Regional Active Ageing Index for Poland - 2015¹

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Background

Poland ranked last in the first edition of the European Active Ageing Index (AAI) (Zaidi et al., 2013). The overall value of the AAI amounted to 27 in 2010, 27.1 in 2012 and 28.1 in 2014 and it was necessary to verify to what extent the overall result for Poland is the outcome of the variations of the AAI results at the sub-national level. Therefore, in 2013 under the behalf of the Department of Senior Policy of the Ministry of Labour and Social Policy the expert study was prepared to identify the possibilities and limitations of calculating this type of indicators in a regional perspective (at the level of voivodeships (regions), here NUTS-2) for Poland (Perek-Białas, Mysińska, 2013). This first appraisal became the beginning of work on an attempt to compare the effects of specific regional policies related to the concept of active ageing within the country. The analyses also inspired the European Commission and UNECE to assess to what extent it is possible to recommend specific approaches to strengthen policy planning at the regional level that will be consistent with the European policy of active ageing. Thank this, on October 15-16, 2014 in Cracow a Peer-Review meeting² was organised (in cooperation with the Department of Regional Policy of the Marshall Office in Cracow) to discuss and exchange international experiences not only on calculation but also on the use of the index in regional public policies. Like Germany has become interested in using the index not only at the regional level (NUTS-2) but also at the so-called local level (NUTS-3), Peer Review, Berlin, April 2016. Earlier analyses of AAI were conducted also at the Biscay region.

The first analysis revealed both the possibilities and the limitations of the development of the Regional Active Ageing Index for Poland (RAAI PL). The second edition revised the methodology of the calculation of the RAAI, that was proposed in the 1st edition, and calculated the values of the index with the minor changes to the indicators. The main aim was to see whether the values of individual indicators change in specific domains and at the same time how total values of active ageing indicators for regions changed in 2013. The last (third) edition has been a follow-up of the analyses after two years and an update of values for 2015.

Data used for updating of the index calculations came from public statistics that was specially prepared by the relevant Departments of the Central Statistical Office. Data from the representative national survey Social Diagnosis 2015 was also used. The methodology for calculation of the index for 2015 will be briefly recalled below, together with the data sources and descriptions of the individual indicators.

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http://ec.europa.eu/social/main.jsp?catId=1024&langId=en&newsId=2099&moreDocuments=yes&tableName=news

The methodology for calculation of the Regional Active Ageing Index for Poland in 2015

Similarly to the first version of the Active Ageing Index (2013) and the second edition (the updated version, i.e. 2014), the methodology for the Regional Active Ageing Index for Poland (RAAI PL in short) is based on the methodology of the original Active Ageing Index³.

Four domains were analysed: employment, participation in society, independent, healthy and secure living and capacity and enabling environment for active ageing. Within each of the domains, the indicators that were available and best reflected the essence of the original questions were chosen. These indicators were aggregated with the proper weighting to domain values, which in their turn were weighted to calculate the overall Regional Active Ageing Index at the end.

The assessment of the approach used for AAI in the calculation of RAAI PL4

The table below describes the indicators used for the Regional Active Ageing Index for Poland in the third edition (2016). It recalls questions and information used, together with the sources and the way indicators were modified for this study. The authors tried to retain the highest possible comparability of the results of the third and the second editions.

In the first domain (Employment), only two indicators of the labour market⁵ at the Voivodeship level continued to be used (as in 2013) - two age groups showing the employment activity of persons aged 55+. In the second domain (Participation in society) it was also not possible to obtain the following indicators: care to grandchildren (55+) and care to infirmed and disabled (55+), which in the first edition were calculated on the basis of the "Study on non-profit work outside the household" conducted by the Central Statistical Office of Poland. Unfortunately, no other study that provides such detailed information for Poland (for calculations at the voivodship level) is now available. Therefore the domain was limited to the two indicators regarding voluntary activity and participation in public meetings, as it was done in the second edition to ensure the comparison over time. Domains III and IV were analysed in the same way as in the second edition. In the Polish approach indicators related to the average life expectancy and average remaining healthy life expectancy were not taken into account, unlike in the original AAI.

