THE ACTIVE AGEING INDEX PILOT STUDIES FOR SERBIA AND TURKEY

BACKGROUND

The pilot studies of the Active Ageing Index (AAI) are a part of the research framework under the AAI project.[1] The aim of the pilot study is to establish if AAI can be computed for a given region (municipality) or a non-European Union (EU) country. This includes analysing availability of the data necessary for the AAI calculation, identifying data gaps and alternative variables (proxies) that can be used to replace those for which data are missing, and eventual calculation of AAI (or at least some of its domain scores) following to the extent possible the methodology that had been applied for AAI for 28 EU countries.

A pilot study includes three steps:

1. Desk study that implies collecting readily available data necessary to calculate the indicators of AAI, identifying data gaps and potential proxies
2. Field visit to a country (region) to complete information via face-to-face consultations with major stakeholders, e.g. national statistical office (NSO), respective ministries, non-governmental organisations (NGOs), older people representatives and others, to complete information (optional)
3. Computation of AAI to the extent possible

and is implemented in cooperation with the UNECE national focal points on ageing and national statistical offices of the countries.

The report presents the results of the pilot studies, including brief overview of the situation in terms of population ageing in the countries, overview of the sources and data availability for the indicator of AAI, and takes a first look at the obtained AAI results.

COVERAGE

Within the first phase of the AAI project a pilot study was carried out for Georgia.[2] Under the second phase of the AAI project the pilot studies have been implemented for Serbia and Turkey. Initially the pilot study was planned to be done for the 2012 AAI only (using mainly data from 2010), however given that in the course of the second phase of the project the calculations of 2010 and 2014 AAI (based mainly on the data from 2008 and 2012, respectively) for 28 EU countries were carried out, it was decided to aim at obtaining data and calculating AAI (or its domain scores) for these data points for the countries in focus as well.

TIME FRAMEWORK

The pilot studies were launched in 2014: May for Turkey and June for Serbia, with first preliminary results and data request sent to the national focal points and statistical offices[3] of the respective countries within the same months. In summer 2014, first feedback was received from the countries.

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[1] Information on AAI and the project can be found at
http://www1.unece.org/stat/platform/display/AAI/Active+Ageing+Index+Home
[2] The results of the AAI pilot study for Georgia are available from
http://www1.unece.org/stat/platform/display/AAI/VI.+Documentation
[3] See Annex III for the list of the experts consulted during the pilot studies.

During 2014–early 2015 four AAI indicators (namely, 2.1 Voluntary activities; 2.4 Political participation; 3.1 Physical exercise, and 3.7 Physical safety) were revised to ensure better comparability and replicability of the data.[4] Thus the results of the pilot study were revised accordingly in summer 2015. The exchange with the national statistical offices continued through December 2015.

A field visit to Turkey took place on 16–18 September 2015 (see below for more information).

OVERVIEW OF THE RESULTS

The available data made it possible to calculate the 2014 AAI for both countries using data mainly from the years 2012 and 2013.[5]

The AAI indicators, domain scores, and the overall index scale from 0 to 100 — the higher the results, the more the potential of older people to contribute to economy and society is used, and the more the environment the older people live in enables them to age in an active way.

One hundred points however does not serve as a realistic target to achieve. For the purposes of preliminary analysis of the AAI results can be used references for comparison such as the average results for 28 EU countries or the goalposts set for EU countries. The goalposts are reference values for domain scores and the overall AAI calculated based on the maximum results among all the countries either for men or for women observed during a given period of time (in this case over the period 2008–2012).

The figure 1 presents the overall AAI results and its domain scores for Serbia and Turkey together with the average 28 EU results and goalposts.

