 % in the CR, 13 % in the UK), and 14 % who recognise the PDO (14 % in the CR, 7 % in the UK) and PGI logos (13 % in the CR, 10 % in the UK) (European Commission [online], 2012). In 2015, the recognition of these logos has remained almost unchanged, thus confirming the results of the Special Eurobarometer survey from 2012. In the EU, PDO logo has +6 percentage points (pp) and PGI logo +3 pp increase in the proportion of respondents that recognise them in 2015, TSG logo awareness stays unchanged. However, there are differences between EU member states. While in the CR the increase in awareness of all logos (+12 pp for PDO and PGI, +9 pp for TSG) was observed, in the UK the proportion of respondents aware of the logos has decreased (-4 pp for PDO and PGI, -5 pp for TSG) (European Commission, [online], 2016b).

Another study of consumers' awareness of PDO, PGI and TSG labels in six European countries (Italy, Spain, France, Belgium, Norway and Poland) confirms that consumers' use of a PDO, PGI or TSG label is triggered by the belief that the label signals better product quality. Quality beliefs are shaped by an interest in getting information about product quality through the quality label (Verbeke et al., 2012).

Recent survey of STEM/MARK agency from August 2014 conducted in the CR has revealed a low awareness of quality labels among Czech consumers and lack of information about them. Other research studies (Velčovská and Del Chiappa, 2015; Klánová, 2015) have also showed that consumers are not able to fully use the labels in their purchase decisions and they do not perceive some of the labels as credible. Czech consumers tend to prefer national and regional products rather than foreign products due to their interest in support of Czech producers or higher perceived quality of domestic products. The national quality labels are better recognized than European and global labels, the highest spontaneous awareness was detected for the Klasa label. Most of consumers consider a quality labels as useful tool of consumer policy and they show an interest in getting information regarding the topic.

3. Food Quality Labels in the Czech Republic and the United Kingdom

Alongside EU quality labels common in both countries due to their membership in the EU, there are also national or regional food quality labels specific for particular country only. In

the following text, the EU quality schemes and national food quality labels in the CR and the UK are introduced with emphasis on labels that have been the subject of the research. The labels were chosen with respect to two criteria - they are most commonly used on the market and they are covering the food and agriculture products only.

3.1 Food Quality Labels in the Czech Republic

The number of food quality labels in the Czech food products market is strongly high. Consumers can meet a variety of labels (more than 40), covering the product quality, product origin, organic farming or other specific characteristics of a food product, namely the Klasa, Czech Product - guaranteed by Food Chamber of the Czech Republic, BIO – product of organic farming, Regional Food, Healthy Food, Protected Geographical Indication, Protected Designation of Origin, Traditional Speciality Guaranteed, EU Organic Farming, etc. (Ministry of Agriculture [online], 2014). In this paper, the attention is given to the Klasa label and Czech Product as the most known and the most frequently used labels.

Klasa can be actually underlined as the main quality programme at the national level. The label is awarded by the Minister of Agriculture since 2003 and may be granted only upon fulfilment of all conditions set forth in the “Regulations for awarding the Klasa national label”. Product which is the subject of the application for the label must demonstrate exceptional qualitative characteristics in at least one attribute which increase its added value and guarantees its uniqueness in relation to ordinary products available on the market (SZIF [online], 2011). Certification process is free of charge. By 10th January 2016, 1107 products from 224 Czech producers have been awarded with the Klasa label (SZIF [online], 2016).

The label “Czech Product - guaranteed by Food Chamber of the Czech Republic” (hereinafter referred to as “Czech Product”) was introduced in 2011 with the purpose to support the sales of food and agriculture products with respect to Czech origin and qualitative parameters of a product. The fee for the certification depends on size of the company and number of certified products. By 10th January 2016, 314 products from 58 producers were certified (Foodnet [online], 2016).

3.2 Food Quality Labels in the United Kingdom

Similarly, to the CR, there is also a high number of quality labels in the UK food products market, however not as much as in the CR. Among the best-known labels are included Red Tractor, British Lion Eggs, Soil Association Organic Standard, Great Taste, Freedom Food, and Certified Sustainable Seafood. Generally, UK food assurance schemes are run as product certification schemes that are accredited by the United Kingdom Accreditation Service. These schemes use regular independent inspections to check that members are meeting specific standards. Two of the leading schemes which can be recognised from their logos on food packs are Red Tractor and Lion Eggs (Food Standard Agency [online], 2016).

The Red Tractor scheme (launched in 2000), run by Assured Food Standards, certifies the food produced in Britain and reflects standard industry practice in the UK and quality standards, including **traceability** (where the food has been farmed, processed and packed), **food safety and hygiene, animal welfare, and environmental protection**. **Over 78 000 farmers are part of the Red Tractor scheme** (Red Tractor Assurance [online], 2016).

The British Lion Eggs (hereinafter referred to as “Lion Eggs”), launched in 1998, ensures eggs have been produced to the highest standards of food safety in accordance with UK and EU law and the Lion Quality Code of Practice. The Lion Quality mark can only be used by subscribers

to the British Egg Industry Council. Nearly 90 % of UK eggs are now produced within the Lion scheme and the Lion Eggs is the UK's leading food safety label with consumer recognition of more than 80 % (The British Egg Industry Council [online], 2016).

3.3 European Union Quality Schemes

Vital part of EU agricultural policy is an effort to improve food quality and safety. In order to allow producers to use the added value of their products, to protect the names of their products and to provide consumers clear information on the product origin, the EU has established (since 1992) the EU quality scheme known as Protected Designation of Origin (PDO), Protected Geographical Indication (PGI) and Traditional Speciality Guaranteed (TSG). PGI covers agricultural products and foodstuffs closely linked to the geographical area in at least one of the stages of production, processing or preparation. PDO denotes agricultural products and foodstuffs which are produced, processed and prepared in a given geographical area using recognised skills and ingredients from the region. TSG highlights traditional character of a product (with proven usage on the EU market for at least 30 years) either in the composition or production method (EUFIC [online], 2013; European Commission [online], 2015). The complete list of product names registered as PDO, PGI and TSG is included in the Database of Origin and Registration (DOOR database).

By 10th January 2016, there were registered 1317 product names as PGI, PDO and TSG in the DOOR database, including 33 Czech agro-food products (23 PGI, 6 PDO and 4 TSG products) and 59 UK agro-food products (33 PGI, 23 PDO and 3 TSG products). The CR is on 9th position and the UK occupies 7th position among EU countries in number of products registered in the DOOR database. The most certified product categories in the CR are Beer (27 % of all certified products) and Bread, pastry, cakes, confectionery and other baker's wares (27 %), the most often certified categories in the UK are Meat and meat products (28 %) and Cheeses (27 %) (European Commission [online], 2016a).

4. Problem Formulation and Methodology

The quality schemes aim to give consumers information on product quality, place or method of production, and help them to recognize quality food products. However, this function is fulfilled only if consumers are aware of the existence and meaning of quality labels. Although today's consumers give more attention to the food products quality, the current trend in food products certification has led to considerably grown number of quality labels both in a national and EU level and to the situation that instead of easier orientation in food quality, the effect is rather opposite (Horáček [online], 2014).

The research study was carried out in order to investigate the consumer attitudes towards food quality labels, to analyse familiarity and credibility of the labels and their influence on food products purchases, to determine whether significant differences do exist in the way consumers perceive the quality labels based on their socio-demographic characteristics, and to compare the insight from consumers of two EU countries, the CR and the UK. The food assurance schemes in the UK have a longer tradition in comparison with the CR, therefore we want to know if it has an influence on consumer awareness and attitudes to quality labels.

Survey method was based on a structured questionnaire that was divided into six sections. The first part consisted of questions aimed on the perception of the terms "good-quality food" and "quality labels", the second part was related to the awareness of food quality labels. Following third part comprised measuring perceived credibility of the labels. In the fourth part, respondents were asked about their purchases of certified products, and fifth part was focused

on promotion of quality labels. The last section includes socio-demographic characteristics of respondents. Two questionnaires, one for Czech consumers, the second for UK consumers, were developed, differing only in national quality labels. Two national labels from each country and three labels included in the EU quality schemes were chosen for the research (Table 1).

Table 1: Summary of Surveyed Labels

Czech labels		UK labels		EU labels		
						
Klasa	Czech Product	Red Tractor	Lion Eggs	PGI	PDO	TSG

Source: SZIF [online], 2016, Foodnet [online], 2016; Red Tractor Assurance [online], 2016; The British Egg Industry Council [online], 2016; European Commission [online], 2015

Data were collected in winter period 2014. A total of 350 respondents, 200 of Czech and 150 from the UK, selected with quota sampling method using the criteria of gender and age (from 20 to 74) were interviewed. Data for sample structure planning came from the Czech Statistical Office and from the Office for National Statistics in the UK (Czech Statistical Office [online], 2014; Office for National Statistics [online], 2014).

5. Problem Solution

Data were analysed using SPSS 19.0. Descriptive statistics and a series of Pearson Chi-Square tests were calculated for the purposes of the study to determine whether significant differences do exist between variables.

5.1 Perception of terms “Good-Quality Food” and “Quality Labels”

Respondents in both countries perceive the term “good-quality food” similarly. They associate it as a safe food, food with no artificial additions, made of natural ingredients (over 50 % of respondents) and beneficial to health (approximately 30 % of respondents). About 5 % of consumers connect the term with “manufactured in the CR / UK”.

The proportion of respondents, that are aware of the term “quality labels”, is shown in Table 2.

Table 2: Awareness of the Term “Quality Label”

		Awareness of the term “quality label”				Knowledge of “quality label” meaning (% of respondents)
		% of respondents	Pearson Chi-Square Asymp. Sig. (2-sided)*			
			Gender	Age	Education	
CR	Yes	77.00	0.094	0.276	0.557	35.00
	No	23.00				65.00
UK	Yes	39.33	0.206	0.336	0.951	17.33
	No	60.67				82.67

* significance level $\alpha = 0.05$

Source: authors’ calculations according to Pačková (2014)

Women are familiar with this term better than men and awareness slightly decreases with age of respondents, but the statistical dependence between awareness of the term and socio-demographic characteristics of respondents was not confirmed (Table 2).

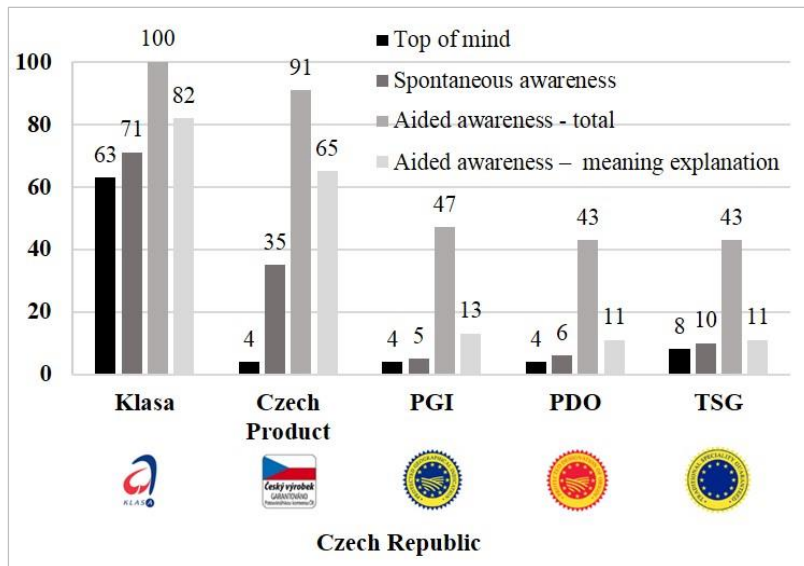
Only 35 % of Czech respondents and 17 % of UK respondents were able to explain the meaning of the term. In the CR, “quality label” is the most often perceived as certification of food fulfilling some criteria, or as a label guaranteeing product quality / product safety / raw materials used. UK respondents perceive the term “quality label” as a guarantee of product origin (they usually answered “made in the UK / EU”), guarantee of product safety or environmentally friendly production.

5.2 Spontaneous and Aided Awareness of Food Quality Labels

In the CR, the best-known national food quality label is Klasa (71 % of spontaneous awareness) and the best-known EU label is TSG (10 % of spontaneous awareness). The strong position of Klasa label among consumers is also confirmed by top of mind value (63 %). UK respondents most often mentioned Red Tractor among national quality labels (35 % of spontaneous awareness) and PGI among EU labels (19 % of spontaneous awareness), whereas spontaneous awareness of PDO and TSG labels is zero.

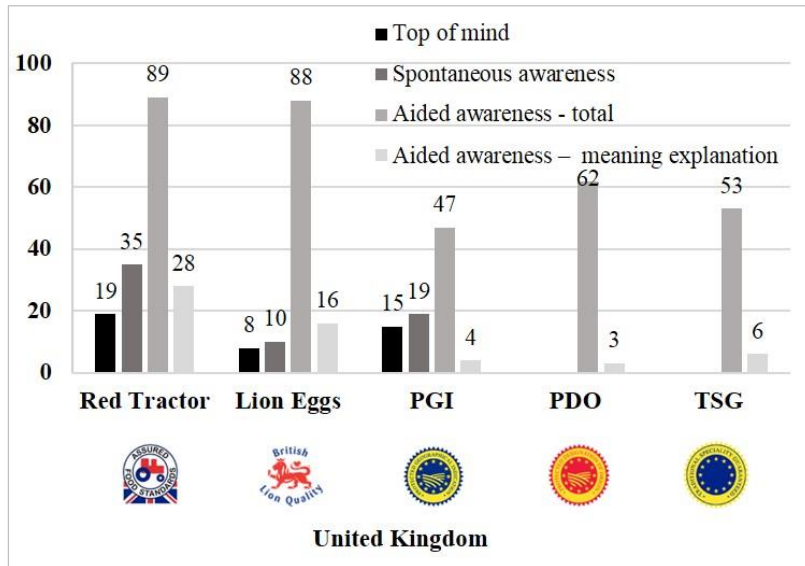
Aided awareness is the highest for national quality labels in both countries. Labels included in the EU quality scheme reached aided awareness lower than 50 %, with exception of PDO (62 %) and TSG (53 %) in the UK. Respondents were also asked to explain what the label logos mean. Czech respondents showed a better understanding to the meaning of logos. Comparison of spontaneous and aided awareness of food quality labels in both countries is shown in Figure 1 and Figure 2.

Figure 1: Comparison of Food Quality Labels Awareness in the CR (valid %)



Source: authors’ calculations according to Pačková (2014)

Figure 2: Comparison of Food Quality Labels Awareness in the UK (valid %)



Source: authors’ calculations according to Pačková (2014)

The dependence between quality labels awareness and socio-demographic characteristics of respondents (gender, age and education) was not confirmed.

5.3 Perceived Credibility of Quality Labels and Purchases of Certified Products

Respondents could indicate three most credible labels for them from the list shown. For both Czech and UK respondents the most trusted are national labels, namely Klasa label (70 % of respondents consider this label as credible) and Czech Product (36 %) in the CR and Red Tractor (68 %) and Lion Eggs (49 %) in the UK. EU food quality labels were indicated as credible only by 4 – 12 % respondents. Perceived credibility of the label is influenced by its awareness, i.e. the label with higher level of awareness is perceived as more credible. The dependence between perceived credibility and aided awareness of the label was proven for Red Tractor, Lion Eggs and PGI labels in the UK and for all labels in the CR (Table 3). Perceived credibility of EU quality labels could be also affected by trust in the EU. According to the research of Pawlasová, Spáčil and Valečková (2014), trust in the EU was proved by 40 % of Czechs (the same information related to the UK is not known).

Table 3: Dependence of Perceived Credibility on Aided Awareness of the Label

CR			UK		
Label	Dependence	As.Sig.*	Label	Dependence	As.Sig.*
Klasa	✓	0.005	Red Tractor	✓	0.033
Czech Product	✓	0.015	Lion Eggs	✓	0.003
TSG	✓	0.000	PGI	✓	0.042
PDO	✓	0.000	PDO	x	0.328
PGI	✓	0.002	TSG	x	0.934

* Asymp. Sig. (2-sided), significance level $\alpha = 0.05$

Source: authors’ calculations according to Pačková (2014)

Products certified with quality labels are purchased only by a small number of consumers, but there are differences depending on type of the label. In the CR, respondents purchase regularly mainly products certified with Klasa label (31 %) and “Czech Product” label (13 %). Quarter (27 %) of UK respondents purchase regularly “Lion Eggs” products (it could be influenced by expansion of the label, since nearly 90 % of UK eggs are now produced within the Lion scheme) and 19 % purchase “Red Tractor” products. Regarding EU quality labels, the situation is much worse. PGI, PDO and TSG products are regularly purchased only less than 5 % of respondents in both countries. There is a close connection between labels awareness, perceived credibility and purchase frequency. Products certified with known and credible label are more frequently purchased. The main reasons for choice of certified products are expected higher product quality (54 % in the CR, 59 % in the UK), previous good experience with the product (48 % in the CR, 32 % in the UK) and interest in support of domestic producers (51 % in the CR, 14 % in the UK; consumer ethnocentrism is stronger in the CR). On the contrary, the main barrier is lack of information about the labels (70 % in the CR, 45 % in the UK). The dependences between variables were not confirmed.

5.4 Promotion of Food Quality Labels

Consumers from both countries recalled only the promotion of national food quality labels (66 % in the CR, 33 % in the UK). Czech respondents are aware TV advertisement, while respondents from the UK have noticed the promotion in shopping centres. Twenty-nine percent of UK's and even 63 % of Czech respondents perceive a lack of information about the quality labels and they consider these information as useful tool leading to an increase a consumer interest in the topic (69 % of Czech and 78 % of UK respondents). Using Chi-square test, relation between perception of information on the topic and awareness of quality labels was not confirmed. There is also no dependence between perception of information on quality labels and socio-demographic characteristics of respondents.

Not only mass-media promotion, but also highlighting the labels at the point of sale can attract the consumer attention to the labels and certified products. Therefore, respondents were asked about the preferred way of promoting certified products at the point of sale. Czech respondents prefer to highlight the products right in the shelf (54 %), to place them into a special area in the shop (36 %) or to organize tastings of products with certified quality (30 %). To place the certified products into the retail leaflet (53 %) and to highlight the products in the shelf (47 %) were the most frequent answers of UK consumers.

6. Conclusion

Findings revealed a better awareness and perceived credibility of the national food quality labels than EU labels by consumers in both countries. The main barrier in purchases of certified products is a low familiarity of quality labels caused by shortage of information or inadequate presentation of that information. Presented results indicate that labels need to 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.

All research studies are subject to limitations and this research was no exception. The study was conducted in two EU countries only and sample of respondents has limited size. Not all food quality labels were included into the study due to their high number; the attention is given only to two national labels in each country and three labels included in the EU quality scheme. Due to limited length of the article, there is also limited scope of problem areas solved in the

study. Following limitation, several possible future research paths appear to be useful. Firstly, the study could be repeated in order to compare the changes in consumer awareness and attitudes. It could be also useful to conduct more extensive research focused on other food quality labels, mainly labels of organic farming or regional quality labels. Further, since the results of the study are related only to the Czech and the UK market, it would be interesting to carry out a study including more EU countries. On the other hand, it would be interesting in future research to find out, why such a small country as the Czech Republic need more than forty food quality labels. Finally, the attention would be paid to consumer typology based on consumer attitudes to food quality labels, using factor and cluster analysis.

Acknowledgements

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Alternative Views on the Debt Financing of Public Sector in the EU

Martin Vološin, Darina Vološinová

College of International Business ISM Slovakia
Department of Economy, Management and Marketing
Duchnovič square, 1
Prešov, Slovak republic
e-mail: volosin@ismpo.sk, volosinova@ismpo.sk

Abstract

Fiscal imbalances and debt financing in the public sector is now considered to be a normal state. However, the growing indebtedness of governments, as shows the example of Greece, generates the growing problems and economic instability, not only in given country but also internationally. The paper deals with the causes and consequences of long-term fiscal imbalances and growing government debt in selected countries of the European Union, and particularly the euro area. The focus of this paper is discussion about the alternative views to the debt financing of public budgets given the current situation in the euro area countries and the tendency to suspend fundamental systemic solution of the debt problem.

