Active Ageing Index as a Tool for Country Assessment and Comparison: The Case of the Czech Republic and Slovakia[1]

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Active Ageing Index as a Tool for Country Assessment and Comparison: The Case of the Czech Republic and Slovakia. The Active Ageing Index was developed as a tool to monitor the potential for active and healthy ageing among European countries and to identify strengths and weaknesses in the country. It is used for policy setting in the ageing agenda. However broadly used, some methodological issues remain, and caution is necessary with its interpretation. Comparison of two countries is used for discussion of these issues. The Czech Republic and Slovakia shared a long history, joined in one state as Czechoslovakia. The current generations of older adults have spent most of their lives in that shared country. Yet, the now separate countries differ substantially in their positions in the Active Ageing Index, with Slovakia ranking much lower than the Czech Republic. In this article, the causes of the differences between the two countries are researched using a thorough comparison of survey indicator rankings, and explained with statistical data and the European Values Study survey 2017. Particular attention is paid to the indicators with the lowest and highest rankings. The results show surprisingly minor differences in most indicators. The most significant difference lay in older adults' employment and health situation, with Slovakia ranking lower. Together, these indicators are very powerful in the overall ranking of the Active Ageing Index.
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Introduction

The Active Ageing Index (AAI) was developed to compare active ageing among European countries and identify strengths and weaknesses in the country (Zaidi et al. 2013). This comparison and easy monitoring of country development should serve to enable the creation of better ageing policy and evaluation of applicable measures. It aims to measure the untapped potential of older adults for active and healthy ageing (Zaidi et al. 2012). In the background also lies maintaining or enhancing the quality of life in old age as the declared goal of many ageing policies, active and healthy ageing concepts (WHO 2002, 2017). Achieving a certain quality of life is also part of the concept of successful ageing (Baltes – Baltes 1993). Active and healthy ageing concepts are currently the fundamental paradigm for policymaking aiming to prepare for

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ageing populations. Although the aim seems clear, active and healthy ageing concepts are ambiguous and differently understood in various situations. The original definitions of active (WHO 2002), and the newly used, healthy (WHO 2017) ageing, are work of the World Health Organisation (WHO). Still, some interpretation tends to reduce substantially to productive ageing and view older adults as a source of productivity or risk for state budgets.

The latest documents presenting the AAI perceive the risk of the normativity of ageing concepts and define active ageing widely, stating that that "policymakers should avoid a top-down approach with the risk that older individuals may feel active ageing as an obligation and offer a range of opportunities instead, to be selected according to older individuals' motivations, expectations and aspirations. This would allow them to freely choose whether, to what extent and how they can age in an active manner." (United 2019: 16) The original WHO objectives, associated mainly with improving the quality of life, are reversed into assessing the quality and quantity of the older adults contribution to society, although in a very guarded way. The efforts to introduce old age as productive (Moody 2001) represent most likely the unintended consequence of the essentially positive attempt to break the stereotype that "old age is a non-engaged and unproductive life period". The outcome is a sign of an equation between the words active and productive. That is, the afore-mentioned fundamental reduction of the concept, present in both public and professional discourse, which has been repeatedly criticised (Calasanti – King 2005; Hasmanová Marhánková 2014; Katz 2000; Laliberte 2015; Petrová Kafková 2013; Townsend et al. 2006).

This criticism targets not only the productivism reduction of the concept, but also the very pressure on the activity of older adults as such. The AAI deliberately protects the concepts of active and healthy ageing, despite the risks of normativity and reduction, to serve as a support for (not only) European countries for policymaking. This meets the requirements of governments for simple and straightforward, quantified optimally, a tool enabling assessment in the context of other countries. Efforts to measure active ageing in some way easily are long-term and are based on the needs of policymaking and social work through evaluation tools. The AAI is constructed primarily on an institutional framework, although the Index itself does not work with the (non-)presence of policies but evaluates only selected "outcome" indicators.

The key monitored result of the AAI is the ranking of countries. The AAI regularly ranks 28 European countries, putting countries into successful or unsuccessful supporters of active ageing and older adults´ potential. Focusing on the ranking of countries among others in evaluating results diverts attention to the merits of the results, where countries vary only slightly. The difference between first, Sweden, and last, Greece, is only 19.4 points on a 100-point

scale. The design of the AAI and the limits of its interpretation have been repeatedly criticised (Amado et al. 2016; De São et al. 2017; Vidovićová – Petrová Kafková 2016). Although the suitability of the Index is debatable, there is no doubt that its results play a significant role in ageing policymaking at the EU and national levels. Therefore a deeper understanding of the index results is essential.