*Figure 1. Overall 2014 AAI results and its domain scores for Serbia and Turkey*
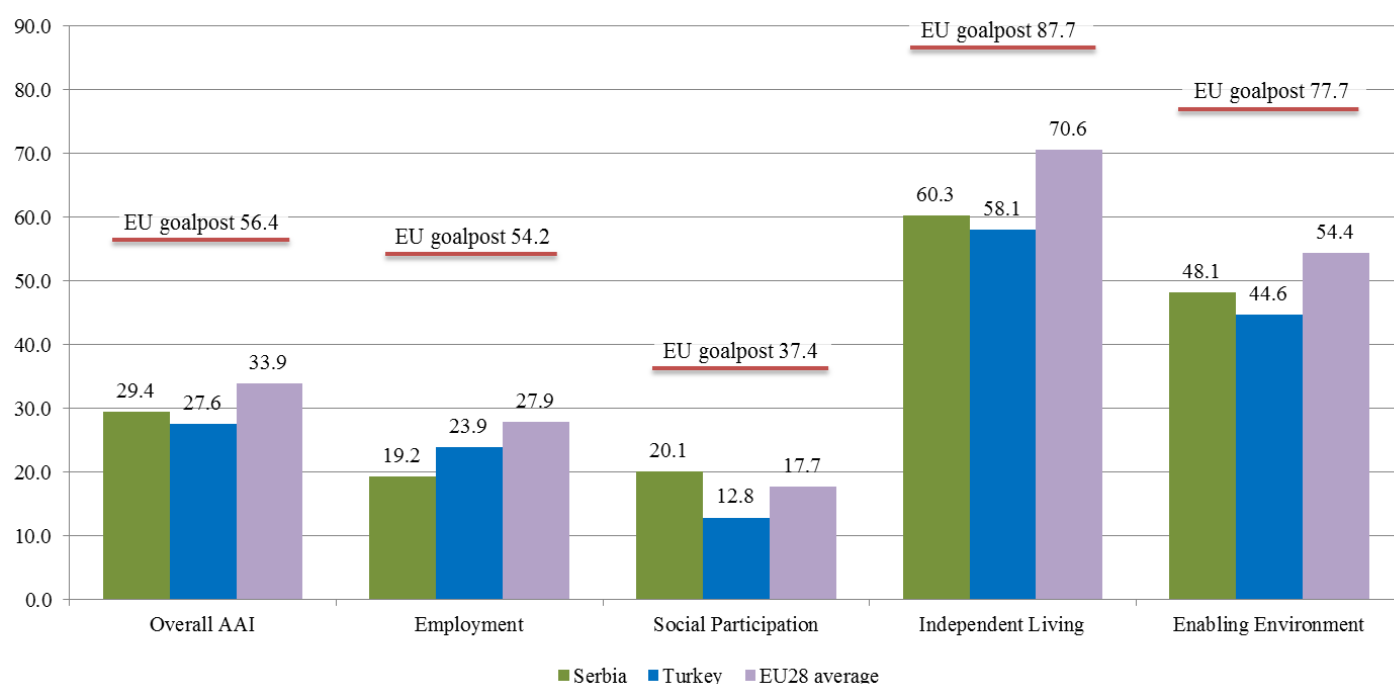
The overall 2014 AAI results for Serbia and Turkey (29.4 and 27.6 points respectively) show that there is a space for improvement in terms of using the potential of older people. This is true for both countries across all the domains.

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[4] For the methodology of AAI please visit http://www1.unece.org/stat/platform/display/AAI/V.+Methodology
[5] For two indicators (3.7 and 4.5) proxies were used for Serbia. Data for earlier years were used for three indicators (3.7, 4.2 and 4.5) for Turkey. See country-specific sections for details.

An important aspect of AAI is that it provides a possibility to analyse the difference in the active ageing outcomes for men and women. One of the ways to improve the AAI results is to try to close the so-called gender gap (difference between the results for women and men). Figure 2 shows the gender gap for Serbia, Turkey and average gender gap for 28 EU countries. Both, Serbia and Turkey, have significantly higher results for men than for women in terms of the overall AAI (results for women are lower than for men by 6.9 and 8.0 points for Serbia and Turkey respectively). Looking at the gender gap in each domain gives a good picture of where these differences come from. From the EU countries results over the period 2008–2012 it is possible to see that men fare better than women in the domains of Employment and Independent Living (often due to the higher results in the financial security indicators), while in the other two domains results are more diverse. In Serbia and Turkey the gender gap in Employment is also significant (higher than in EU), but in Independent Living it is lower than the one of EU.