³ https://statswiki.unece.org/display/AAI/VI.+Documents+and+publications

⁴ For more information and definitions see Perek-Białas, Mysińska, 2013 and Perek-Białas, Zwierzchowski, 2014.

⁵ The Polish Labour Force Survey (BAEL) publications did not present annual data on the employment rates in the breakdown by these analysed age groups by Voivodeships.

Table 1. Indicators - Domain I - Employment

	Indicators for PL Voivodeship	Source	NOTES
1.1.	Employment rate for persons aged 55-59	CSO 2015 ⁶	The employment rate is the share of employed in the total population of a given age category. NOTE! Data come from the Labour Force Survey (LFS).
1.2.	Employment rate for persons aged 60+	CSO, 2015	The employment rate is the share of employed in the total population of a given age category. NOTE! Data come from the Labour Force Survey (LFS).

Table 2. Indicators Domain II - Participation in society

	Indicator for PL Voivodeship	Source	NOTES					
2.1.	Voluntary activity (55+)	SD, 2015	The variable from the Social Diagnosis also included activity in voluntary work outside of organisations (persons aged 55+):					
			"Have you performed any unpaid work or provided any services to persons from outside your family or for a social organisation during the last year?"					
			NOTE: the authors of the AAI pointed to the fact that the original definition of the indicator (activity in voluntary work in organisations) could result in a system error in certain countries (e.g. Poland), where there is a low level of the organisational culture of voluntary work. Here this argument is less critical, as analyses are carried out within a single country. However, an indicator also covering activities outside organisations could be useful in such cases.					
2.2	Participation in	SD, 2015	The share of persons aged 55+, who gave an affirmative answer to the following question: "Have you					
(former	public meetings 55+		attended any public meeting in the past year (but not at your workplace)?". In the original indicator the					
2.4)			definition of a public meeting was slightly narrower (a closed list of activities: trade union, political party or political action group meeting) in order to grasp involvement in political activity.					

⁶ We warmly thank the management and staff of the Department of Social and Living Conditions Studies and the Department of Demographic and Labour Market Studies for assistance in provision of data for the study.

Table 3. Indicators Domain III - Independent, healthy and secure living

	Indicator for PL Voivodeship	Source	NOTES						
3.1.	Physical exercise (55+)	SD, 2015	The share of indications of at least one of the following types of physical exercise in the age group 55 and older: aerobic/running/jogging/nordic walking, gym, cycling, skiing and other winter sports, swimming, football or other team sports, yoga, martial arts, other forms.						
3.2	No necessity to forgo medical or dental appointments or buying prescribed drugs (55+)	SD, 2015	In the first edition, this indicator substantially differed from the original, in which the share of people stating that they had no problems with access to health and/or dental care was used. In the first edition the following answers were used instead: "due to the lack of money you had to forgo obtaining dentures (excluding the answer "There was no such need").						
			In the second edition, the modification was made. The new indicator included the absence of the need to forgo medical or dental appointments or buying prescribed drugs. For the comparison purposes the same indicator was used for the current third edition.						
3.3.	Independent living arrangements (75+)	SD 2015	The share of people aged 75+ who live alone or in a couple-household in the total population of 75+ in a given Voivodeship.						
3.4.	Relative median income (65+)	CSO 2015 (BDL)	The indicator has been modified according to the original, the median of the relative income of persons aged 65 and over was used. It uses the ratio of the average amount of pensions and disability pensions to the average gross salary. (The average monthly gross salary = 100).						
3.5.	No poverty risk (65+)	SD 2013	A person at risk of poverty is a person living in a household with the equivalent income lower than 50% of the median equivalent incomes of all households. This approach is in line with the approach in the original AAI.						
3.6.	Satisfaction with a financial situation (65+)	SD, 2015	In the original AAI - the indicator of <i>material deprivation</i> , state of economic and durable strain, defined as the enforced inability to afford at least four out of the listed nine items. However, it was unfortunately impossible to calculate these indicators in both the first and the second edition as the data for these questions and for this age group at the level of Voivodeships was unavailable. Therefore, as in the first edition, the share of persons (65+) indicating that they were totally satisfied, satisfied or quite satisfied with the material situation of the family was used. The scale of answers: 1 - totally satisfied, 2 - satisfied, 3 - quite satisfied, 4 - quite unsatisfied, 5 - unsatisfied, 6 - totally unsatisfied. Statement: "Satisfaction with the financial situation of one's family".						
3.7.	Physical safety (55+)	SD, 2015	The indicator is different from the original, here: the share of persons (55+) indicating that they were totally satisfied, satisfied or quite satisfied with the state of security at their place of residence. The scale of answers: 1 - totally satisfied, 2 - satisfied, 3 - quite satisfied, 4 - quite unsatisfied, 5 - unsatisfied, 6 - totally unsatisfied. Statement: "Satisfaction with the state of security in the place of residence".						
3.8.	Use of computers (55+)	SD, 2015	The indicator is different from the original, here: the share of persons (55+) providing a positive answer to the question: "Do you use a computer?" (yes).						