Taking into account its limitations, the AAI should be understood, to some extent, as an objective assessment of the current status and the offer of possible further development. Yet, it does not contain instructions on how to achieve this development and in essence, it does not even define the parameters that an ideal actively ageing society should have. The latent assumption that the ideal is to achieve 100 points on all indicators may be questioned by practical impossibility due to mutual time competition of some of the monitored indicators (a typical example is the employment rate vs care of children, grandchildren, the elderly or disabled). Individual countries may opt for different pathways to increase the potential of older adults at a different pace and in other dimensions. Owing to its focus, it is primarily an international comparative tool, which determines the selection of indicators and source surveys.

The Czech Republic (CZ) and Slovakia (SK) have a long shared history of coexistence as one state. Current older adults were born and spent a substantial part of their lives in Czechoslovakia. In 1993, shortly after the beginning of democratisation, the country was divided into two separate states. After separation, The Czech Republic and Slovakia had similar welfare regimes (together with Poland and Hungary), which Fenger (2007) identified as the "post-communist European type", distinctive for their more relaxed economic development. The systems were highly egalitarian. The Visegrad group of countries share similar governmental programs, social situations and political participation. They are distinct to those of Western Europe and at the same time distinct to other post-socialist countries (Karpinska 2018). Recent developments have meant that those similarities are dissipating. After the separation in 1993, the Czech Republic and Slovakia differed from each other in economic and overall development despite many years of joint statehood. Slovakia was slightly less developed, but in the years after independence, it experienced booming economic growth, despite having a higher level of unemployment. Despite these significant achievements, Slovakia was ranked 25 in the AAI 2014, out of the 28 countries in the EU. This result ranked Slovakia only slightly ahead of Poland, who came last in the evaluation. The Czech Republic ranked 11, which was the EU average in 2014 (Zaidi 2014a). In AAI 2020, Slovakia's ranking rose to 21, and CZ's remained 11. After Estonia, the Czech Republic remains one of the highest ranked post-socialist countries (ranked 10

in 2020). Estonia has an extremely high employment rate in all age groups, which is caused by the higher pension age in the country and could indicate the financial difficulties of older adults. This interpretation supports the lowest value on indicator *3.4 – relative median income*. These financial difficulties are in stark contrast with Sweden, with a higher employment rate but ranking 18 on the 3.4 indicator.

Conversely, Slovakia ranks low in the group of post-socialist countries. So, differences between the Czech Republic and Slovakia seem high, despite their previous joint statehood. But we have to keep in mind the low difference in scores is only 4.3 on a 100 scale. The significant difference between the two countries is the share of older adults in the population. Population ageing is not as great an issue in Slovakia as in the Czech Republic because the Slovakian population is significantly younger. Therefore population ageing is not so accentuated at the political level. Although active ageing does not require that individuals involve themselves in all aspects of active ageing equally, the preferred level of activity can be determined mainly by the provision of services available (Karpinska 2018), so the activity level is based on the individual as well as the structural setting.

This article focuses on comparing both countries according to AAI 2020 and attempts to explain the significant difference in the total score. As stated above, both countries have similar results in some indicators. Still, differences in other indicators are high and raise the question of whether the chosen methodology might cause an error. The opaque differences are illustrated along with the similarities through, for example, the GDP per capita indicator. A significant connection between the AAI and GDP per capita has already been demonstrated by the Index authors (Zaidi et al. 2013), as more developed countries typically have a higher AAI ranking than countries with lower GDP per capita. While the results of AAI 2020 for both countries are crucial, the difference in GDP per capita for CZ (42.6 Int$) and SK (34.1 Int$) is slight (GDP 2020). Equally similar are the results of both countries in income inequality measured by the Gini coefficient, another indicator used to compare different countries' economic and living standards (Zaidi 2015). Therefore, these macro indicators of GDP per capita and the Gini coefficient do not help to explain the difference in the positions of both countries in the AAI results.

Materials and methods

Based on an analysis of the AAI 2020 results[3], the positions and values of CZ and SK are compared using the difference between the values of both countries

[3] AAI is based on international data sets such as the European Social Survey and Eurostat, which enable comparison in time and between countries comparison.

and differences in their ranking on particular indicators[4]. The great attention paid to the ranking is due to the importance of the ranking of countries in the official presentations of the AAI results. The Index uses data from multiple sources for its calculations, mainly EU-LFS, SILC, ESS (European Social Survey), EQLS (European Quality of Life Survey). It converts the results of specific variables to a percentage and thus each indicator takes the value 0-100, where 100 represents the best result. For reasons of text length, only the abbreviated names of indicators are used in the text, their exact wording is discussed only in cases where the form of the indicator, or directly the wording of the question could explain the difference in results. For the exact wording of all indicators, see (Zaidi 2014b; Zaidi et al. 2013). The attention paid to the ranking is due to the way the index results are presented, with a country's ranking being a key item for assessing its ageing policy. The value of the difference in results (table 1) is counted as subtraction of the SK value from the value for CZ. For a better understanding of the values, a comparison is made with the EU average.