Keywords: Debt Financing, Fiscal Imbalance, Public Debt

JEL Classification: E62, G01, G28, H63

1. Introduction

The problem of fiscal imbalance is a continuing phenomenon in most countries. The manifestation of fiscal imbalance is in particular the regular budget deficit and consequently, the growing sovereign or public debt. Today, many states show a significant imbalance between its annual revenues and expenditures. Basic options for addressing the fiscal imbalances are: the budget solution - debt repayment by budget surpluses, debt coverage, monetary coverage (transformation of the budget deficit to the growth of the monetary base), coverage by revenues from the sale of state financial assets (privatization of national companies for example), by extraordinary capital dose (the solution of deficit by a lump-sum tax) and administrative solutions. The problem is that the implementation of any solutions to reduce government debt, needs the political will and social consensus.

European economies are currently struggling with rising unemployment, economic slowdown and the debt crisis. Therefore the prevailing opinion is that the deficit reduction should not come at the expense of economic growth. In theory, there are two possible solutions. The first is based on the application of moderate expansionary policy at the cost of further increasing the deficit, which would allow the economic recovery and fiscal stabilization. The second solution is the path of slightly restrictive or neutral policy with a strong focus on more effective expenditure.

Expansionary policy in the short term brings growth in real output and employment, but also the rise in price levels and inflationary pressures if the real product is close to the potential product. The long-term consequences of an expansionary fiscal policy is that the level of real output and employment is unchanged, but the price level increases. But the increasing government investment in development and structural projects, public works and public

employment projects also causes crowding out effect of private investment. If the government implemented an expansionary fiscal policy through tax policy (reduction of tax rates, tax reform), such a change causes at the same time the growth of aggregate supply and aggregate demand. If these concurrent changes affect positively the real output rather than the price level, it can be concluded that the tax reform was successful.

Czech economist Václav Klaus is a strong critic of the government expenditure debt financing and calls it a *system error*. In economic terminology, it is a breakage of the link between the performance and the standard of living. In the view of V. Klaus governments ceased to respect the old rule of the *hard budget constraint*. Europe should therefore get rid of its "Soziale Marktwirtschaft". The European Monetary Union is another example of the dominance of politics over economics. It was created between the very disparate countries without the support from fiscal and political union. Its proponents undoubtedly hoped that the monetary union will help to create a fiscal and political union, which was - after all - always their goal. The fiscal union may be created, the price for its continuation, however, will be huge and it will be paid by anyone other than European citizens, of course involuntarily. System characteristics of the continent will be worse than now, redistribution will increase and the individual motivation will weaken further (Klaus, 2011, 2015).

In respect of a real risk that the budget deficits and slow economic growth will be a permanent feature of European countries we will try to highlight some important aspects of this development and possibilities of finding the relevant solutions. In the next part we will show in more detail the public debt development in the euro area.

2. Public Debt Development in the Euro Area since 2005

Table 1 presents the evolution of public debt in the euro area countries since 2005. Part of countries in the initial period, when the economy was located in the expansion phase (2005-2008) showed the public debt greater than 60 %. Troubled countries were particularly Belgium, Greece, Portugal and Italy with the indebtedness of around 100 % of nominal GDP. In the second sequence were the countries that still failed to meet the Maastricht criteria, but tried to reach the sustainability of debt around 60 % (Germany, France, Portugal as well as Malta and Cyprus). Relatively good position in these years kept Ireland, Spain, the Netherlands and Finland.

The current situation is significantly changed. Since 2008, which is referred to for the first year of the economic depression, to 2011 further rapidly expanded the government debt of Greece and Ireland, Portugal, Spain and Austria, the consolidation of government debt has become problematic also in Germany and France. The public debt grew also in the Netherlands and Cyprus.

Since 2011, a noticeable effort to stop negative trends is visible (Table 2). The reduction in total debt has reached Germany, Greece, Ireland, Malta and Latvia. Nevertheless, the total debt of up to six members of the euro zone (Greece, Italy, Portugal, Cyprus, Belgium and Ireland) exceeds 100% of GDP. Besides these, the debt of France and Spain is close to 100% of GDP. The debt of Austria and Slovenia is growing and exceeds 80%, Germany's debt is still more than 70%, and the debt of Malta, Finland and the Netherlands exceeds 60%. Currently, the debt criterion fulfills only Luxembourg, the Baltic countries and Slovakia.

Table 1: Public Debt Development in the Euro Area 2005-2010 in % of Nominal GDP

	2005	2006	2007	2008	2009	2010
Belgium	92,2	87,9	84	89,6	95,8	96
Germany	67,8	67,6	65,1	65,9	74,4	83
Estonia	-	-	-	4,5	7,2	6,7
Ireland	27,5	24,9	25	43,2	65,1	92,5
Greece	98,8	95,9	94,8	113	129,4	145
Spain	43	39,6	36,2	39,5	53,9	61,2
France	66,4	63,7	63,8	68	79,2	82,3
Italy	105,8	106,5	103,5	105,8	116	118,6
Cyprus	69,1	64,6	59,4	49,1	58,5	61,5
Luxembourg	6,1	6,7	6,9	14,7	14,8	19,1
Malta	69,8	63,7	62,1	64,1	68,1	69,4
Netherlands	51,8	47,4	45,6	58,2	60,8	62,9
Austria	63,7	62	59,4	63,8	69,5	71,9
Portugal	63,6	64,7	63,5	71,6	83,1	93,3
Slovenia	27	26,7	23,4	22,8	35,3	38,8
Slovakia	34,2	30,4	29,4	27,6	35,6	41,1
Finland	41,4	39,2	35,1	33,4	43,5	48,4

Source: European Commission, Bulletin ECB, August 2012

The last line of Table 2 shows that the total debt of the euro area after 2010, while continuing to grow, but this growth shows a declining trend. In 2012, the total indebtedness grew by 4,9%, in 2013 by 2,4%, in 2014 by 1,6%, and in 2015 the total debt of EU 19 for the first time decreased by 0,3%.

In comparison to the euro zone members, the UK national debt in 2015 amounted to £1600 billion, or 86,8 % of total GDP; published by the Office for National Statistics (ONS). The annual amount that the UK government must borrow to plug the gap in its finances is now called the *Public Sector Net Cash Requirement* (PSNCR). The PSNCR figure for 2014/15 was £93,4 billion, or 5,2 % of GDP. Total British GDP in 2014/15 was around £1808 billion. By historic peacetime standards, the national debt is large and growing quickly, but it is much lower than its peak after WW2 when it reached over 180 % of GDP. The British Government's debt is owned by a wide variety of investors, most notably pension funds. These funds are on deposit, mainly in the form of Treasury bonds at the Bank of England. As of 2011 around 35 % of the national debt was owed to overseas governments and investors.

Important consequences of public debt represent its impact on the economic growth. Šulíková showed an asymmetric relationship between public debt and economic growth in selected countries of the European Union in the period 1993 – 2013 (Šulíková, 2015). With the use of panel data model she identifies a linear relationship between the decline of public debt (% of GDP) and economic growth, while the correlation between the increase in public debt and economic growth is described by inverse U-curve with a peak at 64% of public debt. In the relationship between public debt and economic growth two functional types are identified: *loop-shaped hysteresis* - the data copy a closed circle defined at intervals of 53 -113% of GDP (e.g. Austria, Finland, Denmark) and *debt trap* - when crossing borders 113% of GDP an

indebtedness increase accompanied by a decline in GDP follows the diverging part of the parable (Greece, Italy, Portugal).

Table 2: Public Debt Development in the Euro Area 2011-2015

	2011	2012	2013	2014	2015(Q2)
Belgium	102,2	104,1	105,1	106,7	109,3
Germany	78,4	79,7	77,4	74,9	72,5
Estonia	5,9	9,5	9,9	10,4	9,9
Ireland	109,3	123,2	128,8	132,3	102,0
Greece	172,0	159,4	177,0	178,6	167,8
Spain	69,5	85,4	93,7	99,3	99,5
France	85,2	89,6	92,3	95,6	97,7
Italy	116,4	123,2	128,8	132,3	136,0
Cyprus	65,8	79,3	102,5	108,2	109,7
Latvia	42,8	41,4	39,1	40,6	36,0
Lithuania	37,2	39,8	38,8	40,7	37,6
Luxembourg	19,2	22,1	23,4	23,0	21,9
Malta	69,8	67,6	69,6	68,3	68,9
Netherlands	61,7	66,4	67,9	68,2	67,1
Austria	82,2	81,6	80,8	84,2	86,4
Portugal	111,4	126,2	129,0	130,2	128,7
Slovenia	46,4	53,7	70,8	80,8	80,8
Slovakia	43,3	51,9	54,6	53,5	54,5
Finland	48,5	52,9	55,6	59,3	62,4
EU 19	86,1	91	93,4	95	94,7

Source: European Commission, Bulletin ECB, January 2016

Continuing difficulties in bridging the fiscal imbalance suggest that it is indeed necessary to adopt more systemic solutions to this problem and to consider the alternative ways of addressing it.

3. Alternative Views on Public Expenditures Debt Financing

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. An example is the growth of debt problem and the problem of monetary stability in the euro area. Both mentioned problems are mainly accompanied by efforts to postpone radical solutions and passing the consolidation costs on entities that did not cause the problem.

The essence of this development in our view was firstly revealed by J. K. Galbraith, who is a representative of the socio-economic concept of capitalism. The key to understanding his approach is the thesis of the coexistence of two systems in the economy: “planned” and “market” system, where the planned system represents the world of large corporations - the crucial sphere of social transformations. In this system the boundaries between economics and politics are blurred, and private industry coincides with the state power. Market system by Galbraith exists only in a sphere of small and medium enterprises (Parker, 2005).

The main problem of this arrangement according to Galbraith is the uneven economic development. Specific conditions that promote uneven economic development are caused by

“technostructures” of corporations very close bounded with the state. The growth of government expenditure does not indicate the growing needs of society, but is affected by the planned system including the main financial and non-financial corporations. It is therefore necessary to create conditions for the needs of the less developed parts of the planned and market system. In these parts of the economy the funds for research and human resource development are insufficient. Therefore, the purpose of tax policy should primarily be the greater equality in the frame of the planned system. The best tool for the equality ensuring is the reasonable income distribution, which is then adjusted by the tax system. Galbraith strongly supports progressive taxation as a means of ensuring equality. Galbraith’s reform is also based on restrictions of the use of monetary policy. It is based on the argument that monetary policy should help the most developed part of the economy - planned system, and discriminates its the weakest part - the market system. The author is an advocate of stable and low interest rates. The market system is more dependent on loans and low interest rates may contribute to the development of this part of the economy, which is in line with the needs of society.

Slovak economists Goliaš and Jurzyca from INEKO proposed several solutions of the debt problem in euro area based on the principle of financial help. The purpose of providing financial assistance to indebted euro zone countries is to avoid uncontrolled bankruptcies that could lead to a breakdown of the euro area with severe negative consequences for all members of the EU. There is a high probability that the loans provided via the stability mechanisms will not be fully recovered. Nevertheless, the long-term benefits of those loans are expected to exceed the costs. Therefore, this form of financial assistance should be regarded as an investment that has its own rate of return, one that can be controlled for by insistence on adherence to certain rules of behaviour and diligent oversight.

Slovakia, along with the other euro zone member states, is a participant in the financial aid programs that currently provide assistance to Greece, Portugal, Ireland, Spain and Cyprus. Slovakia has taken part in all of the rescue programs implemented in the euro zone with the exception of the first Greek bailout. Its total contribution exceeds €2,6 billion, or 3,6% of its GDP in 2013, and its total participation in the European Stability Mechanism (ESM) accounts for 7,1% of its GDP (Goliaš and Jurzyca, 2014).

The decisions about euro zone bailouts and the introduction of safety mechanisms have aroused intense public debate in Slovakia. As a consequence, it became the only euro zone country that refused to participate in the first bailout of Greece. The failed vote on the expansion of the European Financial Stability Facility (EFSF) and resulting fall of the right-wing government in 2011 caused a deep rift between the liberal SaS party and the country’s three other right-wing parties. The philosophy of financial assistance proposed by INEKO is based on several points and proposals. The first group of proposals includes:

- requirement of strongly conditional assistance,
- enforcing independent and centralized supervision over public finances,
- implementing of structural reforms.

Next part of solutions calls for the systemic changes to be implemented at the EU level:

- building a deeper fiscal union,
- creating a complete banking union,
- introducing non-zero risk weights for sovereign debt,
- establishing a debt resolution scheme for sovereign debt,
- reducing the 100% guarantee for depositors,

- including non-euro zone members of the EU in the rescue programs.

The INEKO propositions put a great importance on internal and external communication. The solution includes greater focus on public education, monitoring and informing the public about structural changes adopted by countries taking financial assistance and disclosing of hidden public debt. To avoid increases in bond yields or sanctions imposed by official debt brakes or the fiscal compact, governments might be tempted to hide some of their debts or not to display them on their public financial balance sheets or official public debt registers. According to INEKO observations, the most common ways of hiding debt used in Slovakia are the use of public-private partnerships (PPP) and transferring debt to public companies.

According to Eurostat, PPP projects may be excluded from the public finance balance sheet as long as the private investor takes on the construction risk (i.e., the commitment to build a certain facility in a given timeframe and by fulfilling quality criteria stated in the contract) and one of two other risks, either the availability risk (i.e., the commitment to make the facility available during a given time period according to the quality control criteria stated in the contract) or the demand risk (i.e., the commitment to cover payments for using the facility for a given time period regardless of changes in demand for the services it offers). In practice, the governments are tempted to transfer the construction risk and the availability risk to a private investor and to take the full demand risk on themselves. The problem is that this setup is often used for the construction of public facilities in which the fees collected from end-users covers only a fraction of the installments agreed under the PPP contracts. Thus, the uncovered part of the installment in fact becomes government debt. In Slovakia, a PPP contract was used to build a highway, creating hidden debt amounting to 3% of GDP. According to the EIB analysis all of the euro zone countries taking financial support from the stability mechanisms are among the top users of PPP projects. The world's number one is Portugal, where PPP projects amounted to more than 10% of GDP.

To prevent the extensive use of PPP projects to obscure public debt rather than increasing efficiency, the EU should redefine its rules for including PPP projects on the public finance balance sheet and public debt register. These projects should be included where the government takes the full demand risk and the fees collected by end-users do not cover a part of the installments agreed under the PPP contracts.

The governments also might hide its debts by transferring them to state companies, such as railway and highway operators, state hospitals, etc. Therefore, the debts of government-owned corporations should also be included in the public debt totals. Another specific type of hidden public debt is uncovered pension liabilities, particularly from pay-as-you-go (PAYG) public pension schemes. Therefore, the EU should adopt an accrual accounting system for pension liabilities that would disclose this type of debt.

4. Conclusion

The authors believe that the current problem consists not only in the debt financing itself and in the continued growth of the public debt, but it is a broader economic problem associated with a decrease in government revenues due to the economic slowdown, the growing economic power of financial institutions and great corporations and increasing of their political influence on governments. This is most visible in the weaker euro zone economies whose competitiveness is reduced by the hard currency introduction and other factors. Ongoing economic changes require a reassessment of the role of government in the economy and the international coordination of the EU economic policy. A new type of government policy must

reflect the nature of the new economy, in which the boundaries between internal efficiency improvements and the provision of goods and services to the public are blurring.

Official consolidation strategy pursued by the European institutions is based mainly on so-called "rationalization" of government spending, which mainly represents their reduction. They have a certain advantage - the ability to convince the public that the government's reform program is meant seriously and will lead to a sustained recovery of public finances. On the other hand, a drastic reduction in government spending is hardly economically and politically feasible (example of Greece), we are therefore inclined to the alternative view that it is necessary to limit the benefits of transnational corporations and to help the weaker domestic enterprises to break free from a subordinate position. Furthermore, in a contrary to the official policy, it is necessary to focus on revenue growth and effective use of existing government expenditure in favor of economic growth and balancing the economic position of large and small companies, but also of economic convergence between stronger and weaker economies within the European Union.

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The Assessment of Market Risk for the Socially Responsible Companies in the Background of the EU Climate Policy

Aneta Włodarczyk

Częstochowa University of Technology
Management Faculty, Econometrics and Statistics Department
Armii Krajowej 36b
Częstochowa, Poland
e-mail: aneta.w@interia.pl

Abstract

It is expected that leading socially responsible firms, demonstrating strong Environmental, Social and Governance (ESG) practice, attracts investors who want to avoid regulatory uncertainty connected with the EU climate policy. This uncertainty concerns inter alia the European Union Emission Trading System (EU-ETS). In this paper the author examined the volatility behaviour of the CO₂ emission allowance prices and Dow Jones Sustainability Europe Index quotations in two aspects: changes of systematic risk of socially responsible companies' portfolio in the periods dated by operational Phases of the EU ETS, the identification of higher risk periods on the carbon permits market and on capital market. Empirical analysis shows that the influence of CO₂ emission allowance price on the value of the portfolio of socially responsible companies is statistically insignificant for each analyzed period of the EU ETS functioning. Moreover, the periods of increased volatility occurrence - and thus, higher specific risk - are not the same on both markets.

Keywords: *EU Climate Policy, Carbon Market, ESG Practice, Socially Responsible Investment, GARCH*

JEL Classification: *C20, Q58, G11*

1. Introduction

The concept of corporate social responsibility is not only the subject of a growing interest of the managerial staff, but also investors, especially in the period of rapid and unexpected assets price changes on capital, commodity and monetary markets. Socially Responsible Investing (SRI) is connected with making investment decisions which are based not only on evaluation of financial condition of enterprise, but also evaluation of interaction between the enterprise and the society as well as addressing the issue of the impact the enterprise has on natural environment (Starr, 2008). Environmental, Social and Governance (ESG) practice may also constitute an enterprise reply to the changing law regulations in the European Union, in the area of climate change and reduced greenhouse gasses emission (GHG). Considering the above, one can expect that socially responsible investments will gain in popularity in the period of tightening up the policy of greenhouse gases emission by the EU and launching the EU ETS. Among them one can distinguish investments into enterprises producing or contributing to production of renewable energy sources, dealing with collecting and recycling package waste, developing new bio-technologies (Mesjasz-Lech, 2012). Attention of investors is also drawn by companies which offer traditional products or services and simultaneously include in their operational strategies principles of corporate social responsibility.

Therefore, the aim of this paper is to examine the volatility behaviour of the CO₂ emission allowance prices and Dow Jones Sustainability Europe Index quotations in two aspects: changes of systematic risk of socially responsible companies' portfolio in the periods dated by operational Phases of the EU ETS, the identification of higher risk periods on carbon permits market and on capital market, in the group of socially responsible companies. Empirical analysis is based on the construction of multifactor models and GARCH class models over the period 2005 – 2015.