Table 4. Indicators Domain IV - Capacity and enabling environment for active ageing

	Indicator for PL Voivodeship	Source	NOTES
4.1.	Average life expectancy at age 55 (separate for women and men)	CSO, 2015	The average remaining life expectancy of men at age 55 and average remaining life expectancy of women at age 55.
4.2.	The share of healthy persons aged 65+	SD, 2015	Persons, who do not belong to the group of people with disabilities and are satisfied with their health condition (answers totally satisfied, quite satisfied to the question: "To what extent are you satisfied with your health conditions?").
4.3.	Mental well-being (55+)	SD, 2015	The indicator based on a set of questions related to mental well-being (similar to the original AAI).
4.4.	Use of Internet (55-74)	SD, 2015	Use of Internet in 2015 - the share of persons, who provided an affirmative answer to the question "Do you use the Internet?" (yes).
4.5.	Social connectedness (55+)	SD, 2015	"How many times in the past month did you attend: a social meeting?" The indicator is calculated as a share of persons, who indicated at least two social meetings in the last month. The original AAI used the question about the frequency of meetings with friends, relatives or colleagues.
4.6.	The share of persons aged 50+ with higher education	CSO, 2015 (Labour Force Survey (LFS)	The share of persons aged 50+ with tertiary education.

 ${\it Explanation of certain abbreviations:}$

LFS - Labour Force Survey, BLD - Bank of local data, cf. www.stat.gov.pl, SD - Social Diagnosis Survey, cf. http://www.diagnoza.com/, CSO - Central Statistical Office

Presentation of the Regional Active Ageing Index for Poland by domains

Domain 1 - Employment

In the first domain, the employment rates of people in particular age groups was calculated. Working people are understood here as persons, who performed at least one hour of any work for gain or income or who helped (without remuneration) to run a family farm or a family business outside of agriculture, or who had a job, but was not working due to sickness, leave or for other reasons, if the length of the break in employment amounted to up to 3 months, or more than 3 months, in case these persons were considered employed and received at least 50% of their remuneration for this period (LFS definition). The highest values of employment indicators in 2013 (second edition) were recorded in Mazowieckie (with the capital of the country Warsaw), Lubelskie and Podkarpackie Voivodeships, while the lowest ones in: Ślaskie (with coal mining industry being common and so early retirement options were used by miners), Warmińsko-Mazurskie and Lubuskie. In 2015 the highest values of employment indicators were recorded in again Mazowieckie, Lubelskie and Pomorskie (quite active region in Poland, Martinez-Fernandez Ch, et al, 2013) Voivodeships. While Śląskie, Warmińsko-Mazurskie and Lubuskie? Voivodeships had the lowest values of indicators.