The Index consists of 22 indicators grouped into 4 domains. Their composition and sorting are standardised and for clarity, the indicators are uniformly sorted numerically, we also use this original marking in our study. Particular attention is paid to the "strongest and weakest" results, i.e. an indicator with higher differences or indicators where Slovakia scores higher than the CZ. This is possible using this method because each of the indicators are expressed as a percentage, with a lower goalpost of 0 and an upper goalpost of 100. It cannot always be assumed that 100% is the optimum, as it implies the unlikely utopian target of the most possible active ageing (Zaidi et al. 2013). Our life biographies are gender-based and this continues in old age. AAI indicators are strongly focused on productive activities and for this reason men achieve higher values in it than women. For this reason, men and women are observed separately. The gender gap is generally higher in the CZ than in SK (5.6 vs. 3.7), but on some indicators, this ratio is not reflected. These similarities and differences on various indicators are explained based on the analysis of available data sources from both countries, including Eurostat data and the European Values Study survey.

[4] Used data are publicly available. Two datasets were used from the European Values Study: EVS (2011): European Values Study 2008: Integrated Dataset (EVS 2008). GESIS Data Archive, Cologne. ZA4800 Data file version 3.0.0, doi:10.4232/1.11004 and EVS (2020). European Values Study 2017: Integrated Dataset (EVS 2017). *GESIS Datenarchiv, Köln. ZA7500 Datenfile Version 4.0.0, https://doi.org/10.4232/1.13560.* Active Ageing Index is available at: https://statswiki.unece.org/pages/viewpage.action?pageId=76287845&preview=/76287845/293536559/2020%20AAI-fin.xlsx

Results

We start our analysis with a comparison of the differences between the results of AAI 2020 for the CZ and SK. Two values have been analysed. The first is the difference between values in the case of CZ and SK, the second is the difference in ranking of both countries. The comparison shows considerable differences on many indicators. The higher differences are in ranking, a comparison of values brings other results. The highest differences are explained using the analysis of different data sets. Attention is paid to the total values and gender differences because men and women tend to score on the AAI differently. For an overview of all differences see Table 1 below.

Employment

The employment rate is substantially conditioned by the retirement age, which has been increasing in both countries. The retirement age was 62 years and 139 days in SK and 63 years and 6 months in CZ in year 2020. For women, the retirement age decreased based on the number of children raised (Sociálna 2018; MPSV 2018). SK has a lower employment rate in all age categories. The difference decreases with age. If the retirement age is similar in both countries, this could not be the cause of the difference in the employment rate. The differences are higher between men than women, with a higher difference on indicator *1.2 – age category 60-64 years* (see Table 1). The difference between women is highest in the age categories 60-64 and 65-69. The employment rate of Slovakian women sharply decreases after age 59, from 74.9 to 27.2 in the age category 60-64 years. This results in a drop means a drop in ranking from 9th position to 18th. A similar situation is among Slovakian men whose employment rate ranking drops from 11th (age category 55-59 years) to 23rd (age categories 60-64 years and 65-69 years). In the case of CZ, the decrease in employment rate is more gradual, similarly to the decline in ranking.

SK has had, in comparison with the CZ, a significantly higher unemployment rate in the longer-term. The actual unemployment rate according to Eurostat data[5] (year 2019) was 1.7% for males and 2.4% for females in CZ and 5.6% for males and 6.0% for females in SK. So, the difference between unemployment rates is higher between men which is reflected in the higher difference between the employment rates of older male and female workers.

Despite that, according to the European Values Study 2017, work ethos in Slovakia is higher than in the Czech Republic (Halman et al. 2011). In CZ, there are strong work ethos[6] scores of 58.9% for men and 63.9% for women

[5] https://ec.europa.eu/eurostat/databrowser/view/tesem120/default/table?lang=en

[6] Measured as the percentage of people who consider work as duty to society.

while in SK it is 63.9% for men and 68.9% for women. In the older adult population (age 55+) the work ethos is even higher, but the country differences disappear. Older men have a lower (CZ – 66.2%, SK – 65.5%) work ethos than older women (CZ – 72.1%, SK – 72.3%).