2. CSR Concept and Changes of Law Regulations Concerning CO₂ Emission

The contemporary concept of Corporate Social Responsibility stresses the protection and growth of social welfare obtained through making proper decisions and actions of strategic dimension. At the basis of the strategic attitude to corporate social responsibility lies an assumption that economic and social goals of enterprises do not exclude one another, as it is possible to generate the economic value in the way that is beneficial also to the society. Thus, taking actions regarding the social interest of individuals and groups connected with a given enterprise means not only preventing and liquidating negative social phenomena, but it also means creating a social welfare. The existence of these negative phenomena is largely connected with the technological changes, which is the cause that more importance is attached by the managerial staff of enterprises to efficient communication between stakeholders of safety and health of employees (Pytel-Kopczyńska and Strzelecka, 2012). A strategic approach to CSR may result in various benefits for enterprises connected, among others, with: supporting the management process of operation continuity, reinforcing competitive advantage, improved financial results, larger transparency of company's operations for the stakeholders, activating stakeholders, promoting the positive image of the company, attracting investors. A universal tool for measuring the engagement of the listed companies in the CSR area actions may be sustainable stock market indexes, e.g. Dow Jones Sustainability Europe Index (DJSI Europe). Indexes of this type comprise companies, which voluntarily agreed to auditing in the scope of social responsibility and possess experience connected with their concept and strategy, verified not only on the basis of carried out social or environmental projects, but first of all on the basis of implemented permanent CSR procedures. A precisely defined set of economic, social and environmental criteria accompanied by the values has been proposed by SAM Research Group to estimate chances and threats of enterprises included in DJSI Europe. Moreover, all the companies are subject to the monitoring with regard to evaluating the functioning of a system for managing possible crisis situations in the enterprise, which may constitute a threat to its financial results or reputation. All crisis situations, including the changing law regulations in the scope of GHG emission reduction, verify the content of this index as companies that identify the CSR concept only with philanthropic actions or a factor that improves the positive image of the company at the time of the crisis discontinue this activity. Only these enterprises whose CSR activity has been integrated with the enterprise management strategy remain in the sustainable development index despite the turmoil that occur in the enterprise's environment (Ludzińska, 2010).

It is also worth emphasizing that for numerous stakeholders in enterprises from various sectors the issues of climate changes constitute the key issues in the social responsibility and sustainable development areas, primarily due to the legal risk connected with establishing national limits of greenhouse gases emission in the member states of the EU. A priority of the current climate and energy policy of the EU is to reduce the internal emission of greenhouse gases until the year 2030 by not less than 30%, compared to the emission level from the year

1990. The outlined goal will be carried out jointly by all member states of the European Union, rationally with relation to costs, in such a way that 43% reduction of CO₂ emission will be obtained by 2030, in comparison with the year 2005, in the sectors covered by the European Union Emissions Trading System and 30% in the sectors not included in the system. Changes in the previous regulations concerning the increase up to 27% the share of RES in the energy balance of the EU as well as improved by at least 27% energy efficiency increase the uncertainty as to the conditions in which enterprises are going to function in the future (European Council [online], 2014). The basic instrument of the EU climate policy is the EU ETS, comprising over 11000 installations from the energy and energy-intensive industry sectors (oil refineries, steel works and production of iron, aluminum, metals, cement, lime, glass, ceramics, pulp paper, cardboard, acids and bulk organic chemicals) from the EU-28 countries and Norway, Liechtenstein and Iceland. The principal rule of the EU ETS work is "cap and trade". The EU has set a cap, that is the upper limit of the total volume of greenhouse gases emissions that may be emitted by power plants and other companies covered by this system in a given year. Functioning of the EU ETS is divided into four Phases (EU Emissions Trading System [online], 2016):

- **Phase I (2005-2007):** the first trading period used for "learning by doing"; decentralized cap-setting; the EU cap resulted from the aggregation of the National Allocation Plans of each Member State; excessive number of allowances referred to the real needs; the price of first-period allowances falls to zero in 2007; nearly 100% free allocation through grandfathering; some Member States used auctioning and some used benchmarking;
- **Phase II (2008-2012):** decentralized cap-setting; the way of EUAs allocation similar to Phase I; the number of allowances was reduced by 6.5% for the period; the economic crisis limited GHG emissions; the surplus of unused allowances and credits; Iceland, Norway and Liechtenstein joined the system; aviation brought into the system;
- **Phase III (2013-2020):** introduction of an EU-wide cap on emissions (reduced by 1.74% each year) and a progressive shift towards auctioning of allowances in place of cost-free allocation; in 2013 about 40% of total allowances were auctioned, with different allocation rules for the electricity (100% auctioning with optional derogation for the electricity sector in certain Member States), manufacturing (free allocation is based on benchmarks) and aviation sectors (15% of allowances are auctioned and 82% allocated for free based on benchmarks, 3% constitutes a special reserve for new entrants and fast growing airlines); back-loading; New Entrants Reserve determined; Croatia joined the ETS;
- **Phase IV (2021-2028):** the increase of the annual linear reduction factor from 1.74% to 2.2% beginning from 2021 in order to reduce the cap on the maximum permitted emissions; introduced changes in the current system of free allocation: updating of the benchmark values according to technological progress in the different sectors, adjustment of the amount of free allocation respectively to changes in the production levels, measuring and monitoring the risk of carbon leakage; transfer of 250 million unused allowances from 2013-2020 in order to establish a reserve for new and growing installations.

Therefore, of vital importance for taking actions in the CSR area is also the risk of CO₂ emission allowance prices, as carbon fees reflected in the energy prices will also affect entities that do not belong to the European Union Emissions Trading System.

3. Systematic and Specific Risk Models for DJSI Returns

The empirical analysis was conducted in two main stages. In the first stage, the multifactor market model was used in order to examine whether the launch of the EU ETS and the changes of its functioning rules may influence on the market value of the DJSI Europe portfolio. The sample period was divided into three subsamples, corresponding to each of the Phases of the EU ETS functioning. In each subsample, the Capital Asset Pricing Model with GARCH structure was estimated in order to determine the systematic risk level (Schaeffer et al, 2012; Laurent, 2013):

$$r_{DJSI,t} = \alpha + \beta \cdot r_{SPE350,t} + \varepsilon_t \quad (1)$$

$$\varepsilon_t = v_t \sigma_t, v_t \sim i.i.d. D(0,1) \quad (2)$$

$$\sigma_t^2 = \omega + \sum_{i=1}^q \alpha_i \varepsilon_{t-i}^2 + \sum_{j=1}^p \beta_j \sigma_{t-j}^2 \quad (3)$$

or

$$\sigma_t^2 = \omega + \sum_{i=1}^q (\alpha_i \varepsilon_{t-i}^2 + \gamma_i S_{t-i}^- \varepsilon_{t-i}^2) + \sum_{j=1}^p \beta_j \sigma_{t-j}^2 \quad (4)$$

where: $r_{DJSI,t}$ is the daily logarithmic return of DJSI Europe in day t, $r_{SPE350,t}$ is the market logarithmic return (S&P Europe 350) at day t, ε_t is the stochastic error term with the conditional variance σ_t^2 following a GARCH(p,q) model (3) or GJR-GARCH(p,q) model (4), v_t is an independently and identically distributed process with zero mean and unit variance, $D(\cdot)$ is a probability density function, $\omega > 0$, $\alpha_i \geq 0$ ($i = 1, 2, \dots, q$), $\beta_j \geq 0$ ($j = 1, 2, \dots, p$), S_{t-i}^- is a dummy variable that takes value 1 when ε_t is negative and 0 otherwise. Additionally, the unconditional variance of given time series is determined as follows (Laurent, 2013):

$$\sigma_t^2 = \frac{\omega}{1 - \sum_{i=1}^q \alpha_i - \sum_{j=1}^p \beta_j} \quad (5)$$

or

$$\sigma_t^2 = \frac{\omega}{1 - \sum_{i=1}^q (\alpha_i - \gamma_i E(S_{t-i}^-)) - \sum_{j=1}^p \beta_j} \quad (6)$$

where: the unconditional variance of GARCH(p,q) is given by (5) and the unconditional variance of GJR-GARCH(p,q) is given by (6).

Beta coefficient in model (1) is the systematic risk measure that illustrates sensitivity of the DJSI Europe portfolio on market portfolio changes. In the case when $\beta = 1$, the expected return of DJSI Europe portfolio is determined by the risk premium of market portfolio. $\beta > 1$ means that the DJSI Europe portfolio is more volatile compared to market portfolio, in other words it is an aggressive portfolio. When $\beta < 1$, the DJSI Europe portfolio represents groups of defensive portfolios, which are characterized by lower volatility than market portfolio. Beta coefficient is often used for the construction of the risk-sensitive profitability measures that help investors compare the attractiveness of different investment portfolios (Skrodzka, 2015). Next, carbon dioxide emissions allowances prices are incorporated into the market model in order to capture their influence on the market value of the socially responsible companies:

$$r_{DJSI,t} = \alpha + \beta \cdot r_{SPE350,t} + \varphi \cdot r_{EUA,t} + \varepsilon_t \quad (7)$$

where $r_{EUA,t}$ is daily EUA future price return in day t. The GARCH structure, similarly to model (1), also describes the conditional volatility of error term in two-factor model (7).

It is expected that ESG practice and the incorporation of the CSR concept into risk strategy of DJSI Europe companies ought to protect them against carbon market risk. Therefore, the estimates of beta coefficients ought to be the same in the periods corresponding to different EU ETS Phases and the estimates of gamma coefficients ought to be negative and statistically insignificant.

In the second stage, the specific risk of the DJSI companies is assessed, based on ARMA(P,Q) – APARCH(p,q) model with t-Student or skewed t-Student distribution. The comparison between higher volatility periods on carbon market and capital market is made, by identifying the conditional variances of the DJSI Europe returns and the returns of the EUA futures prices (Hoti, McAleer and Pauwels, 2005; Laurent, 2013):

$$\Psi(L)(r_t - \mu_t) = \Theta(L)\varepsilon_t \quad (8)$$

$$\Psi(L) = 1 - \sum_{i=1}^n \psi_i L^i, \quad \Theta(L) = 1 + \sum_{j=1}^s \theta_j L^j \quad (9)$$

$$\varepsilon_t = v_t \sigma_t, \quad v_t \sim i.i.d. D(0,1) \quad (10)$$

$$\sigma_t^\delta = \omega + \sum_{i=1}^q \alpha_i (|\varepsilon_{t-i}| - \gamma_i \varepsilon_{t-i})^\delta + \sum_{j=1}^p \beta_j \sigma_{t-j}^\delta \quad (11)$$

where: L is the lag operator, $\delta > 0$ and $-1 < \gamma_i < 1$ ($i=1,2,\dots,q$).

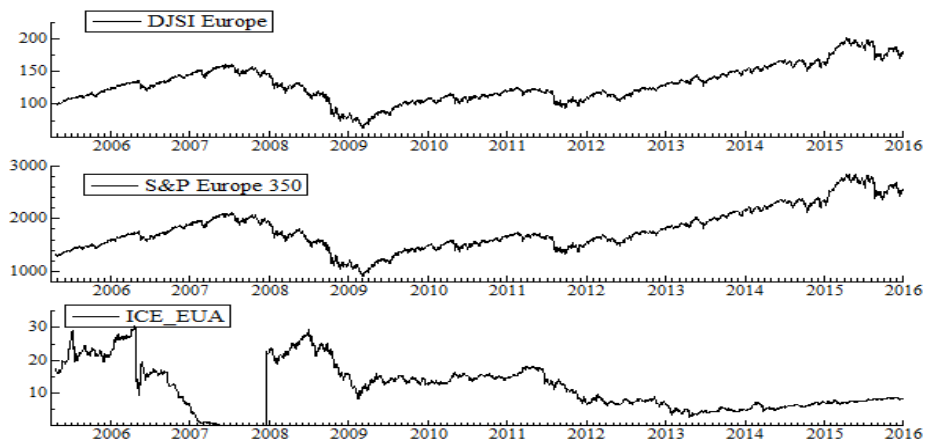
Models' parameters are estimated by means of the quasi maximum likelihood method and the best model in each class is chosen on the basis of Bayesian information criterion (Laurent, 2013).

4. Data Description and Empirical Results

In this research the author analyzed short-term relations occurring between the portfolio of socially responsible companies approximated by Dow Jones Sustainability Europe, the market portfolio represented by Standard & Poor's Europe 350 Index and the futures portfolio for CO₂ emission allowances in the period from 22.04.2005 to 31.12.2015 (daily data). The choice of the research period is connected with the launch of the EU ETS system and starting the listings of futures for EUA on the Intercontinental Exchange Future Europe (ICE Future Europe). Dow Jones Sustainability Europe Index is based on the corporate sustainability assessment published by RobecoSAM, which identifies European sustainability leaders on the basis of economic, environmental and social criteria. The top 20% of the largest 600 companies in the S&P Global BMI, which represent 57 industry groups, are included in DJSI Europe. The benchmark for stock market portfolio is S&P Europe 350 Index, which consists of 350 leading blue-chip companies drawn from 16 developed European markets. The key criterion of selecting companies to the index is their capitalization, which in the year 2015 varied from EURO 1149.72 to 218368.28 million, with a median amounting EURO 13175.58 million. In order to obtain a representative carbon price for derivatives transaction I follow Chevallier (2009) and consider annual EUA futures, which expire in December, for 2006 up to 2016. The EUA price series (denoted as ICE_EUA) were constructed on the basis of the daily ICE EUA Futures Contract Emissions Index (EUR/tCO₂e) obtained from ICE Future Europe, which correspond to the contract with the closest maturity date. The specificity of CO₂ emission

allowances trade is connected with obligatory referencing of CO₂ emission allowances at the end of each calendar year. This is the main reason for the greatest popularity of December contracts among the market participants. Shaping of daily closing prices for DJSI Europe, S&P Europe 350 and the constructed for the needs of this research a benchmark series for the futures contracts for CO₂ emission allowances are presented in Figure 1.

Figure 1: Daily Quotations of the Indexes DJSI Europe, S&P Europe 350 and Future Contracts for CO₂ Emission Allowances in the Period from 22.04.2005 to 31.12.2015



Source: author's work.

Before performing essential analysis, the Augmented Dickey-Fuller Generalized Least Squares (ADF-GLS) and Kwiatkowski-Phillips-Schmidt-Shinn (KPSS) tests are used to identify the order of integration for each time series in analyzed sub-periods. It is found that DJSI Europe, S&P Europe 350 and ICE_EUA price series are nonstationary, but their logarithmic returns are stationary (except the ICE_EUA returns series in the Phase I of the EU ETS). Therefore, all GARCH (p,q) class models are estimated for DJSI Europe, S&P Europe 350 and ICE_EUA logarithmic returns series.

The next stage of the analysis involved building a model of capital assets evaluation (1) -(4) in order to estimate the size of systematic risk (beta sensitivity coefficient) for the portfolio of socially responsible companies. According to the research by Hamner and Longa (2003), companies with a mature approach to the concept of social responsibility, included in the SRI indexes, are characterized by a lower value of the beta coefficient and lower volatility of quotations than the other companies (Schaeffer et al., 2012). In turn, Moreno and Pereira da Silva (2016) identified the existence of statistically positive and negative impact of EU ETS on Spanish polluting sectors' stock market returns from January 2008 to September 2015. Mo, Zhu and Fan (2012) showed the increase in the corporate value sensitivity of European electricity corporations to the changes of the EUA prices in Phase II of the EU ETS compared to Phase I. The model (1) -(4) was estimated in three sub-periods depending on the Phase of the EU ETS system functioning, i.e. for the Phase I (2005-2007), for the Phase II (2008-2012) and for the current Phase III (2013-2015). The aim of such an approach is to check whether intensified works on modifying the EU ETS functioning as well as legislative changes connected with accepting by the EU member states the new climate and energy package have an impact on shaping the systematic risk of the socially responsible companies' portfolio.

Estimations of the model parameters (1), obtained with the use of the quasi maximum likelihood method are presented in Table 1.

While analyzing the estimates of the systematic risk measure for the socially responsible companies' portfolio in various Phases of the European Emission Trading System one can notice that the value of the beta coefficient for Phases I and III is below 1, which could confirm a defensive nature of the portfolio. In Phase II, which corresponds with the period of significant turbulences on the world financial markets, the beta index of the DJSI Europe index was slightly higher than 1. However, one cannot notice relevant differences in shaping the systematic risk value for this portfolio in various periods of CO₂ emission allowances trading.

Table 1: Estimation Results of the Market Model with GARCH (1,1) Structure in Particular Phases of the EU ETS Functioning

Parameter/Statistics	Phase of the EU ETS			Phase of the EU ETS		
	Phase I	Phase II	Phase III	Phase I	Phase II	Phase III
Constant (mean)	0.005 [0.17]	0.002 [0.54]	0.0016 [0.60]	0.0048 [0.20]	-0.0013 [0.69]	0.002 [0.48]
S&P Europe350	0.986 [0.00]	1.026 [0.00]	0.990 [0.00]	0.986 [0.00]	1.026 [0.00]	0.989 [0.00]
Constant (variance)	0.00013 [0.00]	0.0003 [0.01]	0.0015 [0.14]	0.00013 [0.00]	0.00032 [0.01]	0.0045 [0.01]
ARCH	0.051 [0.00]	0.063 [0.00]	0.084 [0.07]	0.056 [0.00]	0.078 [0.00]	0.033 [0.49]
GARCH	0.937 [0.00]	0.925 [0.00]	0.771 [0.00]	0.940 [0.00]	0.922 [0.00]	0.427 [0.01]
Student (DF)	6.74 [0.00]	8.92 [0.00]	12.25 [0.01]	6.73 [0.00]	9.21 [0.00]	16.35 [0.06]
GJR(gamma)	-	-	-	-0.013 [0.71]	-0.0252 [0.35]	0.185 [0.08]
Unconditional variance	0.0116	0.0251	0.0102	0.0114	0.0259	0.0101
JB	94.209 [0.00]	65.15 [0.00]	8.44 [0.01]	95.86 [0.00]	55.69 [0.00]	3.64 [0.16]
Q(5)	6.458 [0.26]	5.730 [0.22]	8.786 [0.07]	6.218 [0.29]	5.682 [0.22]	9.112 [0.06]
LM(5)	1.765 [0.12]	1.681 [0.14]	0.434 [0.82]	1.890 [0.09]	1.669 [0.14]	0.574 [0.72]
Nyblom	0.956	1.669	1.031	0.999	1.956	1.239
Sign bias test	1.338 [0.18]	1.206 [0.23]	0.055 [0.96]	1.372 [0.17]	1.047 [0.30]	0.814 [0.42]

Source: author's calculations. Notes: Student (DF) means degree of freedom in t-Student distribution, p-value in brackets. LM (5) is Engle's Lagrange multiplier test of order 5 for ARCH effect, Q(5) is the Portmanteau test of order 5 for autocorrelation effect in standardized residuals, JB is the Jarque-Bera test for normality. Nyblom means joint statistic of the Nyblom test of stability; individual Nyblom statistics are not presented in this table, but all of them confirm the stability of each model parameter. Sign bias test for investigating of possible misspecification of the conditional variance.

Additionally, in the conditional variance equation the coefficient that describes the GARCH effect takes a significantly higher value (above 0.7) than the ARCH effect (below 0.1). This can confirm the fact that the conditional volatility for this portfolio does not change rapidly, but rather remains on the particular level in a longer period. Accepting the GJR-GARCH (1,1) specification in the conditional variance equation does not lead to a more precise description of volatility dynamism in the I and II period due to negative values of the (GJR(γ)) parameter which depicts an asymmetric reaction of the volatility of socially responsible companies shares portfolio to good and bad information coming to the market. Only in the third period the estimate of this parameter is positive and statistically significant, which may indicate volatility growth of the DJSI Europe portfolio influenced by the influx of shocking information to the market. However, the parameter depicting the ARCH effect is statistically insignificant. Hoti, McAleer and Pauwels (2005) pointed out a similar effect. It is also worth stressing that the unconditional volatility of the socially responsible companies' portfolio in the second period of the EU ETS functioning, characterized by turbulences that occurred on world financial markets, is over twice higher than in the period corresponding to Phases I and III of Emission Trading System.