Table 5. The values of individual indicators in Domain I - Employment

Employment		1.1 Employment rate of 55-59	1.2. Employment rate of 60+	Weiş	ghts	Index	Ranking
No	Region/Voivodship	CSO 2015	CSO 2015	W1	W2	Value	Place
1	Dolnośląskie	59.8	11.2	60	40	40.36	9
2	Kujawsko-pomorskie	56.3	10.2	60	40	37.86	13
3	Lubelskie	63.1	12.3	60	40	42.78	3
4	Lubuskie	57.7	14.5	60	40	40.42	8
5	Łódzkie	60.6	12.7	60	40	41.44	5
6	Małopolskie	59.1	11.6	60	40	40.10	10
7	Mazowieckie	67.7	14.5	60	40	46.42	1
8	Opolskie	59.7	9.5	60	40	39.62	11
9	Podkarpackie	54.2	11.3	60	40	37.04	14
10	Podlaskie	62.7	11.0	60	40	42.02	4

⁷ Podkarpackie Voivodeship ranked last in the third edition of RAAI. In 2013 (second edition) the employment rate in this Voivodeship amounted to 56.7% for persons aged 55-59 and 13.8% for persons aged 60+. In 2015 all Voivodeships recorded employment rates higher than in 2013, only in Podkarpackie there was a decrease to the level shown in the Table 5. Also on the basis of other sources, including the other study - the employment rate in Podkarpackie Voivodeship in 2011 for persons aged 55+ amounted to 26.2% and to 22.7% in 2013, which would indicate that fewer persons aged 55+ were professionally active (employed) than in previous years (this could be the result of migration, as well as retirement in this age group).

	Employment	1.1 Employment rate of 55-59	1.2. Employment rate of 60+	Weig	ghts	Index	Ranking
11	Pomorskie	62.7	14.3	60	40	43.34	2
12	Śląskie	50.5	9.8	60	40	34.22	16
13	Świętokrzyskie	59.4	13.0	60	40	40.84	7
14	Warmińsko-mazurskie	54.1	10.5	60	40	36.66	15
15	Wielkopolskie	60.2	12.6	60	40	41.16	6
16	Zachodniopomorskie	58.3	10.1	60	40	39.02	12

Domain 2 - Participation in society - social activity

The indicators of the second domain take into account activities in social life of people aged 55+. The indicators showing activities in voluntary work and participation in public meetings were used for the RAAI. Unfortunately, it was not possible to estimate the provision of unpaid work to family members outside of the shared household (care to children, grandchildren and care to infirmed and disabled) for both the third and the second editions.

In the first edition, the highest values of the indicator were achieved by Lubelskie Voivodeship, closely followed by Lubuskie and Małopolskie; Warmińsko-Mazurskie, Kujawsko-Pomorskie and Podlaskie Voivodeships ranked the lowest. In the second edition, top places were taken by: Podkarpackie, Lubelskie and Dolnośląskie Voivodeships. Łódzkie, Podlaskie, Warmińsko-Mazurskie Voivodeships have the lowest values in this domain. In the third edition, top places in this domain are again held by: Podkarpackie, Lubelskie and Dolnośląskie Voivodeships. Kujawsko-Pomorskie, Podlaskie, Warmińsko-Mazurskie Voivodeships have the lowest values of the indicators. The regions which were better in 2013 as well were better in this 3rd edition.

Table 6. The values of individual indicators in Domain II - Participation in society

F	Participation in society	2.1 Voluntary activity (55+)	2.4 Participation in public meetings (55+)	Wei	ghts	Index	Ranking
N	Region/Voivodship	SD, 2015	SD, 2015	W1	W4	Value	Place
1	Dolnośląskie	23.6	22.3	50	50	22.958	2
2	Kujawsko-pomorskie	13.6	12.5	50	50	13.023	16
3	Lubelskie	25.4	22.5	50	50	23.944	1
4	Lubuskie	20.9	18.1	50	50	19.488	8
5	Łódzkie	15.8	16.1	50	50	15.960	13