Table 1: **Differences between AAI values of the Czech Republic and Slovakia and differences in ranking**[7]

	Total		**Men**		**Women**	
	Difference in values	ranking CZ/SK	Difference in values	ranking CZ/SK	Difference in values	ranking CZ/SK
Employment	8.1	9/18	11.2	10/21	5.3	9/15
1.1 Employment rate 55-59	9.4	1/9	11	1/11	7.7	2/9
1.2 Employment rate 60-64	13.9	13/20	21.5	8/23	6.7	14/18
1.3 Employment rate 65-69	5.8	15/21	7.6	15/23	4.2	11/20
1.4 Employment rate 70-74	3.4	14/21	4.5	15/21	2.5	9/20
Participation in society	0.1	16/17	-1.0	21/18	1.0	13/14
2.1 Voluntary activities	0.2	24/27	-0.9	25/22	0.9	26/28
2.2 Care of children, grandchildren	-2.4	5/2	-5.0	11/4	-0.3	3/2
2.3 Care of older adults	2.7	15/23	3.6	13/20	2.3	18/24
2.4 Political participation	-0.9	17/15	-2.8	19/17	0.7	12/13
Independent, healthy and secure living	2.9	13/19	3.5	15/19	2.6	12/18
3.1 Physical exercise	0.7	22/23	-2.0	24/21	2.7	19/24
3.2 No unmet needs of health and dental care	3.2	6/9	2.7	7/10	3.4	5/8
3.3 Independent living arrangements	18.0	12/27	21.5	12/16	16.1	12/27
3.4 Relative median income	-16.0	24/11	-16.3	24/11	-15.8	23/8
3.5 No poverty risk	-2.2	7/2	-0.4	2/1	-3.8	10/3
3.6 No severe material deprivation	4.5	11/21	4.4	9/21	4.5	12/21
3.7 Physical safety	-1.3	17/15	-0.5	18/14	-2.3	16/14
3.8 Lifelong learning	1.2	19/24	0.8	17/22	1.5	19/24
Capacity and enabling environment for AA	5.6	14/22	4.7	14/20	6.2	14/23
4.1 RLE achievement of 50 years at age 55	2	20/23	2.8	19/23	1.4	20/24
4.2 Share of healthy life years in the RLE at age 55	17.4	13/27	18.0	14/28	17.0	12/27
4.3 Mental well-being	-2.0	15/14	-6.0	18/14	1.0	13/14
4.4 Use of ICT	12	12/21	14.0	12/22	9.0	13/19
4.5 Social connectedness	1.8	18/20	-4.4	19/16	6.6	18/21
4.6 Educational attainment	2.6	3/4	2.9	1/3	2.2	4/6

Source: Active Ageing Index 2020, own calculation

[7] Individual indicators can take values from 0-100, for more information about the construction of the AAI and the analysis procedure, see the methodology part of the paper.

And foreign migration for work purposes is quite high in SK, with a high proportion of women over 50 years of age from shrinking regions working in foreign countries as carers of older adults (Sekulová 2013). And of course, there is the question of whether some of these jobs are part of the grey economy. In any case, we can conclude that the reason for lower employment of older workers in SK compared to CZ is primarily due to structural factors. Slovak older workers also have significantly lower education than the Czechs and this difference is particularly evident in men (see indicator 4.6 in Table 1). Lower education of older workers, compared to younger people, could be seen as one of the key barriers to their higher employment.