Table 2: Estimation Results of the Two Factor (Market and Carbon) with GARCH (1,1) Structure in Particular Phases of the EU ETS Functioning

Parameter/Statistic	Phase of the EU ETS			Phase of the EU ETS		
	Phase I	Phase II	Phase III	Phase I	Phase II	Phase III
Constant (mean)	0.0048 [0.16]	0.0020 [0.53]	0.0016 [0.60]	0.0045 [0.22]	0.0013 [0.69]	0.0022 [0.48]
S&P Europe350	0.985 [0.00]	1.026 [0.00]	0.990 [0.00]	0.986 [0.00]	1.027 [0.00]	0.989 [0.00]
ICE_EUA	0.0002 [0.55]	-0.0012 [0.27]	-0.0008 [0.30]	0.00016 [0.56]	-0.0011 [0.26]	-0.0008 [0.35]
Constant (variance)	0.0001 [0.00]	0.00031 [0.01]	0.0015 [0.13]	0.00013 [0.00]	0.00032 [0.01]	0.004 [0.01]
ARCH	0.051 [0.00]	0.063 [0.00]	0.085 [0.07]	0.055 [0.00]	0.079 [0.00]	0.033 [0.50]
GARCH	0.937 [0.00]	0.924 [0.00]	0.771 [0.00]	0.940 [0.00]	0.920 [0.00]	0.434 [0.01]
Student (DF)	6.71 [0.00]	9.04 [0.00]	12.40 [0.01]	6.684 [0.00]	9.33 [0.00]	16.52 [0.05]
GJR(γ)	-	-	-	-0.0122 [0.72]	-0.0262 [0.34]	0.183 [0.09]
Unconditional variance	0.0118	0.0250	0.0102	0.0114	0.0258	0.0101
JB	96.115 [0.00]	62.13 [0.00]	8.19 [0.02]	97.79 [0.00]	52.84 [0.00]	3.45 [0.18]
Q(5)	6.516 [0.26]	5.804 [0.21]	9.112 [0.06]	6.276 [0.28]	5.761 [0.22]	8.797 [0.07]
LM(5)	1.769 [0.12]	1.665 [0.14]	0.435 [0.82]	1.888 [0.09]	1.642 [0.15]	0.572 [0.72]
Nyblom	1.064	1.826	1.081	1.110	2.083	1.287
Sign test	1.404 [0.16]	1.139 [0.25]	0.018 [0.99]	1.399 [0.16]	0.999 [0.32]	0.616 [0.54]

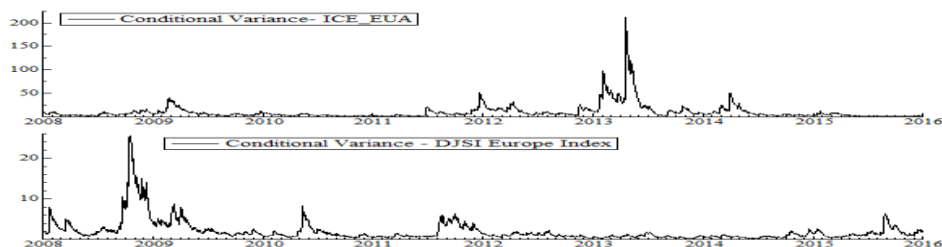
Source: author's calculations. Notes: see Table 1

In the next step a two-factor model (7) was estimated, which constituted a modification of model (1) due to introducing a variable explaining the influence of CO₂ emission allowance price on shaping of the returns from the socially responsible companies' portfolio. It is expected that high volatility of CO₂ emission allowance price will constitute a factor discouraging investors from buying the shares of companies that integrated actions in the field of social responsibility with the management strategy. Moreover, a decrease in CO₂ emission allowance prices should not influence the value of shares of companies included in the DJSI Europe index. Estimates of the model (7) parameters, obtained with the use of the quasi maximum likelihood are presented in Table 2.

The results presented in the Table 2 show that parameter evaluations which reflect the influence of CO₂ emission allowance price on the value of the portfolio of socially responsible companies are statistically insignificant for each analyzed period of the EU ETS functioning. These parameters estimates indicate the negative (but insignificant) correlation between the market value of companies applying the ESG practices in a mature and long-term way, and futures prices of CO₂ emission allowances in Phase II and III of the EU ETS functioning. Additionally, it can be observed that including this factor into the model did not cause a change of the systematic risk level, which had been earlier measured for the market model (1). While analyzing the estimates of the conditional variance parameters for the model (7) similar conclusions can be formulated as in the case of model (1). In particular, the specific risk level measured with the use of the unconditional variance estimated on the basis of the estimates of GARCH (1,1), and GJR-GARCH (1,1) models parameters did not change significantly.

In the last stage of the analysis the author compared volatility of CO₂ emission allowance prices and volatility of DJSI Europe index closings in the period from 02. 01. 2008 to 31. 12. 2015. As in the first Phase of the EU ETS functioning the EUA price was subject to high volatility due to uncertainty accompanying first verifications of the coverage level of total GHG emission by each member state of the EU, which was reflected, among others, in the decrease in the EUA prices to almost EURO 0 in the period of 2007-2008, this period was excluded from the analysis (Hintermann, 2010). For the logarithmic returns series of DJSI Europe and ICE_EUA model parameters (8)-(11) were estimated, and determined on this basis estimates of conditional volatility are presented in Figure 2.

Figure 2: Conditional Volatility of ICE_EUA (Upper Panel), DJSI Europe (Lower Panel) in the Period 2008-2015



Source: author's work.

While comparing the conditional volatility pattern of CO₂ emission allowance prices and the volatility of the socially responsible companies' portfolio one can notice that the periods of increased volatility occurrence - and thus, higher specific risk - are not the same on both markets. Generally, the market pricing of future contracts for CO₂ emission allowances was characterized by a significantly higher volatility than the capital market, and particularly the

sector of socially responsible investments. The period of the highest volatility on this market corresponds to the transition from Phase II of the EU ETS functioning into Phase III in connection with new legal regulations concerning, among others, CO₂ emission allowances allocation or decreases in the total GHG emission limits. Also changes of energy resources prices caused by the Russia-Ukraine conflict and uncertainty which accompanied accepting by the EU the new energy and climate package were reflected in the EUA price volatility (Keppler and Mansanet-Bataller, 2010; Hammoudeh, Nguyen and Sousa, 2014). In case of the socially responsible companies' portfolio its highest volatility occurred at the time when the subprime crisis took place (from the second half of 2008 till the beginning of 2009), the debt crisis in the Euro Zone (Greece - April 2010; Ireland - November 2010; Portugal - May 2011; Spain - July 2012) as well as the deadlock on prolonging the EU sanctions against Russia. This information can be used to diversify the portfolios including the futures contracts for CO₂ emission allowances.

5. Conclusion

The presented results of empirical studies concern verifying the occurrence of short-term dependencies between the market value of socially responsible companies and shaping of CO₂ emission allowance prices in different Phases of the EU ETS functioning, which also indirectly shows the legal risk connected with the changes of the energy and climate policy of the European Union. At this stage of the analysis a vital influence of price processes occurring on the European Carbon Market on shaping the systematic and specific risk for the DJSI Europe portfolio was not observed. In the future the empirical analysis should be extended by the use of multidimensional GARCH models to estimate conditional variances changing in time. Similar results of studies were obtained by Schaeffer et al. (2012), who did not confirm a positive effect of including the companies from the oil & gas sector into the DJSI index in the form of a decrease in their systematic risk level in the short period.

Undoubtedly, intensification of the implemented changes in the scope of legal regulations and the use of market mechanisms to reduce greenhouse gases emission on the whole EU scale constitute a serious challenge for entrepreneurs. Not complying with any of the formal requirements which results in the loss of the socially responsible company status influences the reputation of the economic entity, decreases economic processes efficiency and increases the risk of the company in the scope of value for the client, coordination of market operations, internationalisation of enterprises (Urbanowska-Sojkin, 2013). Therefore, investors more and more often take into consideration, while constructing their shares portfolios, not only the criterion of expected return maximization on the portfolio investment, but also the level in which enterprises are involved in the CSR activity. On the one hand such an approach reflects their environmental or social needs, on the second hand it makes it possible to limit the risk of legal regulation changes referring to the GHG emission reduction, in this the risk of CO₂ emission allowance price shaping, which accompanies their portfolio investment.

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Threats and Challenges to EU Energy Security

Magdalena Zajązkowska

Cracow University of Economics

Faculty of Economics and International Relations, Department of European

Economic Integration

Rakowicka Street 27

Cracow, Poland

e-mail: zajazckm@uek.krakow.pl

Abstract

Together with the development of European integration, the guarantee to ensure energy security of the European Communities has become increasingly important. It has become an important factor in the security policy implemented by member states and the European Union. An analysis of the evolution of the European Union energy policy and the current climate and energy package leads to the conclusion that the guarantee of energy security is a high priority for the short-term and long-term future. The article presents the nature of energy security based on the debate taking place in literature on the subject. Selected definitions of energy safety have been introduced as well as the determinants of energy security as a theory. Based on theoretical issues an attempt was made to formulate the potential threats and challenges facing the energy security of the European Union.

Keywords: *Climate and Energy Policy, Energy Market, Energy Security, Energy Sources*

JEL Classification: *A11, E61, F50, H89*

1. Introduction

Regional economic integration in Europe was accompanied by efforts aimed at creating a common energy policy. Its basic aim was to ensure safe energy supply to each country. The direction of these efforts varied depending on the international situation. The first and second oil crises made it necessary to guarantee safe oil delivery and boosted the search for alternative cost-effective energy sources. Conflicts between Russia and Ukraine brought to the fore the necessity to debate the safety of gas exports. On the other hand, reactor failures in Chernobyl and then Fukushima sparked a debate on the safety of nuclear power stations.

Solutions to the conflict and crisis situations in the energy sector were provided by the climate-energy policy of the European Union complemented by numerous strategies and measures. These focus on guaranteeing the safety of supply, increased competition and sustainable development. Additionally, the European Union measures are accompanied by environmental protection campaigns especially focused on preventing its degradation.

As a consequence of new the criteria, the EU energy economics priorities became: the liberalization of the electrical and gas energy markets, safety of supply to internal markets, changes to the structural types of energy delivery systems taking into account their impact on the environment, and the development of research and modern energy technologies (Wojtkowska-Łodej, 2014, p. 323).

The article presents the nature of energy security based on the current debate in national as well as international literature. Selected definitions of energy security have been introduced along with the determinants of energy security from a theoretical perspective. Based on these theoretical points an attempt was made to formulate the threats and challenges facing energy security in the European Union.

2. Problem Formulation and Methodology

This article is an attempt to find answers to the following question: How is the term energy security understood in literature on the subject and European Union legislation? What are the determinants of energy security? Which of them are particularly significant to the successful completion of the European Union climate and energy policy? What are the threats to energy security of the European Union and what are the challenges which have to be identified in order to guarantee energy security for European Union member states?

In the author's opinion an attempt to create a framework of the theoretical knowledge on the subject of energy security will help clarify the nature of the phenomena and processes that constitute energy security. Such a theoretical framework will help identify threats to energy security in the European Union and define the challenges facing the European Union in guaranteeing energy security.

To accomplish the objectives of the article, the analysis is divided into three parts. At the beginning, selected definitions of energy security have been presented. The next part describes energy security determinants. The third part is an attempt to describe the threats to European Union energy security as well as the challenges facing the EU in guaranteeing energy security.

Literature on energy security is extensive. Theoretical arguments and research cover national as well as Union-wide perspectives.

The analysis in this article is based on the study of literature, the legal regulations and Eurostat's statistics.

3. Definition of Energy Security

There is a wide range of energy security definitions introduced in literature on the subject. The main division in understanding the place of Energetics in the politics of modern countries is the separation of an economic-based approach from a politically-strategic (geopolitical) approach. Economists think that energy security as such is a myth and any potential dangers are associated with a shortage of fuels and disruptions in supply. They treat the markets as the main regulators of these issues. On the other hand, foreign policy analysts reason that energy security is a factor in national security and should therefore be studied from a political, as well as an economic point of view (Kaczmarek, 2010, p. 13).

Based on a survey of 104 studies from 2001 to June 2014, it is found that the definition of energy security is contextual and dynamic in nature. The scope of energy security has also expanded, with a growing emphasis on dimensions such as environmental sustainability and energy efficiency. Significant differences among studies are observed in the way in which energy security indexes are framed and constructed. These variations introduce challenges in comparing the findings among studies (Ang, Choong and Ng, 2015).

Energy security is also described as a one of the main targets of energy policy. It is hard to measure and difficult to balance against other policy objectives. The confusion about energy security is also reflected in political actions. But the common concept behind all energy

security definitions is the absence of, protection from or adaptability to threats that are caused by or have an impact on the energy supply chain (Winzer, 2012).

In a very general sense, energy security can be described as a state in which there are no threats (Żukrowska, 2006, p.21). Another definition identifies energy security as a “dynamic process in which an important role is played by global and regional trends as well as specific actions in energy politics” (Pronińska, 2012, p. 55).

The definition contained in Polish law describes energy security as “a state of the economy which makes it possible to cover the current and potential demand for recipients’ fuel and energy needs in a technically and economically viable way, while maintaining environmental protection requirements” (Energy Law, 1997).

There are also definitions of energy security that describe it as “multidirectional activities (policies) of state and industry on a global and regional scale, whose goal is to ensure sufficient levels of available energy raw materials, especially oil and gas (Chmielewski, 2009, p. 10).

4. Energy Security Determinants

As a result of the increasing role and significance of energy in the economic systems of individual countries, the necessity to guarantee energy security is more frequently perceived as an element of the economic security of a country and consequently its national security.

Energy security is an intricate phenomenon, known for its complexity. It is influenced by a number of factors. Decisions made in the area of energy security are strategic and political in nature and carry with them serious consequences for the whole of the economy and the public.

Energy security determinants are factors that significantly influence this security. They can also be described as conditions. There are, therefore, two approaches to describing the relationship between these concepts. According to the first approach, the determinants are seen as particularly significant conditions which determine and decide the shape of energy security. The second approach assumes a conscious effort to treat these concepts with equal importance (Jażwiński, 2011, pp. 61-62).

The most important factors that shape energy security are (Soroka, 2015, pp. 27-28):

- the scale of resources of energy carriers found within a given country,
- the level of diversity of supply sources,
- the origin of supply sources (national or foreign),
- the storage reserve levels,
- the level of development of renewable energy sources,
- the form of ownership of the energy and supply system enterprises and companies,
- the state of the supply system (industrial power, technical state, reliability),
- the degree of development of transportation modes, and road and rail infrastructure,
- the quality of state supervision over the production process and energy distribution,
- the quality of government, and implementation of development and investment decisions,
- the ability to finance new technologies,
- internal stability,
- international stability.

5. Energy Security of the European Union

5.1 Threats and Challenges Facing Energy Security – Theoretical Issue

Literature on the subject mainly distinguishes between the physical and economic threats to energy security (Czerpak, 2006, p. 122):

- physical, e.g. short-term, or even permanent, breaks in energy supply from one source or one region,
- economic, e.g. dependence on energy prices,
- other, such as high environmental protection demands, which influence the production, usage and supply of oil.

Besides physical, economic and environmental threats facing energy security, it is also necessary to mention the political threats arising from the global international situation and the loss of influence of some countries over the transport and distribution infrastructure of energy.

A more detailed division of the energy security threats, but one that still fits within the above framework, takes into account the following situations (Soroka, 2015, pp. 46-49):

- the threat of a terrorist cyberattack which would disrupt the normal functioning of the energy infrastructure,
- the threat of the depletion of energy carrier resources and loss of production capacity of power plants, and the degradation of the mining and industrial infrastructure.
- This background brings to light additional challenges, namely the consequences of the greenhouse effect, or factors arising from the global financial-economic crisis (Soroka, 2015, pp. 56-59).

Another division distinguishes between short and long-term threats and challenges for energy security (Kaczmariski, 2010, pp. 18-19). The short-term ones are associated with the functioning of industrial transport infrastructure and cover: lack of supply caused by accidents, political problems, terrorist attacks, weather conditions and grid failures. The long-term threats are concerned with geological risk (depletion of resources), technical risk (problems with mining and distribution systems caused by insufficient investment and bad technical condition), economic risk (caused by differences between demand and supply, fluctuation of the prices of energy raw materials, etc.), geopolitical risk (suspension of supply due to political reasons or civil war), environmental risk (environmental pollution caused by activities in the energy area, acceleration of climate change, accidents).

Bearing in mind the above theoretical concepts, this article assumes a division of threats and challenges for the energy security of the European Union into threats and challenges internal to the Union and those classified as external. The first group includes: the lack of a common energy policy strategy within the European Union, and due to that, the lack of solidarity between member states and no single internal energy market because of the incomplete building of an energy union. External threats to the energy security of the EU that derive their origin from the current EU energy situation are: the share of particular fuels in the overall energy balance and dependence on fuel imports. Additionally, another external threat to EU energy security is the potential geopolitical problems preventing the import of oil and gas. The external challenges facing EU energy security are in turn the set of consequences arising from these threats.

5.2 Current Conditions of the European Union Energy Policy

The European Union has developed a significant *acquis communautaire* for the purpose of creating a common energy market, oil and gas storage, energy efficiency and the climate and energy package, but mainly in the area of increasing the share of renewable energy in the use of primary energy. One of the achievements is the introduction into primary law, entries concerning Energetics, and mainly the recognition that energy solidarity means help for countries experiencing problems with the provision of fuel and energy. However, problems with the gas supply from Russia have shown member states that putting this idea into practice requires having an optimal energy infrastructure. Specifically, links between different countries for gas as well as appropriate electricity lines for electrical energy. Routes for these links, as well as the use of existing links for this purpose should be planned and implemented for the whole Union.

Additionally, the European Union energy policy lacks comprehensive solutions covering the Union regarding the supply of energy raw materials, in particular natural gas. When it comes to crude oil and coal, the situation is not as significant, because the crude oil and coal market has been operating for many years. Until now, individual countries in the Union have negotiated their own deals and entered into bilateral gas supply agreements, which weakened their negotiating position, especially with Russia. It is therefore crucial that the Union concerns itself with the balancing of needs and contracts for the supply of gas. An example of this lack of energy solidarity is the Russian-German initiative to build a Baltic gas pipeline – Nordstream 2, when the existing link via the Yamal-Europe gas pipeline is ready and equipped for the building of a second parallel pipeline. Moreover, the cost of building the Baltic pipeline is many times higher than a second pipeline along the Yamal line. In 2014, Gazprom finally resigned from the construction of Yamal-Europe II.

5.3 Geopolitical Problems with Oil and Gas Imports

The European Union is in an advantageous position regarding the location of significant crude oil and natural gas reserves. Areas deserving mention are: the Middle East, North Africa, North Sea basin, Caspian Sea basin, and Russia – its land area, but also potentially the coastal areas of the Arctic Sea. All these areas vary in the size of reserves, as well as political situation. The most stable politically is the North Sea region, which is within the borders of Western Europe. The Middle East boasts the largest oil and gas reserves in the world. Some countries in the region suffer from an unstable political situation, but the future of this region could be even more complex. Oversupply of crude oil has meant that its price on the world markets over the last number of months has been in the region of USD 30 a barrel, which in the long-term will cause a drop in the budgeted incomes of OPEC countries. This will, in turn, lead to further destabilization of the region. Similarly, the Arab countries of North Africa, apart from a few exceptions, are a stable supplier of oil and gas for Europe. An interesting region because of the discovery of new oil and gas reserves is the Caspian Sea basin. However, its oil and gas areas are of special interest to Russia. For a long time, Russia has been striving to take over the pipelines linking the Caspian Sea to Europe. Any investment in drilling and transportation of gas from this region should therefore be carried out with great caution.

The EU's already fragile position in terms of security of supply appears to be more uncertain, because of the cooperation with the biggest supplier, Russia. This situation is untenable and calls for swift and decisive action to adequately tackle the issue once and for all. That's why it is necessary to diversify the EU's energy supply, whether through increasing the import of liquefied natural gas, through its relations with the Eurasian Union, the promotion of

renewable energy or the construction of alternative pipelines and energy routes. From energy transit, to technology transfer, to investment protection, energy and trade present interplays across various fields. Improvements can be made to the EU trading system to ensure greater energy security and more efficient energy markets (Leal-Arcas, Rios and Grasso, 2015, pp. 291-336).

6. Conclusion

Conclusions based on the analysis which was carried out have been divided into theoretical and practical areas.

An analysis of the literature regarding energy security leads to the conclusion that more efforts to create a full theory of energy security are vital. This is due to a lack of knowledge in the generalization of energy security into clearly defined categories and precise definitions showing the mechanisms, principles and accuracy of processes and activities in this field. It can therefore be agreed that “despite the many schools of thought energy security is rarely analyzed from a theoretical perspective” (Rewizorski, Rosicki and Ostatnt, 2013, p. 72).