Participation in society		2.1 Voluntary activity (55+)	2.4 Participation in public meetings (55+)	Wei	ghts	Index	Ranking
6	Małopolskie	23.2	18.1	50	50	20.652	6
7	Mazowieckie	26.2	16.5	50	50	21.336	5
8	Opolskie	23.2	19.7	50	50	21.435	4
9	Podkarpackie	20.2	22.6	50	50	21.442	3
10	Podlaskie	17.6	9.1	50	50	13.358	15
11	Pomorskie	23.2	15.5	50	50	19.343	9
12	Śląskie	21.7	16.0	50	50	18.868	11
13	Świętokrzyskie	17.5	17.0	50	50	17.236	12
14	Warmińsko-mazurskie	20.0	10.1	50	50	15.080	14
15	Wielkopolskie	18.9	19.1	50	50	18.990	10
16	Zachodniopomorskie	19.6	19.4	50	50	19.509	7

Domain 3 - Independent, healthy and secure living

The indicators of the third domain are related to health, feeling of security (both physical and material) and independence. For the ranking of this domain, the following indicators were taken into account: physical exercise, no necessity to forgo medical or dental appointments or buying prescribed drugs, independent living arrangements, physical safety, use of computers. The third domain is also based on indicators related to material situation - relative median income, no poverty risk, satisfaction with a financial situation.

In the first edition, the top three included the following Voivodeships: Śląskie, Wielkopolskie and Mazowieckie, while Świętokrzyskie, Warmińsko-Mazurskie and Podkarpackie were at the end of the ranking by this domain. In the second edition (in 2014, calculations for 2013), the highest indicators were recorded for Śląskie, Opolskie and Zachodniopomorskie Voivodeships (especially Śląskie with higher level of pension benefits of miners could have an impact on this ranking). The lowest values of the domain were found in: Warmińsko-Mazurskie, Podlaskie and Podkarpackie (more rural) Voivodeships. In the third edition (in 2016, calculations for 2015) the highest indicators were recorded for the same Voivodeships: Śląskie, Opolskie and Zachodniopomorskie. The lowest values in this domain were found in: Warmińsko-Mazurskie, Świętokrzyskie and Podkarpackie Voivodeships.

Table 7. The values of individual indicators in Domain III - Independent, healthy and secure living

Ii	ndependent, healthy and secure living	3.1 Physical exercise (55+)	3.2 No necessity to forgo medical or dental appointments or buying prescribed drugs (55+)	3.3 Independent living arrangements (75+)	3.4 Relative median income (65+)	3.5 No poverty risk (65+)	3.6 Satisfaction with a financial situation (65+)	3.7 Physical safety (55+)	3.8. Use of computers (55+)	Index	Ranking
N	Region/Voivodship	SD, 2015	SD, 2015	SD, 2015	CSO 2015	SD, 2015	SD, 2015	SD, 2015	SD, 2015	Value	Place
1	Dolnośląskie	32.6	77.62	64.4	48.6	92.3	66.4	86.9	38.7	63.9	5
2	Kujawsko-pomorskie	22.0	74.06	58.4	44.3	89.3	61.3	87.8	28.6	58.9	13
3	Lubelskie	22.2	75.98	58.8	43.1	85.9	68.7	90.3	23.0	59.6	10
4	Lubuskie	32.3	74.02	61.7	43.9	93.1	66.6	88.3	34.5	62.5	7
5	Łódzkie	20.9	80.59	61.7	44.7	93.1	51.9	87.2	28.7	58.9	12
6	Małopolskie	21.8	76.27	53.5	47.0	92.5	65.0	88.3	33.5	60.4	9
7	Mazowieckie	24.8	78.49	64.4	49.7	94.6	63.7	88.0	35.5	62.7	6
8	Opolskie	36.5	82.52	57.2	47.3	91.9	80.1	92.9	28.9	66.3	2
9	Podkarpackie	25.4	75.37	50.4	41.8	85.5	57.6	91.6	25.4	57.8	14
10	Podlaskie	19.0	83.89	58.4	43.6	91.0	58.6	90.2	21.9	59.2	11
11	Pomorskie	30.6	79.33	62.3	47.5	94.3	64.2	91.7	46.1	64.9	4
12	Śląskie	23.0	83.77	65.2	59.0	94.4	76.4	86.8	33.6	65.7	3
13	Świętokrzyskie	12.2	80.95	47.2	43.3	90.1	62.7	91.3	19.5	57.1	15
14	Warmińsko-mazurskie	12.6	74.21	47.1	43.4	93.0	62.8	88.2	23.7	56.4	16
15	Wielkopolskie	23.1	82.95	55.2	46.0	93.8	64.7	92.8	31.1	62.1	8
16	Zachodniopomorskie	28.6	88.55	75.6	46.4	95.8	64.4	92.6	37.0	66.6	1
_	Weights	15	15	10	10	10	15	15	10		