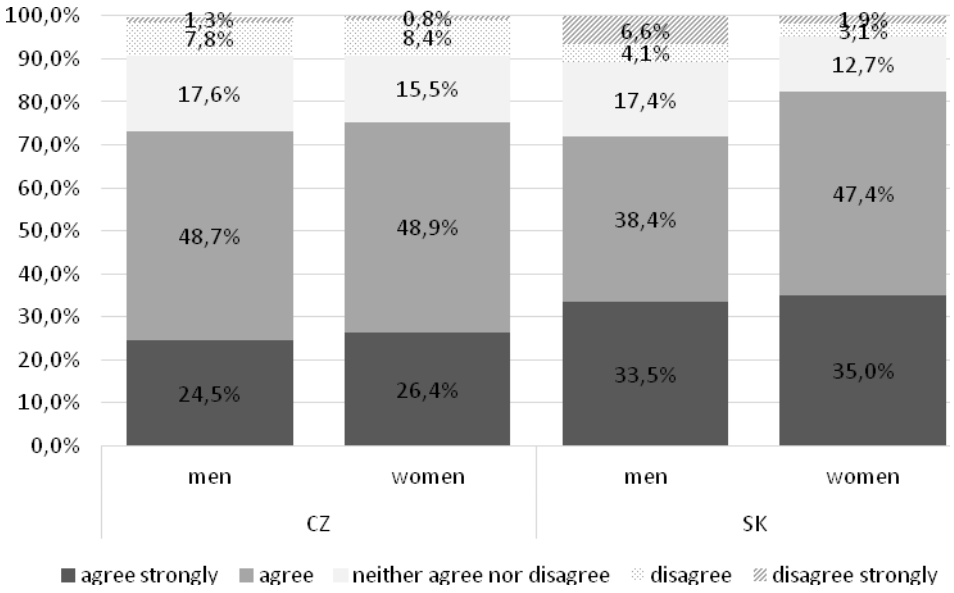
Participation in society

The second dimension of the AAI, *Participation in societ*y, shows very surprising results. The SK score is very similar to CZ. Its position among men is even better than the Czech mens position at rank 18 (value 15.0) vs. rank 21 (value 14.1). It is a change in ranking compared to the previous wave in 2014, where CZ was ranked 11 (value 18.8) and SK ranked 22 (value 13.7). So, the value of CZ decreased while the score of SK increased slightly. The Slovak men score higher than Czech men on three indicators from four, in the case of women, is it the only indicator. The highest difference between both countries is on indicator *2.3 – Care of children, grandchildren***,** where the Slovak score was better than Czech. Looking at the gender differences shows that although women in both countries score almost identically, Slovakian men score notably higher than Czech men. The difference between values is 5.0 and Slovakian men rank 9 points higher than Czech men. We can ask whether the higher score of Slovak men could be based on a different understanding of the word "care" more than by higher involvement of Slovak men in this type of care, because Slovakia is perceived as a country that has more traditional gender roles than the Czech Republic.

The higher score of Czech older adults on indicator 2.3 – *Care of older adults* is quite surprising. The more detailed view on scores of all European countries shows under average values for Czechs and Slovaks of both sexes. The results do not conform to the known patterns of care, with care in families in the south of Europe. So, we have some doubts about the shared understanding of the survey question. The question used for the creation of this indicator was: "In general, how often are you involved in any of the following activities outside of paid work?... …Caring for disabled or infirm family members, neighbours or friends under 75 years old/aged 75 and over." (Zaidi 2014b: 5-6) The "disabled or infirm" could be understood differently in different languages. The Czech and Slovak translation focuses on completely disabled older adults whose number is much lower than the number of older

adults in need of some particular care in their daily life. The different understanding could be the reason for these low values. Conversely, the Czech and Slovak language versions are very similar in their translations from English[8]. Nevertheless, Slovaks score very low – lower than the Czechs do. We could also presume that care for children and/or grandchildren and older adults is understood differently, or rather care for these two groups are seen in different activities. For example, care for children could be seen in the material provision, in earning a living for the whole family.

Figure 1: **Normative solidarity and care obligations, age 55+ years - "It is a child's duty to provide long term care for their parents"**



Source: European Values Study 2017, own calculation

Looking at the differences in care arrangement could indicate a difference in norms regulating family solidarity. In general, the view of normative intergenerational solidarity, i.e. norms regulating family solidarity and care provision, differs in both countries. The CZ sits closely with northern and middle European countries, while SK sits with eastern and southern European countries (Petrová Kafková 2013). A more thorough perspective confirms the perceived differences in obligations between generations (see Figure 1). Older Slovaks agree strongly, and more than Czechs, with the duty of children to take

[8] The Czech version is as follow: „… péče o nemocné nebo invalidní…", Slovak: „…o invalidních alebo nevládnych…".

care of ill parents. In Slovakia, a great gender difference can be seen. This duty is agreed (agree strongly and agree) with by 71.9% of older Slovak men and by 82.4% of older Slovak women. Very surprisingly 6.6% of older Slovak men disagree strongly with this duty.

The EVS 2017 confirms that higher involvement in care in Slovakia is connected with higher intergenerational solidarity and the perceived obligation of care for parents in need. Thus, this result cannot be seen as random and highlights the differences in family arrangement in the two countries.