Further development of the European Union climate and energy policy, whose main basis is the guarantee of EU energy security, should be based on the consistent completion of its existing targets (3x20%).

It is still necessary to support increases in energy efficiency in individual member countries. These efforts will lead to a reduction in both the usage of primary energy, and greenhouse emissions.

The second significant direction is the increased usage of energy from renewable sources. The use of energy from renewable sources reduces both the use of primary energy from fossil fuels, and greenhouse emissions.

Another important problem is the battle against greenhouse emissions. The first priority of these activities is limiting climate change. In the author’s opinion, the same level of importance should be given to energy security of the European Union. The idea of the ETS system is the de-carbonization of Europe with a view to making it independent of energy raw materials.

A fourth proposal is to embark on more effective efforts to modernize and build new electrical energy production plants, as well as what is broadly understood as Energetics infrastructure, especially in the former Soviet bloc countries.

The completion of the guidelines mentioned above should be supported by the European Union (co-financing of projects), but mainly by the efforts of individual member states (financial support, introduction of favorable laws).

It should, however, be emphasized that rational solutions to problems regarding energy security of the European Union should be carried out as part of a common European Union economic policy. This gives rise to the proposal to create a common European Union economic policy which would become the basis for the finalization of the energy union and further development of the common EU climate and energy policy.

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The Principle of Procedural Economy in the Context of the Taking of Evidence in the European Area of Justice

Lucie Zavadilová

Masaryk University

Faculty of Law, Department of International and European Law

Veveří 70, 611 80

Brno, Czech Republic

e-mail: ZavadilovaLucie@seznam.cz

Abstract

The internal market of the European Union seeks to guarantee the four fundamental freedoms. The increase in free movement of persons, goods and services inevitably results in an increase in the potential number of cross-border disputes. Therefore, the European area of justice has not only economic, but also legal connotation. As a result, the EU has adopted a number of legislative instruments designed to help individuals and companies with cross-border litigation. In order to simplify and accelerate the taking of evidence in a state other than the one in which the matter is pending, the Council adopted Regulation (EC) No 1206/2001 of 28 May 2001 on Cooperation between the Courts of the Member States in the Taking of Evidence in Civil or Commercial Matters. The aim of this paper is to consider the principle of procedural economy in the context of the taking of evidence, as the costs and duration of procedures may deter parties from exercising their rights.

Keywords: European Area of Justice, Evidence Regulation, Principle of Procedural Economy, Taking of Evidence

JEL Classification: K40, K41, K49

1. Introduction

“The creation of an area of freedom, security and justice, where the free movement of people, goods, services, and capital can be performed with full legal guarantees, has always been a fundamental concern since the inception of the European Union, and a necessity for the achievement of the single market” (Study on the application, 2007, p. 9). This means that the European area of justice has both economic and legal aspect. While economic connotation implies close connection between the European area of civil justice and the internal market of the European Union (“EU”) (Rozehnalová et al., 2013, p. 17), legal aspect is connected with the adoption of a number of legislative instruments that are designed to help individuals and companies with cross-border litigation (more to the legislative agenda see Hess, 2012, pp. 1075, 1076). Because, the increasing use of the rights of free movement of persons, goods and services inevitably results in an increase in the potential number of cross-border disputes (Marcos, 2013, pp. 96, 97).

Judicial cooperation in cross-border proceedings in civil and commercial matters between the Member States constitutes one of the crucial fields that subject to EU legislation (Rozehnalová et al., 2013, pp. 20, 40, 41). Council Regulation (EC) No 1206/2001 of 28 May 2001 on Cooperation between the Courts of the Member States in the Taking of Evidence in Civil or Commercial Matters (hereinafter referred to as “Evidence Regulation” or

“Regulation”) unified the question of the international taking of evidence and enhanced the proper functioning of the internal market. In relations between the Member States, the Regulation prevails over the Hague Convention of 18 March 1970 on the Taking of Evidence Abroad in Civil or Commercial Matters (Recital 1 of the Preamble, Art. 21/1 of the Regulation).

The Evidence Regulation “*entails a step forward towards the forming of a uniform European civil procedure*” (Betetto, 2006, p. 137). Its intended objective is the automatic execution of the letters of request and “free movement of evidence” (Nuyts, Sepulchre, 2004, pp. 332, 336). However, certain measures are still needed in order to facilitate the functioning of the Regulation. The aim of this paper is to consider the principle of procedural economy in the context of the evidence taking according to the Evidence Regulation. The first part is devoted to the Regulation itself, its scope of application and methods of the taking of evidence. The second part focuses on the principle of procedural economy, in particular on time limits, use of modern means of communication and costs. In order to achieve the purpose of this paper, the descriptive method and the method of analysis will especially be applied.

2. The Evidence Regulation

The traditional international civil procedural law is based on the principle of the *lex fori*. It means that the law of the forum (i. e. Czech law) shall be applied in procedural matters (Pauknerová, 2011, p. 171; Bogdan, 2012, p. 4). This is connected with the sovereignty of the state, as the judicial power of the courts and other judicial authorities is limited to the territory of their own state. Also the taking of evidence is in principle limited to the state’s territory (Nuyts, Sepulchre, 2004, p. 308). However, it is often essential for a decision in civil or commercial matters to obtain evidence in a state other than the one in which the matter is pending (Recital 7 of the Preamble to the Regulation). This is one of the reasons because of which the situation in the EU is different. Here, judicial cooperation between the courts must prevail over the sovereign rights of the particular states (Betetto, 2006, p. 140).

Before 2004, there was no binding instrument between all EU Member States concerning the taking of evidence abroad (Practice guide, 2006, p. 5; more to the legislative history see Storskrubb, 2008, pp. 114 – 118). Even the Evidence Regulation does not harmonize the domestic rules of evidence (Nuyts, Sepulchre, 2004, p. 307; more to the harmonization of civil procedure see Kramer, 2012, pp. 121 – 139), its aim is to make the evidence taking in cross-border cases simple, effective and rapid (Recital 2 of the Preamble to the Regulation; Case C-283/09, 2011).

2.1 Scope of Application of the Regulation

The scope of application determines in which case the Evidence Regulation is to be applied. Because of this, the substantive, territorial and temporal scope needs to be considered.

2.1.1 Substantive Scope

The Evidence Regulation becomes applicable if four conditions under Art. 1 are met. Firstly, it applies to the requests for the taking of evidence. Even though the concept of “evidence” is not defined in the Regulation, it includes hearing of witnesses, parties or experts, the production of documents etc. (Practice guide, 2006, p. 10; more to the notion of “evidence” see Case C-175/06, 2007).

Secondly, this evidence must be intended for use in judicial proceedings, commenced or contemplated. The purpose of this condition is to prevent pre-trial discovery, including the so called “fishing expeditions” (Storskrubb, 2008, p. 121).

Thirdly, the Regulation is only applicable in civil or commercial matters (more to the autonomous interpretation of this concept see Case C-29/76, 1976). In this context, the Regulation will “*apply to litigation based on civil and commercial law, consumer law, employment law and even competition law as far as private proceedings are concerned*” (Practice guide, 2006, p. 10).

Last but not least, the request needs to be made by the court of a Member State. The concept of “court” must be given a broad interpretation including all authorities in the EU Member States with jurisdiction in the matters that fall within the scope of the Evidence Regulation. However, this notion does not cover arbitral tribunals (Practice guide, 2006, p. 10). Pursuant to Art. 2/1 of the Regulation the transmission and execution of the requests between the courts should be direct. It means that the requests “*shall be transmitted by the court before which the proceedings are commenced or contemplated*” (so called “requesting court”), “*directly to the competent court of another Member State*” (“requested court”), “*for the performance of the taking of evidence*” (Art. 2/1 of the Regulation). Therefore, the Regulation is based on the principle of direct transmission and a decentralized court system (Storskrubb, 2008, p. 118) where the courts of the Member States communicate directly between themselves (Nuyts, Sepulchre, 2004, p. 326). However, the Member States are also supposed to designate a central body. It is especially responsible for “*supplying information to the courts*” and “*seeking solutions to any difficulties which may arise in respect of a request*” (Art. 3/1(a) and (b) of the Regulation). The central body is only in exceptional cases involved in the forwarding a request to the competent court (Art. 3/1(c) of the Regulation). In case the state does not designate a competent authority, which is made responsible for taking decisions on requests for the direct taking of evidence, belongs this into the fields of competence of the central body (Art. 3/3 of the Regulation).

2.1.2 Territorial and Temporal Scope

The Evidence Regulation is applicable throughout the EU with the exception of Denmark as from 1 January 2004 (Arts. 1/3, 24 of the Regulation; Practice guide, 2006, p. 5). As a Member State of the European Union, the Czech Republic is bound by the Regulation since 1 May 2004 (Pauknerová, 2011, p. 170).

In relations between Denmark and the other Member States – provided they are its contracting states – the abovementioned Hague Convention of 1970 still applies.

2.2 Methods for the Taking of Evidence

The Evidence Regulation contains the rules concerning the transmission and execution of the requests. The act provides for two methods of the evidence taking – the taking of evidence by the requested court (Arts. 10 – 16 of the Regulation) and the direct taking of evidence by the requesting court (Recital 10 of the Preamble, Art. 17 of the Regulation). Both methods are established as alternatives and the requesting court can choose which one it will follow (Study on the application, 2007, p. 23).

Nevertheless, the Regulation does not govern the cross-border taking of evidence exhaustively. But it aims to facilitate it (Case C-170/11, 2012; Case C-332/11, 2013).

2.2.1 Taking of Evidence by the Requested Court

This method is based on the judicial cooperation between the Member States' judicial authorities (Nuyts, Sepulchre, 2004, p. 326). The letters of request are directly transmitted from the requesting court to the appropriate court in the requested state. As a rule, the requested court shall execute the request within 90 days of its receipt. In general, the request shall be executed in accordance with the procedural law of the requested state (i. e. *lex fori*). Upon the application of the requesting court, the request may be executed in accordance with a special procedure provided for by the law of the requesting state (Art. 10/1, 2, 3 of the Regulation). The requested court is allowed to apply appropriate coercive measures, for example to compel the witness to testify (Art. 13 of the Regulation; Nuyts, Sepulchre, 2004, p. 330).

2.2.2 Direct Taking of Evidence by the Requesting Court

Pursuant to Art. 17 of the Regulation the requesting court is authorized to take evidence directly in the territory of another Member State. A request needs to be submitted to and approved by the central body or the competent authority of the requested state. The central body (or competent authority) shall inform the requesting court of its decision within 30 days of receipt. The direct taking of evidence may only be performed on a voluntary basis, because coercive measures cannot be used (Art. 17/2 of the Regulation). The evidence taking shall be performed in accordance with the law of the requesting state by a member of the judicial personnel or by any other person (e. g. expert, commissioner, diplomatic officer or consul) designated in accordance with the law of the requesting state (Art. 17/3 of the Regulation; Practice guide, 2006, p. 22). Nevertheless, the central body (or competent authority) may specify conditions according to the law of the requested state under which the evidence can be obtained (Art. 17/4 of the Regulation).

Direct taking of evidence constitutes one of the most remarkable innovations introduced by the Regulation. One of its major advantages is that it saves time because no intervention and active collaboration of the judicial authority of the requested state is needed (Nuyts, Sepulchre, 2004, pp. 332, 333). Unfortunately, this method is only rarely used (Study on the application, 2012, pp. 11, 54, 142).

3. Principle of Procedural Economy

One of the fundamental principles of civil procedural law constitutes the principle of procedural economy (Pauknerová, 2011, p. 20). This principle ensures that the protection of the rights is effective, provided within a reasonable time (i. e. expedient), and without excessive and unreasonable costs for the parties (Winterová et al., 2015, pp. 71, 72). Because the costs and duration of proceedings may deter parties from exercising their rights (Storskrubb, 2008, p. 80).

As has already been mentioned, the purpose of the Evidence Regulation is the simple, effective and swift transmission and execution of the letters of request. To speed up the procedure, the Regulation introduces obligatory use of a specific system of standard forms which are annexed to this act (Storskrubb, 2008, p. 119). The Evidence Regulation also exempts the request and all accompanied documents from authentication or any corresponding formality (Art. 4/2 of the Regulation). In addition to these, there are two most important means which the Regulation establishes to contribute to the procedural economy in the process of the evidence taking – strict time limits and the use of modern means of communication.

3.1 Time Limits

In general, the requests “shall be transmitted by the swiftest possible means, which the requested Member State has indicated it can accept” (Art. 6 of the Regulation). Moreover, the Evidence Regulation imposes strict time frame for the execution of requests (Nuyts, Sepulchre, 2004, p. 307). The entire procedure of the evidence taking should not last longer than 90 days of receipt of the request (Art. 10/1 of the Regulation). In case the deadline is exceeded, the requested court shall inform the requesting court about the obstacles which have delayed the execution of the request. The requested court shall also notify the estimated time that it expects it will need to execute the request (Recital 10 of the Preamble, Art. 15 of the Regulation). Within the stated 90-day period, each stage of the procedure has its own particular time limit established by the Regulation (Arts. 7/1, 8, 14/4 of the Regulation; Study on the application, 2007, p. 26).

The short time limit is certainly a positive development, if we consider the delays that tend to characterise the cross-border taking of evidence (Nuyts, Sepulchre, 2004, p. 327). Nevertheless, its enforcement in practice is rather complicated. Because, there is no sanction in case of delays (Study on the application, 2007, p. 26).

3.2 Use of Modern Means of Communication

The Evidence Regulation includes special provisions which emphasise and encourage the use of communications technology during the taking of evidence, especially videoconferencing and teleconferencing (Arts. 10/4, 17/4 of the Regulation; Nuyts, Sepulchre, 2004, p. 328). Art. 10/4 of the Regulation authorizes the requesting court to ask “the requested court to use communications technology at the performance of the taking of evidence (...)”. In principle, the requested court must comply with this requirement and use modern technologies. The reasons for the refusal to execute the request in this way are to be interpreted narrowly (Art. 10/4 of the Regulation; Nuyts, Sepulchre, 2004, pp. 328, 329). The use of new communication technologies is also encouraged at the performance of the direct taking of evidence (Art. 17/4 of the Regulation).

The use of modern means of communication (in particular emails and videoconferencing) is considered to be one of the most significant achievements of the Evidence Regulation. Because it helps both the courts and the parties with the cross-border taking of evidence, as technology mitigates distance (Storskrubb, 2008, p. 126; Study on the application, 2007, pp. 66 – 69). In this respect, the use of such technologies is of great importance as an alternative to physical presence of witnesses, experts, parties, representatives of the court etc. (Study on the application, 2012, pp. 11, 13, 142). Using videoconferencing is the most efficient and cost effective way how to obtain evidence (Using videoconferencing, p. 6).

Nevertheless, it will take time until these opportunities are available to all the courts of the Member States. Moreover, these methods often entail considerable costs, which might have to be borne by the parties (Storskrubb, 2008, p. 126).

3.3 Costs

The principle of procedural economy is not only connected with the duration of procedure, but also with its costs. The judicial cooperation between the courts of the Member States in the evidence taking is in general free of charge. This means that “the execution of the request (...) shall not give rise to a claim for any reimbursement of taxes or costs” (Art. 18/1 of the Regulation). However, the requested court may require the reimbursement of the fees paid to

experts and interpreters, and the costs associated with the use of a special procedure provided for by the law of the requesting state, or with the use of modern means of communication. The obligation of the parties to reimburse these fees and costs shall be governed by the *lex fori* of the requesting state (Art. 18/2 of the Regulation; Nuyts, Sepulchre, 2004, p. 324). In principle, the parties may only be obliged to pay for the use of communication technology, if the requesting court asks the requested court pursuant to Art. 10/4 of the Regulation to use it. There shall be no obligation for the parties, when the court voluntarily offers the use of modern means of communication (Study on the application, 2007, p. 73).

The requested court is authorized to ask the requesting court for a deposit or advance only where the opinion of an expert is required (Art. 18/3 of the Regulation). “*The requesting court is not obliged to pay an advance to the requested court for the expenses of witness or to reimburse the expenses paid to the witness examined*” (more to the costs see Case C-283/09, 2011).

4. Conclusion

The Evidence Regulation contributed to the proper functioning of the internal market and establishing an area encouraging the free movement of persons. The idea behind this Regulation was to create simple, effective and swift system of cooperation between the courts as regards the cross-border taking of evidence. This is in line with one of the leading principles of civil procedural law – the principle of procedural economy.

The Evidence Regulation introduced several measures to fulfil one of its main objectives – to reduce the time period necessary for the execution of the evidence taking. The Regulation established the direct communication between the decentralised system of competent courts of the Member States. The act also allowed the direct taking of evidence by the requesting court as second method for the evidence taking. Moreover, the Regulation introduced the use of standard forms and strict deadlines. In most cases, the requests are executed within the given 90-day time limit. However, we have to admit that there are differences among the practice of particular states.

One of the crucial achievements of the Regulation is the promotion and use of modern means of communication, especially videoconferencing. This is of great importance, as it saves both costs and time. Nevertheless, the problems are still connected with the lack of appropriate technical equipment in a number of Member States.

We can therefore conclude that the Evidence Regulation accelerated the procedure of the cross-border taking of evidence within the EU Member States and contributed to the promotion of the principle of procedural economy. Nevertheless, there is still room for improvement.

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Impact of Bank Bailouts on the European Integration

Alena Zemplerova

Anglo-American University Prague

Letenska 5

Prague, Czech Republic

e-mail: Alena.Zemplerova@aauni.edu

Abstract

Between October 2008 - November 2014 European Commission has approved € 5 763 billion of financial state aid to the bank bail-outs (39% of the EU GDP). In a short term state interventions stabilized the financial markets, however in the long term the effect of massive bailouts can be negative as they distort competition in multiple ways. Although the European Union (EU) as a whole shows signs of growth, the public debts continue to grow as well and thus create new systemic risk to financial stability. Financial state aid provision to the problematic banks together with sovereign debt crisis and euro-area crisis gave rise the development of the European Banking Union, which centralizes the major banks supervision and resolution of banks in Eurozone and thus opens a door for closer integration.

Keywords: Banks, Integration, Debts, State Aid

JEL Classification: H63, G18, K20, L50

1. Introduction

Autumn 2008 some European Union (EU) major banks, unable to source liquidity to meet their short-term liabilities, came close to failure. National governments started to bail-out the banks to stabilize financial system. In 2008, governments of member states of the European Union provided an overall amount of €3 458 billion to bail out banks.¹²⁶ The situation in Europe was related not only to the global financial crisis but also to the Eurozone monetary union and efforts of the European Central Bank which aimed to stabilize the euro area as the financial crisis turned into a sovereign debt and euro-area crisis in 2010. Financial state aid provision by national governments to help banks in difficulties continued and as by the November 2014, the total amount of approved financial aid increased to € 5 763 billion which is about 39% of the EU GDP.¹²⁷

Although European Commission has the power to block the financial state aid, it approved all financial aid very quickly in order to decrease the systemic risk, prevent runs on the banks and domino effect. The overall assessment of bailing out banks in a short term is positive as it stabilized the financial markets. After the economic decline 2009-2010 and 2012, most EU countries started to grow. The problem is that the public debts continued and continue to grow as well and thus create new risk to financial stability and disintegration.

¹²⁶ European Commission, State Aid Scoreboard data.

¹²⁷ Gross domestic product at market prices 2014.

Public money used for bailouts of banks by governments had to be borrowed on financial markets or printed. State aid guarantees, the most extensively used form of state aid required the issuance of long-term debt securities and thus the sovereign debt in the countries increased. Most economists accept the expansion of public debts over the short term however they fear possible long term effects of high public debts. There is a threshold effect of the debt/GDP ratio associated with worse growth outcomes (Reinhart, C. and K. Rogoff, (2010) which the EU is approaching.