Domain 4 - Capacity and enabling environment for active ageing

The indicators used for calculation of the fourth domain include: average remaining life expectancy (average remaining life expectancy for women aged 55 and men aged 55), the share of healthy persons (defined as those who declare no disability certificate and were satisfied with their state of health), mental well-being, social connectedness, use of Internet and having higher education.

In the first edition, Pomorskie Voivodeship ranked the highest, while the next two places were occupied by Śląskie and Mazowieckie. The last places were taken by Świętokrzyskie, Podlaskie and Warmińsko-Mazurskie Voivodeships. In the second edition, the highest values for the fourth domain were recorded by the following Voivodeships: Pomorskie, Śląskie and Dolnośląskie, while the lowest - Podlaskie, Świętokrzyskie, Lubelskie. In the third edition, the highest ranked the following Voivodeships: Pomorskie, Śląskie and Zachodniopomorskie, while the lowest, just as in the second edition: Podlaskie, Świętokrzyskie, Lubelskie. The indicator which was responsible for better position was using ICT (especially for Pomorskie about more than 50% of analysed age group reported regular and frequent use of Internet).

Table 8. The values of individual indicators in Domain IV - Capacity and enabling environment for active ageing

	Capacity and enabling nvironment for active ageing	4.1.a Average male life expectancy at age 55	4.1.b Average female life expectancy at age 55	4.2 The share of healthy persons aged 65+	4.3 Mental well-being (65+)	4.4 Use of Internet (55-74)	4.5 Social connectedness (55+)	4.6 The share of persons aged 50+ with higher education	Index	Ranking
N	Region/Voivodship	CSO 2015	CSO 2015	SD, 2015	SD, 2015	SD, 2015	SD, 2015	CSO 2015	Value	Place
1	Dolnośląskie	22.2	28.0	39.5	21.4	46.0	26.1	13.6	28.612	7
2	Kujawsko-pomorskie	22.4	28.1	45.7	18.4	34.5	27.3	10.4	28.729	4
3	Lubelskie	22.5	29.0	29.3	14.8	28.5	20.6	13.5	23.468	16
4	Lubuskie	22.0	27.9	36.6	14.7	44.4	28.8	11.9	26.940	13
5	Łódzkie	21.6	27.7	49.5	16.3	35.0	22.6	13.7	28.727	5
6	Małopolskie	23.4	28.9	40.8	17.8	40.6	27.6	15.6	28.639	6
7	Mazowieckie	23.1	28.7	41.9	17.6	40.2	23.5	18.3	28.404	8
8	Opolskie	22.4	28.3	45.0	22.2	38.2	17.5	12.5	28.326	9
9	Podkarpackie	23.5	29.1	44.5	15.4	30.4	24.4	12.0	27.788	11
10	Podlaskie	23.0	29.3	31.1	16.9	27.9	19.6	13.9	24.216	15
11	Pomorskie	23.0	28.3	50.6	25.4	53.6	31.7	16.3	33.434	1
12	Śląskie	22.2	27.5	53.3	22.2	38.7	27.5	12.5	31.417	2
13	Świętokrzyskie	22.2	28.9	43.0	11.8	23.8	22.5	11.6	25.865	14
14	Warmińsko-mazurskie	21.9	28.2	38.4	20.2	29.0	31.6	12.2	27.577	12
15	Wielkopolskie	22.5	28.1	43.0	18.0	35.0	25.4	12.6	27.998	10
16	Zachodniopomorskie	22.3	28.0	47.6	19.0	43.1	29.9	13.6	30.398	3
	Weights	17	17	23.0	16	7	13	7		

Overall Regional Active Ageing Index in Poland

After the calculation of the RAAI values in separate domains, the total value of the RAAI for Poland was calculated for individual Voivodships.