Independent, healthy and secure living

The third AAI domain provides more varied results. On indicator 3.4 – *Relative median income*, SK scores higher than CZ, a similar situation occurs on indicator 3.5 – *No poverty risk.* On indicator 3.6 – *No severe material deprivation*, the Czechs score higher than the Slovaks. The results are contradictory as all three indicators point to financial prosperity and the risk of poverty. These results show a low risk of poverty for Slovak older adults in the European comparison. On indicator 3.4 the differences between both countries are very high and while Slovakia scores above average among European counties, the Czechs fall below average. These results apply to both men and women. The results are more ambiguous on indicator 3.5. Slovakian and Czech men score almost identically, with first and second position in the ranking. The differences are higher in the case of women. Slovakian women rank third and the Czech women in tenth position. The results are completely different for indicator 3.6, where Slovaks rank in 21st position, while the Czechs are 11th.

On one more indicator score, the Slovaks rank higher than the Czechs. Slovaks state higher feelings of physical safety (indicator 3.7). The differences are low, but consistent for men and women. The Slovaks score above average in the European comparison. Although the differences are low in number in ranking, there is a gain of up to five places in the case of men. Indicator *3.1 Physical exercise* brings mixed results. Slovakian men score higher than the Czech score, but in the case of women, the results are opposite. The differences are low and both countries rank in the final positions.

Slovakia reported lower access to general practitioners and dentists. And this subjective feeling of unmet needs is supported by the available number of general practitioners and dentists per number of inhabitants. The accessibility of out-patient primary care is better in CZ than in SK (Trendy 2006). There is a substantial difference on indicator 3.3 – *Independent living arrangements*[9],

[9] Exact wording of the indicator: „Percentage of people aged 75 years and older who live in a single person household or who live as couple (2 adults with no dependent children)" with the rationale that „The indicator aims to capture decisional autonomy regarding one's own life in old age." (Zaidi 2014b:8).

with the CZ at rank 12 and SK at rank 27. And these differences are even higher for women than for men. The difference between CZ and SK is the highest among all indicators. In a European comparison, Slovakia has the second highest number of older adults who do not live in single households or as part of a couple. Shared living arrangements could threaten the independence and autonomy of older adults and could also indicate a scarcity of accessible housing, as was the case in Czechoslovakia under the period of the socialist rule (Možný 1999). Conversely, the preference of multigenerational households could be based on cultural differences and do not necessarily indicate a risk of older adult´s exclusion. According to Walker (2002), active ageing should be sensitive to cultural and other diversities. The EVS 2008[10] contains questions regarding whether a successful marriage is dependent on living apart from in-laws. This variable could serve as an indicator of whether the higher number of intergenerational households in Slovakia is a cultural choice or merely a necessity. The statement "successful marriage is dependent on living apart from in-laws" is strongly agreed to by 47% of CZ women and 49% of CZ men aged 55+, while in SK, only 40% of women and 31% of men strongly agree. Based on these results, we can presume that the difference in independent living is more cultural. The higher level of intergenerational solidarity also confirms this explanation. Thus, although SK has a worse result on this indicator, it probably does not mean worse leaving conditions, but the cultural preference for different living arrangements.

Capacity and enabling environment for active and healthy ageing

The overall view of the last AAI domain illustrates the better position of the Czech Republic. CZ ranks in the middle position (14th), and although SK is much lower at 22nd position, the difference between both countries in this domain is 5.6, which means very similar results. Thus, we again find that significant differences in the ranking of a country are given only by very small differences in the achieved values of the indicators.

There are significant differences on two indicators. One is indicator 4.2, *Share of healthy life years in the RLE at the age 55*[11], the second indicator 4.4, *Use of ICT*. On both indicators the Czech scores are higher than the Slovaks. On indicator *4.6, Educational attainment*, both countries score very similarly, with their rankings being among the highest positions of European countries,

[10] The question was not asked in the next wave of the survey made in 2017, and no similar question was asked.

[11] The construction of the indicator is quite complex, is defined as " Remaining life expectancy (RLE) at 55 divided by 50 to calculate the proportion of life expectancy achievement in the target of 105 years of life expectancy" with rationale „to capture the life expectancy aspect in determining the capacity for active ageing across EU countries." (Zaidi 2014b:13).

which holds primarily for the men ranking in 1st (CZ) and 3rd (SK) position, while lower for the women in 4th (CZ) and 6th (SK) position.