The financial crisis uncovered lack of EU financial system regulation, non-existence of unified rules for bailing-out banks and tendency to the fragmentation of financial markets. In parallel with approving of bail-outs of the banks by national governments in order to stabilize financial markets, the European Commission had published number of communications and other documents with the aim to minimize both the damage on market competition on the financial markets as well as the moral hazard related to bailing out of banks. It took long time and difficult negotiations till the European Banking Union started to work in 2014 based on intergovernmental treaties. The Banking Union (BU) centralizes the major banks supervision, introduces unified rules of bank regulation, bail-in system and uniform degree of insurance and thus opens a door for further integration and centralization in Eurozone countries.

The paper first introduces EU state aid ban as an integral part of the competition policy and points to the negative effects of financial state aid on competition. In the next part the magnitude of provided financial state aid during 2008-2014 by countries and instruments based on available statistics of State Aid Scoreboard is reviewed. It is still early to evaluate long term effects of the financial state aid on the growth, therefore only tentative analysis of the link between the financial aid, growth and public debts is carried out for key crisis countries. The paper finally discusses the institutional and legal set up in financial sector of European integration in a broader context.

2. EU Competition Policy and Financial Crisis State Aid

State aid ban is an integral part of the competition policy (see for details for instance Zemplerova 2010). The European Commission, Directorate General (DG) for Competition which is in charge of enforcement competition policy in the EU has the power to prohibit the state aid provided to banks by national government as a measure that distorts or threatens to distort competition¹²⁸ - in such case provided state aid has to be returned or payed back – or it can approve financial state aid as “compatible with EU market”, hence if it can be exempted from the ban under the provisions of the EU Treaty for various reasons.¹²⁹

Such an exemption has been made in case of more than 450 decisions in which the Commission authorized national governments to provide state aid to the financial sector during the period 2008-2014 determining the restructuring or orderly resolution of 112 European banking institutions. State aid has been approved by European Commission “to remedy a serious disturbance in the economy of a Member State”¹³⁰. Around 25% of the entire European banking sector has been subsidized under EU State aid rules. The aid has been provided mainly to some of Europe's biggest financial institutions. Out of the top 20 European banks, the Commission approved aid to 12 banks, of which six were subsequently restructured, five

¹²⁸ granting state aid to businesses, including financial sector is in principle prohibited by the Treaty of the Functioning of the EU (TFEU) Article 107 (1).

¹²⁹ TFEU Article 107 (2) and (3).

¹³⁰ TFEU Article 107 (3b).

received aid through approved aid schemes, and one was liquidated. In some countries more than 50% of the financial system by assets has received state support. (Adamczyk and Windisch, 2015). The better half – evidently the more efficient half of financial sector in these countries did not get any subsidy.

Financial state aid provided to banks can give a market power and unfair advantage to the aided bank over other banks that did not get any state aid and that can have distorting consequences for price and quality of banking services. Distortions may occur between two or more aided banks in the internal market, if the aid is unequal and provided under different conditions that are more advantageous than their aided competitors. It may have implications for business investment decisions, growth and unemployment in Member States that provided no or less support. It may also delay structural adjustments in Member States providing aid and the presence of inefficient banks may be detrimental to consumers in the longer run. Moreover, state aid has impact negative on public finances. (See Zemlinerová, 2006)

Probably most important negative effect of state aid to the banks is that it raises moral hazard and thus accepting excessive risks. If banks are not disciplined by market but promoted by state, it allows continuing in excessive risks. It undermines incentives to compete if the aided banks only enjoyed the benefits of risk-taking but does not have to carry the burden of the losses. Negative effects of financial state aid are more probable as the financial aid was concentrated both in terms of small number of member States and small number of large financial institutions in the internal market.

The major problem from the point of view of market competition protection is that there were important differences in national bailout programs and banks have been bailed out in different ways and using different instruments and conditions of state aid provision. Although banks became increasingly international in nature, legislation remained largely national, related to national governments and the political scene. The implications of the absence of European legislation at that time are significant as state aid policy in one country can have distorting effects on competition in another country. Due to the internationalization of banking, when a bank receives state aid from its home government, it gives the bank a competitive advantage not only on the national market but also in host countries.

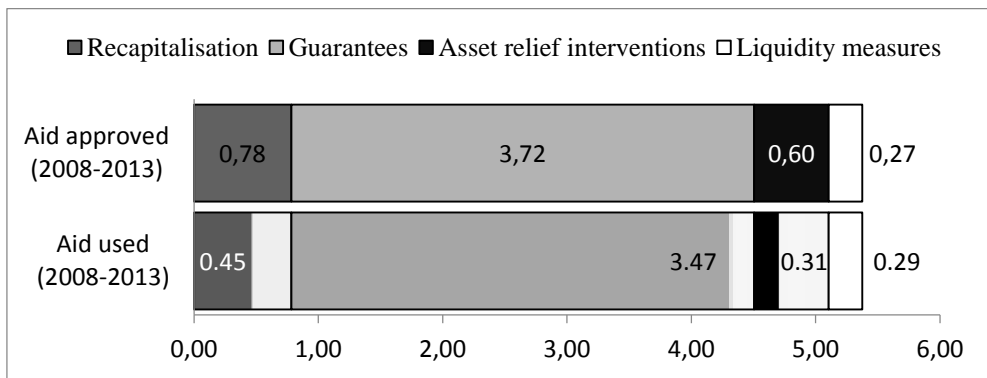
2.1 Financial State Aid – Data

Two different concepts are used to describe the volumes of State aid to financial institutions: the approved (committed or pledged) amount of aid and the used amount of aid. The aid approved represents the overall maximum amount of State aid measures (such as guarantees, capital injections and other) committed by Member States and approved by the Commission. That aid approved is the upper limits of support which Member States are allowed to provide. The used amount of the aid expresses the actual volume of the aid measure which Member States implemented for recapitalization (the nominal value), for impaired asset relief (the difference between the transfer value paid to the beneficiary and the market value of the asset), for guarantee (the volume of the liability covered by the State), for liquidity support (value of the loan). Recapitalisation and impaired asset relief are recorded at the time of their issuance. For liability support (liquidity and guarantee), aid can be recorded either once when the liability considered is issued, or can be recorded as long as the liability matures.

The data presented relies on the State aid Scoreboard¹³¹ with slightly different time scope. The Paper covers the period October 2008-September 2014 and full years 2009-2013. Moreover, as regards aid in the form of guarantees, figures in this Paper only consider the guarantees for newly emitted bonds by beneficiary banks and record such guarantee once at the time of their emission.

Scoreboard records expenditure for which the Commission adopted a formal decision or received an information fiche from the Member States. From analytical point of view, the crisis financial data are relatively crude and “political” as they depend on information received from the national government. In addition, data might be inconsistent due to the changes in the Scoreboard change in the methodology to record the state aid.

Figure 1: Approved and Used Amounts of State Aid to Financial Institutions during 2008-2013 by Instrument Type (in Trillion Euros)

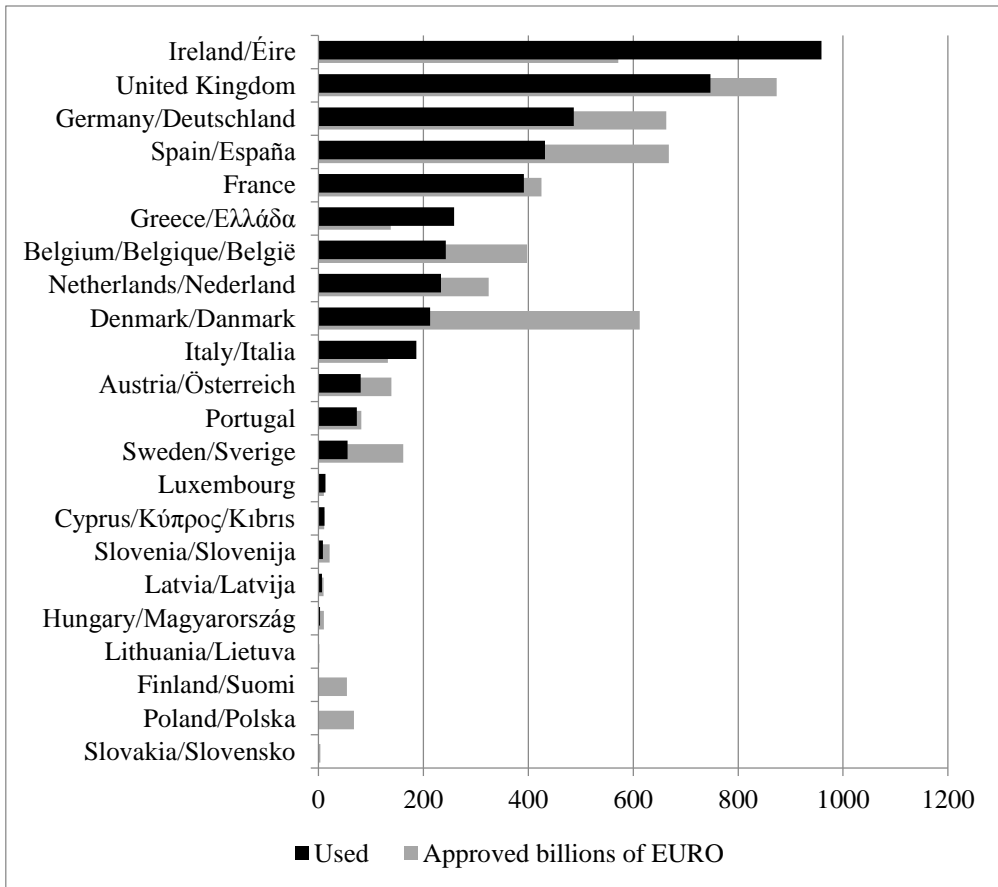


Source: European Commission, State aid Scoreboard

http://ec.europa.eu/competition/state_aid/scoreboard/financial_economic_crisis_aid_en.html

Figure 2 shows the total aid approved and used during 2008-2013 by instruments. The large majority of aid (69%) had been committed for guaranteeing financial institutions' senior liabilities, 14.5% to recapitalization measures and 11% for asset relief intervention. Rest was supposed to be used for liquidity measures. Till the end of 2013 only 84% of all approved aid has been used – 93% of guarantees, 58% of recapitalisation measures and half of asset relief interventions. Strangely enough – more liquidity measures have been used than approved.

¹³¹ Since 1992 all official state aid is recorded by Scoreboard in order to make it transparent in the single market. State Aid Scoreboard comprises aid expenditure made by Member States, by sectors or type which falls under the scope of Article 107(1) of the Treaty on the Functioning of the EU. Between 1992-2007, the financial aid was recorded as a sectoral aid. Since 2008 the crisis financial aid is recorded by the European Commission separately.

Figure 2: Amounts of State Aid to Financial Institutions during 2008-2013 by EU Member States (in Billion Euros)

Source: European Commission, State aid Scoreboard.

http://ec.europa.eu/competition/state_aid/scoreboard/financial_economic_crisis_aid_en.html

Note: The amounts consist of recapitalization, asset relief, guarantees and liquidity measures.

Figure 2 shows how the aid was distributed among the EU countries. The timespan is shorter 2008-2013 and covers the total amount € 5375 billion as it did not include € 388 billion first 9 months of 2014. The Figure illustrates that the financial aid was concentrated to small group of countries. More than 70% of the total financial crisis went to Great Britain, Ireland, Denmark, Spain, Germany and France, of which four - Germany, Ireland, Spain and France - are members of Eurozone. Rest of the countries had only very little or negligible approved or used state aid. Two Member States – Finland and Poland, – did not use any of the approved measures while aid granted by Slovakia, and Lithuania remained marginal. Bulgaria, Czech Republic, Estonia, Malta and Romania are not involved in the Figure 2 as they did not have any case of financial state aid during the crisis.

About 80% of financial state aid has been actually used to the date. As for actually *used* financial state aid, Ireland, Great Britain, Germany, Spain and France were the countries on the first positions. In some countries like Ireland, Italy or Greece there was more state aid used

than approved which can be explained by inconsistency in statistics or by the fact that the country received aid also from other than national budgets.

As mentioned above, the national bank bailout plans differed significantly across European countries and different factors shaped national rescue programmes, among which economic conditions, the institutional and political setting of each country, ownership and role of the banking sector, relationships between governments and their national banking systems were the most important ones (see Grossman and Woll, 2013 for more detail).

In Ireland for instance the banks lent the money to property developers and generated a property bubble. To stabilize the financial sector, Ireland committed more than twice their gross domestic product to the ailing banking sector, which led to country into a sovereign debt crisis and other but not national budgets have been used to bailout financial sector. As Schoenmaker D., (2015) concludes Irish authorities have been successful in the management of the Irish banking crisis, on balance; there was a strong focus on restoring solvency and replacing management. Less emphasis was on restructuring loans. The Irish taxpayers did bear the costs of recapitalising the Irish banking system, while part of the resulting stability benefits accrued to the wider European banking system.

2.2 Financial Aid, Public Debt and Gross Domestic Product

Debt is a common part of recent market economies but there are apparently some limits to the height of the public debt and its link to the growth. (Reinhart and Rogoff, 2010) In the European Union, **eight years after** the worst financial crisis since the Great Depression, public debts continue to grow and **government debt is unsustainably high in some EU countries**. Most EU member states have higher levels of borrowing relative to GDP than they had in 2007. Not only public debts but also business sector and household debt are mounting. Public debt is however the fastest growing of all the sectors. While EU public debt/GDP ratio was still below 60% in 2007, in 2014 it reaches 90%. Part of the public debts has been incurred by national and EU leaders due to the financing bailouts and programs to face the crisis.

Table 1: Share of Financial State Aid (FSA) on Gross Domestic Product (GDP) and Government Gross Debt (GGD)

Country	FSA/GDP [‡]	FSA/GGD [‡]
EU-27	44%	48%
United Kingdom	44%	42%
Ireland	480%	408%
Denmark	288%	613%
Spain	68%	65%
Germany	24%	30%
France	20%	21%

Source: European Commission, State aid Scoreboard.

http://ec.europa.eu/competition/state_aid/scoreboard/financial_economic_crisis_aid_en.html

Note: FSA Approved 2008-September 2014, [‡] 2014, GGD and GDP are consolidated

The ratios of the financial state aid, gross domestic product and public debt for the whole EU and selected countries recorded by Table 1. Not only massive subsidies and bail-outs of the banks by national governments undoubtedly deteriorate competition and increase moral hazard but also have impact on the increase of national deficits and public debts which in turn have negative effect on the economic growth. Financial state aid has caused in several countries

ballooning budget deficits due to the governments bail-out financial institutions and tax revenues collapse during the economic crisis or slow down. **Large share of debt can be related to the bank bailouts and to the fact that government debt is unsustainably high in some countries.** The level of the debt is important in understanding future growth prospects.

In the EU, the total public debt increased to € 12 117 billion as by 2014¹³² during 2008-2014. Of course the public debt growth has also other reasons and other but financial aid has impact on its development and the analysis would have to go much deeper but because most of the financial aid has not been paid back in European countries (contrary to US), it can be concluded that a vast share of public debt increase can be attributed to the financial aid but very differently across the countries. In the United States it was The Troubled Asset Relief Program (TARP) was set up in 2008 to provide rules to purchase assets and equity from financial institutions to strengthen financial sector. The TARP program approved public means \$700 billion, later the sum was reduced to \$475 billion. December 19, 2014, the U.S. Treasury sold its remaining holdings and ended TARP with total revenue totalling to \$441.7 billion on \$426.4 billion invested (*Tracy R., Steinberg J. and Demos T., 2014*).

3. Legal and Institutional Issues related to the Financial Crisis

EU did not intervene directly into the bailing out of banks during the banking crisis as there was not mechanism or legal basis for it. The need to stabilize financial markets was urgent and thus all these aid was exempted from the general state aid ban without proper analysis following the European Council of 15 October 2008 which confirmed its support for the Commission's application of the State aid rules "to be implemented in a way that meets the need for speedy and flexible action".

Article 107(3)(b) TFEU which allows for State aid which remedies a serious disturbance in the economy of a Member State, become one of the first of the mechanisms through which the EU began to develop a response to the crisis. In 2008-2009, the Commission adopted a temporary state aid framework to enable Member States to deal with financial problems in systemic banks. The crisis rules for banks were tightened in 2010 and extended in 2011. In the absence of harmonised regulatory framework, several "Crisis Communications" were adopted by the European Commission since the beginning of the financial crisis, setting out how Member States could take action to support financial stability while remaining in compliance with State aid requirements, and specifying the necessary remedies required of banks in receipt of State support for the financial sector during the financial crisis. *Recapitalisation Communication* provided guidance on recapitalization and established principles for the remuneration of the injections of capital made by States. The *Impaired Asset Communication* provided guidance for relieving banks from toxic assets and the *Restructuring Communication* set out conditions for restructuring plan.

Since the start of the crisis, the European Union has undertaken a number of institutional and regulatory changes aimed at the management and the resolution of banking crises. To the date there are numerous legislative measures which have transformed the nature of EU financial system regulation have been adopted and are still in preparation. In 2012, the European Council has agreed to undertake further initiatives and create European Banking Union. Banking Union (BU) is to take over many powers but also responsibilities to supra-national

¹³² Government consolidated gross debt.

level - regulation, supervision, recovery and resolution of the financial sector and deposit protection.

European Banking Union is the most ambitious political project in the European integration since the Economic and Monetary Union. It is work-in-progress focusing on bank supervision and bank resolution. The stated aim of the Banking Union is to break the sovereign-bank loop or so called “vicious circle”: Bailouts of banks create problems in government finances and increase in borrowing costs in anticipation of costly rescue programmes. As banks are major holders of downgraded government bonds, capital outflow in anticipation of sovereign crisis paralyzes interbank money market. Given the fact that credit standing of nation states and banks are interlinked, BU attempts to organise bank risk sharing at the euro area level.

After difficult negotiations Banking Union started to work in November 2014 when the Single Supervisory Mechanism (SSM) became operational and European Central Bank (ECB) became supervisor for the Eurozone. The ECB is vested with new powers, for example, to authorise the take up of the business of credit institutions, to require the banks to hold own funds in excess of the capital requirements, to request the divestment of activities that pose excessive risks, and to remove members from the management body.

Since January 2016 Single Resolution Mechanism – SRM which includes bail-in system should be in operation. The details of SRM enforcement are not yet clear, although it should be possible to inject cash directly into ailing Eurozone banks through European Stability Mechanism (ESM). Members of the BU are all euro area countries and those EU member states that choose to participate. All countries that adopt the euro in future will automatically become members of the banking union. Banking Union is significantly limiting national sovereignty in several fields, leads to further centralization on super-national level.

Banking crisis has triggered a new round of legal and institutional changes in the EU. Banking Union together with the Fiscal Union (Fiscal Treaty or Compact) mean significant changes in centralization of powers within the EU. The major reason of the Banking Union was to have a reliable mechanism which would signal bank failure and break the vicious circle between the financing the public deficits and debt through sovereigns and the banks that have these sovereigns in their portfolios. Treaty on Stability, Coordination and Governance in the Economic and Monetary Union, the so-called Fiscal Compact, has complicating the institutional set-up of the 19-members Eurozone, and its constitutional relationship with the EU of 28 (Fabrini, 2014).

4. Conclusion

The financial crisis 2008 lead to huge amount of aid provided by European governments to stabilize the banking sector. Stabilising the banking system was only short term objective; the ultimate objective of the EU, governments and the central banks is stable economic growth. This however is not possible without protection of market competition.

In the EU, the bulk of the aid granted to financial institutions was concentrated on a limited number of individual financial institutions in the internal market as a whole. Based on available data it is not clear to what extend the aid has been accompanied by a restructuring plan for the aided bank – at least there is no evidence for payback of the aid as was the case of the United States. Although there is a need to safeguard the stability of the European financial system or bring temporal liquidity to the real economy, for the sake of long term growth it has to be ensured that the financial state aid measures will not destroy the level playing field between aid recipients and their competitors: banks who benefit from government support should pay

back the aid received. If this will not be the case, competition will be distorted with all consequences for long term growth and welfare. In addition, countries will face international arbitrations as it was for instance the case on Nomura/IPB in the Czech Republic based on enforcement of the EU competition laws but also WTO/GATT Agreement.