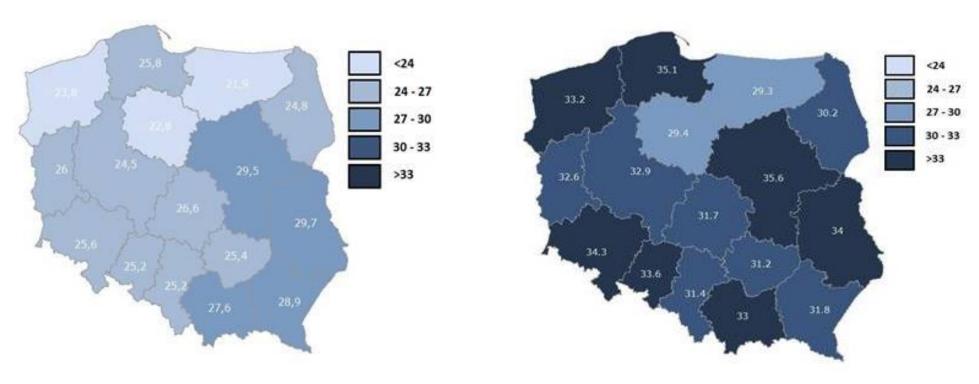
Table 9. Active Ageing Index - (the shares of domains 35%, 35%, 10%, 20% - as in the original AAI approach)

	Regions		Dom	Overall values of AAI			
		1	2	3	4	Value	Ranking
1	Dolnośląskie	40.4	23.0	63.9	28.6	34.3	3
2	Kujawsko-pomorskie	37.9	13.0	58.9	28.7	29.4	15
3	Lubelskie	42.8	23.9	59.6	23.5	34.0	4
4	Lubuskie	40.4	19.5	62.5	26.9	32.6	9
5	Łódzkie	41.4	16.0	58.9	28.7	31.7	11
6	Małopolskie	40.1	20.7	60.4	28.6	33.0	7
7	Mazowieckie	46.4	21.3	62.7	28.4	35.7	1
8	Opolskie	39.6	21.4	66.3	28.3	33.7	5
9	Podkarpackie	37.0	21.4	57.8	27.8	31.8	10
10	Podlaskie	42.0	13.4	59.2	24.2	30.1	14
11	Pomorskie	43.3	19.3	64.9	33.4	35.1	2
12	Śląskie	34.2	18.9	65.7	31.4	31.4	12
13	Świętokrzyskie	40.8	17.2	57.1	25.9	31.2	13
14	Warmińsko-mazurskie	36.7	15.1	56.4	27.6	29.3	16
15	Wielkopolskie	41.2	19.0	62.1	28.0	32.9	8
16	Zachodniopomorskie	39.0	19.5	66.6	30.4	33.2	6
	Weights	35	35	10	20		

The study evidenced that the region of Mazowieckie (which includes Warsaw, the capital city) with 29.5 points in 2011 and already 35.6 in 2015, showed one of the highest AAI scores across all regions in earlier study, together with other south-eastern regions. This can mostly be attributed to the employment of older workers which is higher than in other regions. Even in such a short period of time (2011-2015), the level of overall AAI and of its four domains increased in all Polish regions.

Figure 1. Total RAAI by voivodships in 2013

Figure 2. Total RAAI by voivodships in 2015



Note: Elaborations by Perek-Białas and Zwierzchowski (2019) based on analysis of AAI in 2013 and 2015. Data used for 2013 AAI analysis refer to 2011.