There are two indicators with contradictory results: 4.3 *Mental well-being* and 4.5 *Social connectedness.* In the case of indicator 4.5, the gender differences are even higher. In a total view score, the Czechs are better than the Slovaks and among women the difference is even higher (ranking 18 vs. 21). Men score in the opposite manner however, the Czech men have a 4.4 lower score than the Slovakian men. On indicator 4.3, the Slovak scores are higher than the Czechs, although the differences are small. A more detailed view shows that only the Slovakian men have higher scores, and the difference is substantial. The Slovakian women's score is almost the same as the Czechs. Both countries rank in the middle among the European countries. The difference is a little higher between the women than the men. Indicator 4.3 serves to capture current mental well-being (previous two weeks) and was developed as a measure of the general positive quality of life (Bech 2012). So, it is possible to confirm these results by comparing them with other variables measuring the quality of life. The more general variables, satisfaction with life and happiness, brings similar results, as these variables catch the quality of life in long-term views while mental-wellbeing is more focused on the current situation (see Table 2 below). As a proxy variable, measuring the quality of life reflects control over one's own, the differences are negligible. Variable happiness confirms the ranking of mental well-being, with a lower quality of life of Czech men.

Table 2: **Quality of life indicators – older adults** (age 55+).

		Mental well-being	**Happiness (% of very happy)**	**Satisfaction (φ 1-10, 10 satisfied)**	**Control over life (φ 1-10, 10 full control)**
CZ	men	73.1	9.6	7.3	7.1
	women	70.9	13.0	7.3	6.8
SK	men	79.1	13.0	7.6	7.7
	women	69.9	11.3	7.0	7.0

Source: European values study 2017 and AAI 2020, own calculation

The indicator 4.2 – *Share of healthy life expectancy at the age of 55* has one of the biggest differences, with 57.6 points for CZ and 29.2 points for SK. Slovak women report 26.1 points vs. 55.1 for Czech women. Not only is healthy life expectancy lower in SK, but also life expectancy at birth. And the standardised mortality rate in SK is higher than in CZ, particularly for men. In SK, the standardised mortality rate for men was 1728.33 and for women 1094.47, while in CZ it was 1560.34 for men and 10009.69 for women in

2017[12]. Despite that, the causes of death do not differ greatly. Diseases of the circulatory system are the main causes of death in both countries. Neoplasms and external causes of mortality and morbidity are the second and third most common causes of mortality and their standardised rates are higher in CZ than in SK (Trendy 2006). In CZ, the number of hospitalisations per 100 000 people is higher than in SK, but both countries have the same average length of stay in hospitals – approximately 7.5 days. Longer average lengths of stays for long-term patients is more than 60 days in CZ while in SK it averages approximately 24 days. Newly granted invalidity benefits per 100 000 people were more than twice as much in CZ than in SK (493.5 vs. 215.4 in 2004). These differences can be understood as differences in the social system and care regimes, but could also be influenced by the accessibility of health care. The accessibility of bed care and out-patient primary care (e.g. GP, dentistry, gynaecology) was better in CZ than in SK (Trendy 2006), which is confirmed by the values of AAI indicator 3.2 – *No unmet needs of health and dental care*, where CZ scores higher than SK. We can presume that the worse position of SK on indicators 4.1 and 4.2 is a consequence of lower accessibility of health care among other issues. This result is consistent with the higher number of *unmet needs of health and dental care* (3.2).

Influence of weights

The overall results are based on complicated weighting. It must be noted that indicators with higher values have an implicitly greater weight on the domain-specific Index, and vice-versa if no explicit weights are employed. For each domain, the weighted average of the indicators is calculated. The overall aggregated indicator is then calculated as the weighted average of the domain-specific indices[13]. These weights as well as those used at domain level are drawn from the recommendations of an Expert Group. During the AAI creation, different aggregation methods and different weights were examined. The results of different aggregation methods show similar results, with only minor changes in ranking and overall consistency (Zaidi et al. 2013).

Despite using explicit weights, the particular indicators and domains do not influence the final ranking in the same way. The *employment* and *social participation* domains have a higher influence at weight 35 than *independent and secure living* at weight 10 and *capacity for AA* at weight 20. Within the fourth domain, the first indicator 4.1 – *RLE achievement of 50 years* is more influential with a weighting of 33.3, while 4.4 – *mental well-being* and 4.6 – *educational attainment* weighs only 6.7. In the first domain: *employment*, all

[12] 2017 is last available year at: https://ec.europa.eu/eurostat/databrowser/view/hlth_cd_asdr2/default/table?lang=en

[13] For explicit and implicit weight used in AAI please see: https://statswiki.unece.org/display/AAI/V.+Methodology

age categories have the same influence, although some of these categories refer to retired people. Particular dimensions are not perceived as equal (Vidovićová – Petrová Kafková 2016). The implicit weights confirm these inequalities. Significantly greater influence is thus gained by clearly productive activities, the others, although at least very limited in the Index, have a negligible effect on the overall assessment.