There are uncertainties related to the BU, especially with respect to principal economic problem of Economic Monetary Union (EMU), namely feasibility of fiscal union and enforceability of Banking and Fiscal Unions. The financial crisis followed by sovereign and euro crisis showed that important issues in economic policy concerning the EMU and the role of the nation-state were 'swept under the carpet'. Meanwhile overall indebtedness in the EU is not decreasing. The recent piling of the debts in some EU countries creates new risks to financial stability and may thus undermine the economic growth in the long term.

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Current Issues of Legal and Illegal Migration in Slovakia

Otília Zorkóciová, Lucia Ďuranová

University of Economics in Bratislava

Faculty of Commerce, Department of International Trade

Dolnozemska cesta 1

Bratislava, Slovakia

e-mail: ozorkoci@hotmail.com, duranovalucia@gmail.com

Abstract

Nowadays, migration is one of the main phenomena in 21st century and significantly influences the future of nations. Geographically, EU countries constitute important target region for immigrants coming from different countries in the world and thus migration is included in key aspects of EU political agenda. This article builds on the theoretical views of professional public identifying legal and illegal migration (including the importance of highly-skilled immigration). This article analyses the number and structure of legal and illegal immigrants in Slovakia. At the end of article are the results of the original survey focus on attitudes of Slovak respondents to the various aspects and envisaged consequences of immigration in Slovakia.

Keywords: *Highly Skilled Migration, Illegal Migration, Immigration, Legal Migration*

JEL Classification: *J610, J600, J210*

1. Introduction

The phenomenon of migration, influenced by the political-economic and environmental deformations in the international environment, has grown in recent years to enormous, often uncontrollable, and therefore unsustainable proportions, and at the same time put European Union member countries in a position where they face new challenges and are also forced to search for common solutions. Migration, due to migration crisis, touches most of the European countries including Slovakia more than ever before. Slovakia has not faced such intense immigration pressure yet, than the others, so called, “dream“ destinations for migrants, such as Germany or Sweden, or also transit countries such as Italy and Greece. Therefore, the number of migrants in Slovakia is incomparable to that in these destinations. In spite of that, Slovakia is becoming a part of the solution making process of migration policy within the EU. Since Slovakia has entered to the EU in 2004 until now, approximately a 4-time increase in legal immigration into its territory was recorded, and also a partial decline, although previously low but still occurring, in illegal and asylum migration.

The goal of this paper is to identify the actual EU approaches towards possible solutions of migrant crisis and the current state of the legal and illegal migration in Slovakia as an EU member state. A component of this paper is also the results of an original survey, conducted by the authors, focusing on the current attitudes of Slovak respondents to different aspects, and anticipated consequences of immigration in Slovakia.

1.1 Theoretical Background of Legal and Illegal Migration

The current period is called the era of globalization; national economies are closely linked and mutually interdependent. A new era has brought us great benefits in terms of reducing costs, speeding delivery of goods and services, and to facilitate the stay of persons and labor force (Zorkóciová, Brynkusová, 2012, p. 12). Globalization is an extremely complex and diverse process. Therefore, it is currently very difficult and complicated to clearly identify the direction, details of indication, and the extent of further development of this process (Kosir, Rosenberg 2007, p. 42). The intensification of migration is one of the greatest global challenges of the 21st century, it acts as an accelerator of globalization, but it is also accelerated itself by the completion of the globalization processes.

There are multiple different views of representatives within the professional community, as well as international organizations, to define migration. The term migration is according to IOM – International Organization for Migration is defined as a movement of people crossing international borders, or a mobility within the country. It is the movement of a population, involving any kind of movement of persons, regardless of distance, composition and cause (IOM, 2011). Migration can be characterized as a temporary or permanent movement of individuals or groups of people from one place to another, due to various reasons; from better work opportunities to persecution (Zanker, 2008, p. 23).

Migration flows are dynamic, containing different types of people and their motivations that are affecting the country of source, as well as destination country, and society (Bonifazi et al., 2008, p. 19). Migration is also a process of social changes when an individual, alone or accompanied by the other persons, leaves one geographical area in order to fulfill the vision of better economic and political conditions, or expand opportunities for education, with long-term residence or permanent establishment in the another geographical area (Bhugra [online], 2004). Migration is a complex socioeconomic phenomenon, which is, on one hand conditioned by economic and social situations in the source region and in the target region also. On the other hand, migration is an important indicator that reflects the characteristics of the region (Kněžáčková, 2014, p. 320). Migration occurs in various forms, for example: migratory movements between continents, within a continent or within a country. As there are various types of movements falling under migration there are also efforts for its detailed classification. There are many criteria for classification based on how a migration can be divided according to the length of stay (short term, long term), direction of movement (emigration, immigration), or by the motivation of migration (voluntary and forced).

It is very complicated to determine a general definition of "migrant", especially at the international level. We can talk about migrants if the individuals are living temporarily or permanently outside their country of origin, while creating significant social ties to their currently resided country (UNESCO, 2011). In this article, in conditions of EU, we will distinguish three basic types of migrants, identifying as:

- Legal (economic) migrant - individuals who voluntarily leave their parent country and migrate to another country in order to improve their standard of living, economic situation, or due to education. Unlike refugees, these migrants are not forced to leave the parent country due to persecution, racial, religious, ethnic or military conflicts.
- Illegal migrant – the term "illegal migrant" refers to such individuals who are not nationals but remain in one of the EU Member States without a valid visa or residence permit. Illegal migration represents migration flows that bypass the regulatory standards of the parent, transit and source countries. In term of the targeted countries

where the illegal migration flows are heading we can talk about the entry, stay or work without the necessary permits or documents required by immigration laws. In case of the source country the illegality can be seen when migrants cross the international boundaries without a valid passport or do not meet the administrative requirements for leaving the country. Illegal migrants can enter the destination country through three main irregular manners. The first is to enter the country without a proper authorization, through a secret entrance or the use of false documents. In the second manner, the migrant can enter the destination country under authority of residence permit and by exceeding validity of the obtained permit is becoming an illegal immigrant. In the last manner we talk about deliberate exploitation of the asylum system by the illegal migrants. (Ďuranová, 2015, p. 62).

- Highly qualified migrant - the definition of a highly skilled workforce is not united within the EU Member States and its content depends on the requirements of a domestic market and divergent national criteria. The criterias applied by the Member States are often derived from the International Standard Classification of Occupations of the International Labour Organization (ILO), where the categories of highly qualified and skilled workers apply to professions involving managers, specialists and professionals, as well as from the International Standard Classification of Education UNESCO, offering an overview of the level of education attained by a highly qualified individual (Zorkóciová, Ďuranová, 2014, p. 143).

1.2 EU Approaches Towards Possible Solutions of Migrant Crisis

In the last couple of months the European Union has endured one of the largest migration pressures in its history. A result of the continually growing migration crisis is the influx of over 1 million immigrants (primarily refugees) into a number of European countries, who crossed and are crossing European national borders through irregular means.

EU leaders adopted a range of measures to solve the immigration crisis, such as the system of mandatory quotas about redistribution of migrants, to which several Member States, including Slovakia had a negative attitude. Although none of the measures have yielded tangible progress in this fight against the unceasing migration crisis, neither have solved the real cause of the present uncontrolled stage, which is to stabilize the situation in Syria. The important step in resolving the real nature of growing migration flows was the truce between the US and Russia in Syria, which was brought into force 27th of February 2016. Turkey, as an acceptable destination for Syrian refugees, plays key role during current crisis. In order to make more effective regulation of irregular migration, Turkey has introduced stricter rules for immigrants from third countries to obtain a visa to enter the country and continuously strengthen the border's control especially with Syria. The important step Turkey has done towards struggle with irregular migration is also strengthening cooperation with EU Member States, especially in the area of readmission and police and judicial cooperation, as well as implementation of measures against corruption and organized crime that have serious negative effects on the phenomenon of modern migration crisis. The turning point in solving the refugee crisis had the agreement between EU and Turkey, which is in line with EU standards and international law and it would terminate irregular migration from Turkey to the EU.

On 18 March, the European Union and Turkey decided to end the irregular migration from Turkey to the EU. The EU and Turkey agreed that (European Commission, 2016):

- All new irregular migrants crossing from Turkey to the Greek islands as of 20 March 2016 will be returned to Turkey;

- For every Syrian being returned to Turkey from the Greek islands, another Syrian will be resettled to the EU;
- Turkey will take any necessary measures to prevent new sea or land routes for irregular migration opening from Turkey to the EU;
- Once irregular crossings between Turkey and the EU are ending or have been substantially reduced, a Voluntary Humanitarian Admission Scheme will be activated;
- The fulfillment of the visa liberalization roadmap will be accelerated with a view to lifting the visa requirements for Turkish citizens at the latest by the end of June 2016. Turkey will take all the necessary steps to fulfill the remaining requirements;
- The EU will, in close cooperation with Turkey, further speed up the disbursement of the initially allocated €3 billion under the Facility for Refugees in Turkey. Once these resources are about to be used in full, the EU will mobilize additional funding for the Facility up to an additional €3 billion to the end of 2018;
- The EU and Turkey welcomed the ongoing work on the upgrading of the Customs Union.
- The accession process will be re-energized, with Chapter 33 to be opened during the Dutch Presidency of the Council of the European Union and preparatory work on the opening of other chapters to continue at an accelerated pace;
- The EU and Turkey will work to improve humanitarian conditions inside Syria.

According to senior officials of the EU, Turkey could play a strategic role in resolving the current immigration crisis. Currently signed agreement should discourage migrants from using smuggling networks and at the same time it should support legal immigration. There are also some critical views of the agreement signed by the EU and Turkey about refugees which doubt its success. One of the critics is the Austrian President Heinz Fischer, who does not believe in a real success of this agreement and assumes that there is only very low chance of achieving the reduction of irregular immigration flows. Skeptical attitude towards this agreement has also Slovak Prime Minister Robert Fico, who emphasizes the need for new alternative solutions in the EU. In this agreement we can see several negative aspects concerning Greece as the main buffer country for irregular migrants, which does not have adequately functioning system of assessment of asylum applications and also absents sufficient and adequate accommodation facilities for asylum seekers. This reality just highlights some poorly elaborated legal and practical issues of the agreement. The reason for the above-mentioned problems is a very short period of time between the conclusion of the agreement and its subsequent application. This kind of negative aspects may significantly affect the effectiveness of the agreement in its very beginning.

Also in our opinion this agreement does not solve the problem and irregular migrants will seek the “alternative” migration routes, such as through Bulgaria. Although the agreement would reduce irregular migration flows, historical migration patterns show that if one migration route closes, another opens up. The new potential migration routes could be, for example: between Turkey and Bulgaria, Turkey and Italy, Libya and Italy, Morocco and Spain, or Russia and Finland. Among the main determinants that could bring desired elimination of irregular migration flows from third countries into the EU, we consider: ending the Syrian conflict, improving conditions for refugees in the neighboring countries of Syria (e.g. Turkey), as well as supporting economic development in poor countries which are currently the main source countries of irregular migrants. The end of the migration crisis is now in the unforeseeable

future and it is questionable whether the agreement between the EU and Turkey about refugees will bring the expected breakage in its solution.

2. Problem Formulation and Methodology

Slovak Republic as a part of the European Union has belonged for a long time among the countries with the lowest share of foreigners in the domestic labor market. The phenomenon of international migration took part in the Slovak Republic especially after its accession to the EU in 2004. This crucial step increased immigration attractiveness of SR in the eyes of labor migrants mainly from developing countries. Since Slovakia's accession to the EU in 2004, the number of foreigners legally residing in the Slovak Republic increased almost fourfold (from 22 108 migrants in 2004 to 84,787 in 2015) and their share in the total population of Slovakia represents 1.56% (IOM, 2016). Following table shows the number of permits granted to immigrants from different EU Member States but also from the third countries.

Table 1: Number of Valid Resident Status for Foreigners in 2015 –TOP 10 in Slovakia

Temporary residence		Permanent residence		Tolerated residence	
Nationality	Number	Nationality	Number	Nationality	Number
Ukraine	7 297	Czech Republic	9 927	Syria	660
Serbia	4 988	Hungary	7 593	Ukraine	44
Russia	1 814	Romania	6 573	Vietnam	40
Republic of Korea	1 140	Poland	5 333	Moldavia	19
China	798	Germany	4 255	Serbia	18
Vietnam	626	Ukraine	3 365	Pakistan	10
Iran	481	Italy	2 458	Sudan	10
USA	440	Austria	2 257	USA	8
Macedonia	352	United Kingdom	1 835	Russia	7
Turkey	282	Bulgaria	1 757	Turkey	6
Other	2 871	Other	17 443	Other	80
TOTAL	21 089	TOTAL	62 796	TOTAL	902

Source: Ministerstvo vnútra SR [online], 2015

Slovakia, in spite of the relatively dynamic growth, has one of the lowest numbers of migrants among the third countries within the EU. Most of the migrants come to Slovakia from its neighboring countries due to free movement of individuals and labor. They are often motivated by the family or other social ties, but also by the existing work opportunities. Another numerous group of immigrants are citizens of Eastern and South-Eastern Europe (Ukraine, Serbia, Russia), as well as East and Southeast Asia (Vietnam, China, Korea Republic, Thailand).

„Migration policy of the Slovak Republic with a view to 2020“ is a document dealing with a labor migration in Slovakia. It is the essential starting point for the creation of the modern and purposeful policy of the Slovak Government in the field of migration. Slovakia faces the problem of labor force emigration abroad and associated lack of qualified workers in the domestic market. Therefore, one of the main goals of the Slovak migration policy is to attract a highly qualified and skilled labor from the third countries. Another important document

dealing with a migration labor is a conceptual paper *Minerva 2.0 – Slovakia to the first league*. This document is focusing on the solutions for the low mobility problem of foreign students and researchers, and proposing through the introduction of so-called „Slovak card“ and a points system, to support Slovak migration policy and to create appropriate conditions of the migration process for a highly skilled workforce from third countries. It is anticipated to be able to communicate with authorities in Slovakia more effectively in English language, speed up the process of issuance of visas and residence permits in Slovakia, facilitating the integration of foreign migrants and their access to the labor market, strengthening awareness of the opportunities for study, of social and health care, and of the taxes.

As it is stated in the document *Migration policy of the Slovak Republic with a view to 2020* (2011, p.6), the management of the economic migration must vigorously respond to the challenges of the global competition for talents, especially to their active search and creation of conditions for their arrival to Slovakia. Slovak Republic needs to implement more effective policies as it can actively support the admission of economic migrants and employment of migrants from third countries in accordance with needs of the national economy and the labor market, with emphasis on the recruitment and employment of the highly qualified workers and researchers, and as needed, other qualified migrants. The basic criteria for the admission of migrants within the framework of the regulated economic migration is their potential for the development of the Slovak economy and society with a preference for the acceptance of such migrants, who have the necessary qualification and competencies to cover the sustained demand for the scarce professions in the national labor market, with an emphasis on culturally closer countries.

Slovak Republic, in comparison with other EU Member States, has significantly lower number of issued EU Blue Cards, which are granted to the highly qualified citizens, migrated from third countries. The reason for such a low number is especially the later adoption of the Blue Cards regulation in Slovakia, in mid 2011. Over the last five years the most of the Blue Cards in Slovakia obtained the citizens of Russia and Ukraine, as well as citizens of Turkey and China. This was mainly a group of highly qualified workers – scientific and professional staff. The greatest interest is for IT specialists, linguists and researchers who are beginning to be in short supply. Slovak labor market also absents the traditional professions of the lower qualifications such as: butcher, baker, shoemaker, floor coverer, chimney sweep, farmer, fisherman or a sheep breeder.

Illegal migration is one of the key questions in the area of international migration, addressing both national and international level. Specific statistical data about the number and structure of the illegal migration flows at local, national, regional and global levels vary significantly and are also often inaccurate. However, we can state that illegal migration grows proportionally with the growth of a total international migration. Illegal migration combines many of the negative phenomena for example: trafficking / smuggling of migrants, human trafficking, cross-border crime, illegal low paid work or demanding and dangerous work. Illegal migration makes the control of the entry and movement of aliens to the targeted countries very difficult; it supports the growth of the shadow economy, increases tax evasion, creates new security threats, deeper social conflicts and integration problems (Mrlianová et al., 2011, p. 5).

Since the accession of Slovakia to the European Union in 2004, illegal migration decreased eight times from 10 946 illegal migrants in 2004 to 1 304 migrants in 2014. However, in 2015 the number of immigrants crossing the borders illegally or illegally remain on the territory of Slovakia increased at 2 535 (IOM, 2015).

Table 2: Illegal Migration in Slovakia in 2015 – TOP 10 Nationalities

Nationality	Total number of illegal migrants
Ukraine	867
Syria	582
Afghanistan	265
Iraq	146
Pakistan	120
Serbia	57
Russia	46
USA	44
Without nationality	29
Bangladesh	25
TOTAL	2 181

Source: Ministerstvo vnútra SR[online], 2015

Slovak borders are crossed illegally mainly by the migrants from Ukraine, but significantly is growing also the number of Syrian immigrants who are forced to leave the country due to the permanent conflicts. In many cases, they use the services of smugglers for easier entry into the EU, using the familiar Western Balkans EU routes. A part of illegal migrants passing through Slovakia to Czech Republic and consequently to the main immigration country Germany, eventually to the other Western countries. Considering that the illegal migration is becoming increasingly a serious cultural and safety risk, the solution for this escalating problem is gradually gaining ground in the migration policy. The content of this migration policy in the area of illegal migration returns and trafficking with people is particularly (Migration policy with a view to 2020, 2011, p. 11):

- a) developing a cooperation on behalf of an action against the illegal migration with the countries of the European Union, countries of origin and transit under the global approach to migration,
- b) adopting legislative, organizational and administrative measures to prevent illegal migration in the area of control and sanctions imposed in cases of illegal employment of migrants,
- c) taking measurements to increase the security protection of the documents and introduction of the technical means to detect their falsification and counterfeiting,
- d) performing security checks of foreigners (asylum visa applicants), focused on the verification of the invitation or granting the stay.

3. Problem Solution

Due to the ever increasing importance of migration and its positive and negative effects on the various areas of the economy in destination country, we have conducted an original survey. Its target was to detect the current attitudes of young Slovak university students towards the issue of the legal and illegal migration in Slovakia. To determine opinions and attitudes of the respondents, we have applied the one of the most commonly used methods in researching, the questionnaire querying. A questionnaire consisted of the 17 questions centered on the legal and illegal migration. The data gathering procedure was pursued mainly through the personal questioning followed by the completion of the questionnaire's printed form, as well as electronically when the questionnaire was placed on the social network in several groups intended on young people – students. This survey involved a total of 356 students. In this

presented article we will be focusing on the attitudes of the respondents towards legal migration in Slovakia, and its positive and negative consequences on the economy. In the next part of the article we will present the results of the evaluation of selected questions. In this section of the article we will evaluate this part of the survey, which was aimed at the analysis of the respondent's attitudes towards legal and illegal migration in Slovakia and their positive and negative consequences on the economy. One part of the questionnaire consist of the open questions which were, towards their multilateralism, processed by using the advanced filtering in order to ensure their highest explanatory power and the objectivity of their evaluation.

In the first classifying survey questions we investigated a sex, age and a field of study of the surveyed respondents. Respondents completed the questionnaire represented 65 % women and 35 % men. The largest group of respondents were people of age 18-22 years, who represented up to 85 % of the total number. The second most numerous group included respondents of age 23-25 years (11 %), the remaining 5 % of the respondents were over 26 years old. The majority of the respondents' study in the field of economic science, which bears in our opinion a greater explanatory power of their responses.