Summary and recommendations

In the conclusion of the first edition of the index it was emphasised that the presented results of the Regional Active Ageing Index for Poland should be viewed with caution, as they were only a preliminary guidance, illustrating how significant the differences between individual Voivodeships were and how this affected the results of the overall index. At that time the results of the analysis were presented for the first time, without an opportunity to compare the situation before 2012 (the European Year of Active Ageing and Solidarity between Generations) and after it. The results of the current third edition are based on the data from 2015, which is essential because of many activities undertaken since 2012 in the area of senior policy in Poland (including establishing of the Department of Senior Policy, The Social Participation of Older Persons Programme, activities of the Universities of Third Age, non-governmental organisations, regional and local initiatives identified - inter alia - in the framework of activities of the Office of Human Rights Commissioner).

The objective of this study was not solely to show, which Voivodeship "won" in ranking this time, but also to determine whether the values of the index were increasing in each of the Voivodeships independently of others. The third edition made it possible to assess not only the dynamics of the aggregated AAI, but also of its four domains, and even individual indicators, e.g. voluntary activity. Detailed dynamics could be relevant for the evaluation of effectiveness of the public policies. it is crucial to set targets at the regional level, that should be achieved in a specific time perspective (for example, increase the share of persons aged 60+ who use a computer and internet by 2020 up to 50%). Setting time-specific targets should inspire more effective action, and in the future form an assessment base for evaluation of the effectiveness of the implemented policy.

One of the limitations of the used approach is that it is still impossible to use the same individual indicators in the RAAI for Poland as those used in the original methodology. In this edition, an attempt was made not to modify the methodology of measuring the original AAI and to retain compatibility with the previous editions. Nevertheless, some indicators had to be omitted or modified, reflecting the specificity of information available for Poland, but the logic of modification and the manner of defining questions was adequately demonstrated in the report to provide transparency of limitations and assumptions. Hence, the presented analysis enables the assessment of the effects of implemented interventions and can become a guide for identifying areas and regions where actions are still necessary.

Another limitation is the use of the survey data (which means it was necessary to apply weights and pay attention to the size numbers in specific age groups in Voivodeships, controlling

errors⁸, etc.) We tried to minimise own calculations in the presentation of the indicators, in order to rely on verified and checked data to the maximum extent possible. Many indicators could not be used directly, as they were not there or were not presented in the breakdown by Voivodeships, or not in the way it was assumed.

It is important to emphasize that, as in the first and the second editions, this time there was also a need for additional calculations from various studies (mainly from Social Diagnosis 2015), and the cooperation with the Department of Senior Policy at the Ministry of Family, Labour and Social Policy with the Central Statistical Office was utilized.

The analysis does not include comparisons of the indicator for women and men, which is conducted in the original methodology. The reason for this omission was the lack of data allowing for such analysis or too small sample sizes preventing inference with an acceptable level of standard errors of the estimates.

From the point of future analysis and its periodic updates, it is recommended to ensure that all individual indicators of RAAI for Poland would be easily accessible and updated. To enable full international comparability of the results it is necessary to provide the same or adequately close wordings of all the variables used in the original version of the AAI. At the national level, the information necessary to calculate the Active Ageing Index is already available, but unfortunately there is still not much data by Voivodship.

Finally, it is worth adding that the efforts on the calculation of the RAAI for Poland provide an opportunity to strengthen the discussion on the use of social indicators, both in programming and evaluation of public policy interventions (Górniak, Keler, 2008). Also the participation of representatives of Poland in the efforts of the Expert Group of the UNECE and European Commission provides the opportunity to follow the development of methodology and to introduce modifications to the Polish approach.

In a situation where regions are responsible for spending funds (not only European ones), it is necessary to verify to what extents the planned activities change the rank of Voivodeships in highlighted domains of active ageing and - as a result - in the overall value of the AAI for Poland.

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 $^{^8}$ Relevant calculations of standard errors were made, together with the assessment of 95% confidence intervals for estimated values.