To more clearly demonstrate the effect of weights on the resulting Index, I tried to equalise all the indicators used in the Index. If all indicators in the domain use the same value and all domains use the same weights, the ranking of SK changes significantly from 21 to 18. The position of CZ remains identical, i.e. rank 11. The final ranking in particular domains do not show significant differences, so we can conclude that the low Slovakian position in the total AAI is due to the weight of the domains in the total Index, gaving more weight to indicators in which SK does not score well. These powerful indicators do not contribute to the quality of life (Petrová Kafková 2018) concurrently. The influence of the used weight also shows the regional application of the AAI (Breza – Perek-Białas 2014).

Conclusions

The Active Aging Index has resulted from pressure from politicians to create an easy-to-interpret tool for assessing active ageing in a country. Many ambiguities, questions and criticisms lead both to the creation and possibility of creating such a tool (Amado et al. 2016; De São et al. 2017; Vidovićová – Petrová Kafková 2016), and to the very concept of active ageing (Calasanti – King 2005; Hasmanová Marhánková 2014; Katz 2000; Laliberte 2015; Petrová Kafková 2013; Townsend et al. 2006). These critiques provide fundamental comments not only on the construction of the Index, but also draw attention to the normative nature of the pressure on the social productivity of older adults and to active participation in general. However, especially at the European level, the AAI has become an important tool for setting and evaluating ageing policies. For this reason, a better understanding of AAI results is essential.

Creating an aggregated index always brings many compromises, and in all summary indices, the results could be distorted by the chosen definitions, variables, indicators and weights. We should have this in mind when using this Index and interpreting the results. In the case of the AAI, extensive work has been done done to find the final solution. All possible solutions could favour some countries and disadvantage others. In this paper, the difference in ranking of the Czech Republic and Slovakia was explored. Both countries have many similarities, but the overall results differ significantly. All indicators are measured at the range 0 – 100, so the difference between values of both countries enable comparison of the differences between them.

Despite the significantly higher ranking of CZ over SK, Slovakia scores better on six indicators from 22, which is a surprising result. This indicates that the differences between the two countries need not be so huge. In fact, on only five indicators, the difference between the two countries is higher than 10. None of them are in the second domain focusing on participation in society. On 15 indicators, the difference is lower than 5. These refer to the difficulty of the whole AAI because its variability is relatively low. Although the AAI could theoretically acquire values of 0 - 100, in fact, the discriminatory power of the index is low. The results vary in AAI 2020 from 28.4 (Greece) to 47.8 (Sweden), which is only 19.4 points. The difference between the overall values of CZ and SK is only 4.3 points and was 5.9 points in AAI 2014, where SK ranked 25. So, we can question using overall values and ranking as the principal result. Maybe more attention should be paid to ranking in individual domains and indicators, where the variability is higher, and to the of indicators change in time.

Apart from the meaning of the overall AAI values, other questions arise. In their comparison of the Czech and Polish positions, Karpinska (2018) concluded that the expansion of institutionalised care facilities (for both young and old) would eventually help to increase the labour market participation of older women, which is very low in the case of Poland. Although we completely agree with the importance of accessible care services, the question arises as to whether these really change the life situation of older women or just change their formal employment status, even though they still provide care, but as a job and not as an unpaid activity (Vidovićová 2018). Because the accessibility of care services do not decrease the need for care and and from a complete view, the hours spent by care (paid and unpaid) do not change. All of us have only 24 hours per day for our social roles. Increasing involvement in one area could simply decrease participation in another.

To conclude, the situation of older adults in the Czech Republic and Slovakia differ. However, the difference lays especially in structural conditions and is not as great as the AAI results imply. The lower heath status of Slovakians is accompanied by lower health care accessibility. The other significant difference lays in the employment rate of older workers. This is a result of the higher unemployment in the Slovakian population on the whole, which is due to the lower level of education.

Conversely, the low employment rate at retirement age could indicate the good financial situation of Slovak older adults, not only barriers in maintaining employment. The lower employment rate of older Slovakian workers is mainly in the female population. These indicators reveal that the position of women is worse than men in both countries. In general, the gender gap is higher in Slovakia than in the Czech Republic, but the differences are slight. In the

paper, I have found potential explanations of the different results of CZ and SK on some indicators, but it was not the primary goal of this text. The main effort was to find the causes of the significantly different rankings of CZ and SK in the overall results of the AAI, in a situation where the overall ranking of countries is presented as a key indicator of the country's potential for active ageing and thus as an essential figure for setting ageing policies. In addition, the paper contributes to a better understanding of how to construct an index.

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