The first question of the questionnaire was directed to the expression of concern feelings towards the legal/illegal migration and the identification of the reasons of their concerns. Most of the respondents (96 %) were considered the illegal migration as a threat to the migration flows – as opposed to the legal migration. Majority of respondents were concerned about the illegal migration particularly due to the potential risk of the terrorist attacks and the increased crime, unwillingness of the migrants to adapt to the Slovak culture, or about the uncontrollable and insufficient listing of the numbers and levels of the illegal migrants residing in Slovakia.

In the next question we were interested whether respondents have an idea about the percentage share of legal immigrants in proportion to the total population in Slovakia. Respondents could have answered in the range of 0-100 %. The answers to this question were evaluated by averaging the responses and based on that we were able to obtain the figure of 11.8 %. In comparison with already mentioned statistical data by the IOM - International Organization for Migration, legal migrants in Slovakia represent only 1.56 % of the population, even though it is important to note that their number is continuously growing.

In this survey we were also focusing on respondents' expectations concerning the development of the legal migration flows directed to Slovakia in upcoming years. The majority of the questioned respondents are expecting a gradual increase in the number of legal migrants. This result reflects the views on the current, constantly increasing migrant flows from third countries to Europe, as well as the necessity of acquiring a skilled labor for scarce professions, and also an aging population modifying Slovak labor market.

The content of the questionnaire was focused on the evaluation of the positive and negative aspects of legal migration in Slovakia. Respondents had the opportunity to express their attitude to the positive impact of legal migration on the Slovak economy. Most of the respondents were, in the evaluation of positive aspects of legal migration, opted to answer those legal immigrants who are qualified and have special working skills and abilities, represent an important source of streamlining the labor market in the country they are coming to. As a great positive of legal migration, respondents also considered the filling of the professional gaps in the labor market and a balancing of the limited geographical and functional mobility of a domestic workforce. In case of negative impacts, respondents expressed the views that with the arrival of a large number of legal migrants, there is a threat of losing the national identity of the country and this brings the possibility of increasing

national (ethnic) conflicts and activization of various radical social groups. The other negative aspect of this question mentioned by respondents is a concern about filling the jobs by migrants instead of domestic population, and also increasing treat of crime, violence and disturbance of the standard social habits in the country, since migrants would bring to our country different cultural values and way of life.

4. Conclusion

The effective regulation of the international migration leads to migrant's prosperity in the source, transit and destination countries. Above all, the labor migration requires a systematic approach and skilled management, secured by the appropriate EU structures, and a state management of the Member States. Many EU countries including Slovakia are struggling with a lack of skilled labor and at the same time the aging population. International migration of the high skilled workers is becoming to play a key role at the labor market since its contribution to their growth, development and competitiveness. Although Slovakia has already taken the first steps on the way to obtain a highly skilled workforce, there are still many weaknesses against the global competition for talents. In that, not only EU countries but also for example: USA, Canada or China competes through their national migration policies on the acquisition of highly skilled migrants from third countries. In order to attract highly qualified workforce it is important to continue optimizing conditions for it not only in Slovakia. The conditions can be optimized by the elimination of institutional, social and administrative barriers. A proper management of legal and illegal migration is subjected by the serious problem – aging population, which affects not only the EU Member States, but also the whole world. For the first time in history, our global population will no longer be young, thanks to lower fertility, increased child survival, better nutrition, sanitation, medical advances, health care, education and economic well-being. (Šotkovský, 2014, p. 712). On the other hand, there are regions and the areas of the world continents that are afflicted by the armed conflicts, famine, and extreme poverty with a predominant population in productive age, seeking for a vision of “better life” in the “promise land” with a highest number of the aging population on the world.

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Influence of Competence Centres on the Development of Innovations

Vladimír Žitek, Viktorie Klímová

Masaryk University, Faculty of Economics and Administration
Department of Regional Economics and Development
Lipová 41a
Brno, Czech Republic
e-mail: zitek@econ.muni.cz, klimova@econ.muni.cz

Abstract

Innovation cooperation is regarded as a factor that increases innovation capabilities of companies, regions and countries. Therefore, innovation policies in developed countries support cooperation in innovation activities through a wide range of policy tools. Competence centres are one of them. Competence centres represent a group of actors that cooperate in research, development and innovation in advanced fields with high application and innovative potential. They are jointly created by enterprises, research organisations and universities. The aim of this article is to analyse the competence centres in the Czech Republic with respect to their expected influence on innovation development. The analysis is focused on the structure of recipients, granted support, intellectual property rights and research fields.

Keywords: *Competence Centres, Innovation, Intellectual Property Rights, Research and Development*

JEL Classification: *O31, O34, O38*

1. Introduction

A competence centre represents an innovation policy tool that is used to support collaboration in innovation and research. It is widely accepted that such cooperation enhances and accelerates innovation processes and leads to more radical innovations. In the scientific literature, mainly the innovation systems concept is known by its emphasis on cooperation (networking) and interactive learning. We can say that research and innovation cooperation is a pillar of the system approach to innovation. This concept has also influenced the practical innovation and regional policy at the European, national and regional levels. All member states of the European Union have to focus their attention on research and innovation if they want to acquire resources from the European structural funds. To be more precise, each country has to set up an innovation strategy for smart specialisation (e.g. Streitenberger, 2013; Kordoš, 2014). They are called National/Regional innovation strategies for smart specialization RIS3. They build on each country/region's strengths, competitive advantages and potential for excellence. This approach is directly influenced by the innovation systems concept (see e.g. Asheim, Boschma and Cooke, 2011)

Companies using knowledge from various sources (other firms and knowledge organizations) at various levels (regional, national, international) are the most likely to generate product innovations new to market (Tödtling and Grillitsch, 2015). Activities practised in these networks include creation, combination, exchange, transformation, absorption, and utilization of resources through a wide range of formal and informal relations (Tijssen, 1998; Fischer,

2001). The innovation networks give companies new ideas and initiatives and enable faster knowledge transfer. So, they can significantly contribute to the improvement of innovation capabilities of companies. Due to the cooperation, the companies can determine tasks in the innovation process and reach targets that would not be reached without others. (Powell and Grodal, 2005) Cooperation between companies and research organizations is one of the channels through which science is linked to technology and leads to innovation. In the framework of the mutual cooperation, companies access new knowledge sources, benefit from research spillovers and share the risks and costs of their innovative projects (Marzucchi, Antonioli and Montresor, 2015).

Policy-makers can stimulate companies' cooperation with research organizations by granting an R&D subsidy (Marzucchi, Antonioli and Montresor, 2015). Competence centres are one of the policy tools for support of innovation and research cooperation. Competence centres represent a group of actors that cooperate in research, development and innovation in advanced fields with high application and innovative potential (TAČR, 2014). Their aim is to achieve a stronger impact and concentration of research efforts by creating research environments in which enterprises can participate actively and benefit from the results. They are expected to strengthen regional innovation systems. (OECD, 2011) Competence centres can be seen as platforms to stimulate the combination of local and global networking activities (Korber and Paier, 2014). They allow for the connection of the demand side and the supply side of the innovation system. It means, they link companies applying knowledge with research institutes and universities producing new knowledge (see e.g. Autio, 1998; Tödtling and Tripl, 2005). Two basic types of knowledge have emerged and spread from competence centres: tacit knowledge and codified knowledge (see e.g. Jensen et al., 2007). The former can be diffused through a face-to-face contact and so it can be spread at short distances. In this case, geographical proximity plays an important role (Marrocu, Paci and Usai, 2013). The latter can be written down and it is diffused through publications, patents, utility models, and so on. Empirical studies investigating macro-economic benefits of competence centres show two types of benefits (OECD, 2011): 1) those related to knowledge spillovers (the creation of formal and informal linkages and networks between firms, research institutions, public agents and other local organisations), and 2) those related to the increase in the attractiveness of the hosting regions (productivity increase, competitiveness enhancement, long-term economic growth and employment).

The first competence centres appeared in the USA, when the National Science Foundation's Engineering started to support their activities in 1985. Since the 1990s they have become an international phenomenon. Although they have some common features, they are adapted to the needs of the local innovation systems. (Bumane, 2014) Nowadays, competence centres are very popular in Sweden, Switzerland, Austria, Germany, Canada, United Kingdom, Latvia, Estonia, and others. In the Czech Republic these centres have been supported since 2011 by the Technology Agency. There are two main implementation competence centre models in the world. The first of them requires establishing a competence centre as an independent legal entity, e.g. Estonia, Latvia, and Austria. The second does not require the same and these competence centres are integrated in a university or a company, e.g. in the Czech Republic.

2. Data and Methodology

In this article we evaluate the expected influence of competence centres on innovation development. We use data about the Czech competence centres that are supported by the Technology Agency of the Czech Republic in the framework of the Competence Centres Programme. Up to now, two public tenders were put out and 34 competence centres have been

supported in their framework (RVVI, 2016). The first public tender was put out in 2011, the second one in 2013. The individual competence centres have been granted since 2012. The programme is planned for the period of 2012–2019 and its financial allocation is approx. 6000 mil. CZK (approx. 220 mil. EUR). This programme is financed only from the state budget of the Czech Republic; it is not financed by any European structural fund.

The programme supports the establishment and operation of centres for research, development and innovation in advanced fields with high application and innovative potential and a perspective for making a substantial contribution to the growth of competitiveness of the Czech Republic jointly created by research organizations and enterprises. Primarily, it should support the competence centres which meet the National priorities of targeted research, experimental development and innovation. (TAČR, 2014)

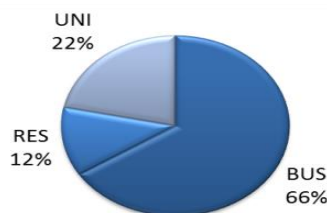
We analyse all 34 competence centres that are supported. The attention is paid to typology of participants, costs and granted support, research fields and expected results (especially in the form of intellectual property rights).

The aim of this article is to analyse the competence centres in the Czech Republic with respect to their expected influence on innovation development. For this purpose, the analysis focuses on their activities in the area of patents, utility models, industrial designs, proven technologies, prototypes and certified methodologies. It is also aimed at the structure of participants, financial support for projects and research fields.

3. Competence Centres and the Development of Innovation

The actors that participate in projects within this programme can be divided into two basic groups: enterprises, and research organisations. A research organisation is defined in the sense of Commission Regulation (EU) No 651/2014: a research and knowledge-dissemination organisation means an entity, irrespective of its legal status (organised under public or private law) or way of financing, whose primary goal is to independently conduct fundamental research, industrial research or experimental development or to widely disseminate the results of such activities by way of teaching, publication or knowledge transfer. On the basis of this definition we can derive that research organisations are represented primarily by research institutes and universities. Therefore, we divided all supported subjects into three groups: businesses (BUS), research institutes (RES), and universities (UNI). The research institutes are represented mainly by Public Research Institutions that are founded by the Czech Academy of Sciences.

Figure 1: Structure of Recipients in the Competence Centres Programme



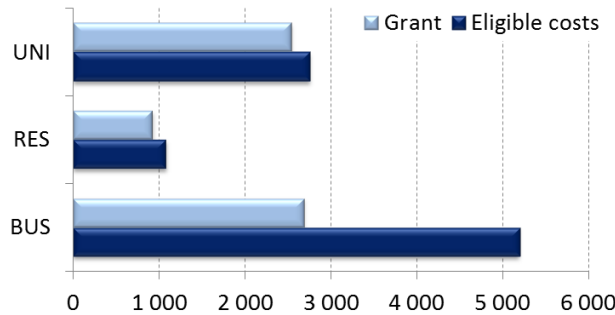
Source: authors' calculations based on RVVI (2016)

In total, 341 recipients in 34 projects are supported within the programme. The most of them are businesses (225). Public universities (and state university in one case) are represented by

72 various participants (faculties, departments, research centres at universities) and research institutes are represented by 42 subjects. Each competence centre has to encompass at least one research organisation and two enterprises. Figure 1 illustrates the share of individual types of participants.

The supported players want to spend 9,031 mil. CZK on their research projects during the period of 2012–2019. These eligible costs will be paid primarily by businesses (5,192 mil. CZK). Universities will spend 2,755 mil. CZK and research institutes 1,083 mil. CZK. The rules of the programme and the European legislation determine the maximum intensity of support that can be granted. In general, we can say that universities and research institutes can obtain higher support than companies. Therefore, the expected total grant for universities (2,540 mil. CZK) is only 143 mil. CZK lower than the grant for businesses. Research institutes should obtain nearly one billion CZK. Figure 2 shows total eligible costs and total amount of grant based on the recipient type.

Figure 2: Eligible Costs and Grant in Competence Centres Programme (in Thous. CZK)



Source: authors’ calculations based on RVVI (2016)

We can calculate costs and subsidies per project as well (see table 1). The project with the lowest eligible costs concerns a chemical field and involves eight participants. This project obtained also the lowest grant of all projects. The project with the highest eligible costs is carried out in the field of civil engineering and 22 partners participate in it. The project with the highest support is conducted in electrical engineering and involves 12 participants.

Table 1: Eligible Costs and Grant Per Project (in Thous. CZK)

	Minimum	Maximum	Average	Mean
Eligible costs	126,650	360,256	265,620	266,587
Grant	88,217	245,244	180,842	185,269

Source: authors’ calculations based on RVVI (2016)

Eligible costs and grant can be expressed per participant, too (see table 2). Disregarding one specific participant with zero costs, the lowest eligible costs are 300,000 CZK. But this is not a typical participant of competence centres projects. The average eligible costs per participant reach 26,484 thous. CZK. Fifteen companies did not obtain any grant, although they invest in collaborative projects (except for the participant mentioned above). Their eligible costs vary from 300,000 CZK to 15,199 thous. CZK, one company should even invest 29,300 thous. CZK. This is the case of the Czech Power Company ČEZ which is owned by the state.

Table 2: Eligible Costs and Grant Per Participant (in Thous. CZK)

Recipient type	Indicator	Minimum	Maximum	Average	Mean
All recipients	Costs	0 (300)	233,600	26,484	19,169
	Grant	0 (182)	190,254	18,031	12,900
Businesses	Costs	0 (300)	192,000	23,076	16,440
	Grant	0 (182)	116,272	11,925	8,400
Universities	Costs	7,237	233600	37,236	26,958
	Grant	7,237	190,254	34,322	24,745
Research institutes	Costs	4,149	88,291	25,797	20,830
	Grant	4,149	59,003	22,043	18,298

Source: authors' calculations based on RVVI (2016)

Evaluating the influence on innovation activities we should also observe the part of eligible costs that were not covered by the public aid (table 3). This indicator is relevant for businesses, in particular. If a university or a research institute do not get grant for 100% of eligible costs, we can expect them to be probably co-financed from another public source. A business cannot get any other support, so we can suppose that it earns money at market and its participation in the competence centre project enables it to introduce new and profitable innovation. Table 3 shows that the maximum amount of eligible costs without public aid reaches 75,728 thous. CZK. These costs will be financed by NUNVIA, a.s. (formerly ENVINET, a.s.), a company specialized in nuclear power and radiometric systems. Meopta – optika, s.r.o., should invest 64 mil. CZK from its own resources.

Table 3: Eligible Costs with No Public Aid (in Thous. CZK)

Recipient type	Minimum	Maximum	Average	Mean
Businesses	169	75,728	11,152	8,800

Source: authors' calculations based on RVVI (2016)

The purpose of establishing and supporting competence centres is to achieve a higher number of quality results through the cooperation. The expected research results will concern the fields belonging to technical sciences and informatics, in particular (Vláda ČR, 2013). In more detail, we can say that fields related to electrical engineering will be prevailing. Three main fields are assigned to each granted project – primary, secondary and tertiary fields. Our analysis shows that the spectrum of covered fields is very diverse. The most frequented field is JA (Electronics & Optoelectronics, Electrical Engineering) which is stated for 13 projects from 34. Other fields are not so frequent. Fields with codes JB, JE and JO play quite important roles as well (see table 4).

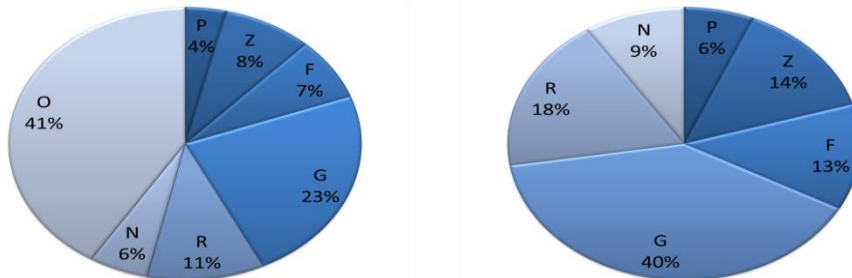
Table 4: The Most Frequent Fields Covered by Projects Supported in Competence Centres Programme (Number of Projects)

Code of field	Title of field	Field			
		primary	secondary	tertiary	total
JA	Electronics & Optoelectronics, Electrical Engineering	3	6	4	13
JB	Sensors, Measurement, Regulation	2	1	4	7
JE	Non-nuclear Energetics, Energy Consumption & Use	3	0	1	4
JO	Structural Engineering	3	0	0	3

Source: authors' calculations based on RVVI (2016)

Competence centres are focused on applied research and therefore the expected and required results have to correspond with it. The collaborative projects should bring these types of results: P (patents), Z (pilot operation, proven technology), F (results with legal protection - utility model, industrial design), G (technically realized results - prototype, functional sample), N (certified methodologies and practices), R (software), and O (Other results that cannot be classified in any type above). Figure 3 illustrates the share of individual result types that are planned in research proposals. The left-hand side shows all types of results. The right-hand side presents results without O-type results. O-type results represent usually publications in journals and conference proceedings.

Figure 3: Results Planned in Competence Centres Projects



Source: authors' calculations based on RVVI (2016)

The total sum of expected results is 2,238. Besides the O-type results the highest number of results is observed for G-type (543), R-type (251), and Z-type (191). The average number of results per a project is 68.5, the lowest number is 11 and 277 is the highest one. If we do not take into consideration the O-type results, the total sum of results is 1372, the average 40.1 and results in individual projects vary from 9 to 162. Table 5 illustrates the representation of result types in projects. The most frequent result type is G (prototype, functional sample) which is planned to be achieved in 30 projects out of 34. At least one patent should arise from 21 projects.

Table 5: Result Types in Supported Projects

Result type	P	F	Z	G	R	N	O
Number of projects	21	26	29	30	22	22	27
Share of projects (%)	62	76	85	88	65	65	79

Source: authors' calculations based on RVVI (2016)

On average, each project should bring three patents. The highest number of patents (11) has been observed at the Centre of the development of advanced metallic biomaterials for medical implants (field code JG, Metallurgy). It is also possible to state that each project brings 5 results with legal protection (F) and 6 proven technologies (Z) on average. We consider especially G-type results interesting. In the case of prototypes it is possible to suppose that they will be put into practice and market within a short time. So, a strong impact on innovation is supposed. On average, each project should bring 16 G-type results. The highest number of G-type results (69) has been observed at the Josef Božek Competence Centre for Automotive Industry (field code JO, structural engineering). Also the Centre of advanced materials and technologies for protection and safety enhancement (field code JI, Composite Materials) should achieve a high number (68) of G-type results.

4. Conclusion

Competence centre are used as an innovation policy tool for support of cooperation in innovation and research. These long-term collaborative projects should bring a wide range of new and radical innovations into practice. Our article is focused on the impact that should be reached by the competence centres supported by the Czech Technology Agency. In the framework of the Competence Centres Programme, 34 projects with 341 participants are supported. There are 225 companies among the participants.

The purpose of the programme is to support innovation in advanced fields with high application and innovative potential and a perspective for making a substantial contribution to the growth of competitiveness of the Czech Republic. Therefore, it is expected that results in technical sciences and informatics will be reached, in particular. Our analysis showed that the most frequent field is Electronics & Optoelectronics, Electrical Engineering which is stated in 13 projects. Each project should bring 3 patents and 16 prototypes on average. We consider especially the second type of results important, because they can be expected to be placed at the market soon.

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