Figure 2. Gender gap for Serbia and Turkey: overall and by domains
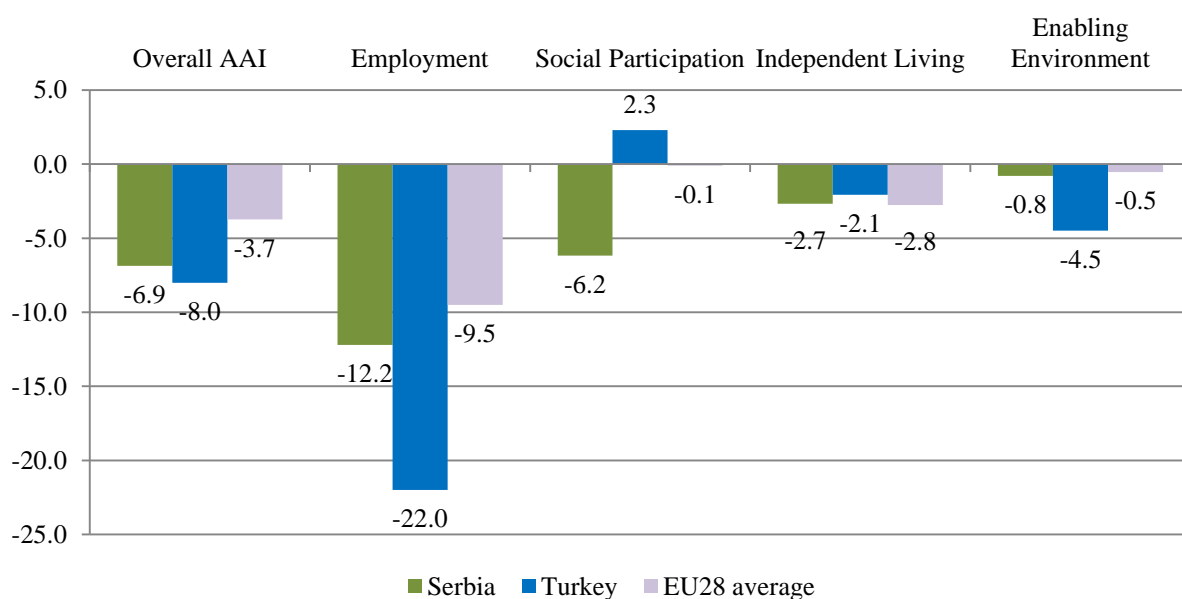
Two next sections of the report will look in more detail at data availability and AAI results for each country, as well as give some background information on the countries' situation in terms of population ageing.
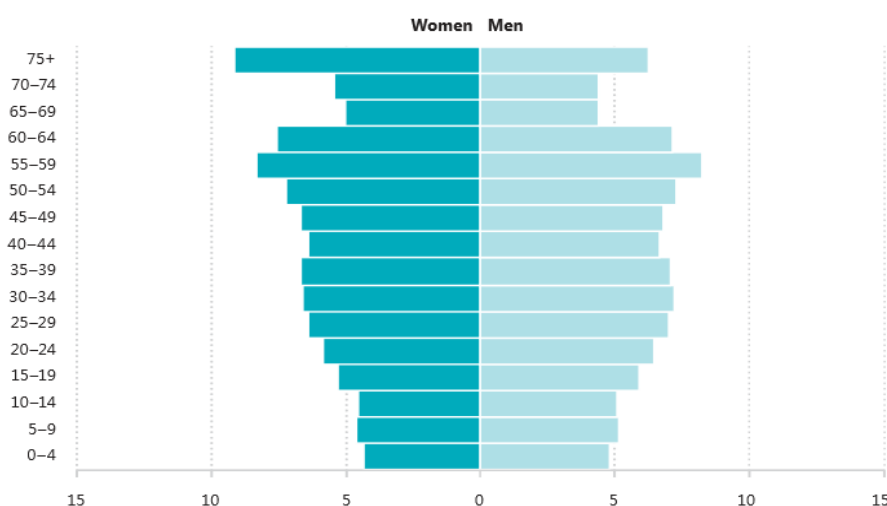
SERBIA

Context: ageing in Serbia

The population of Serbia has been ageing rapidly since 1960s with the share of population at age 0–14 having decreased by half and the share of population at age of 65 and above having grown 2.5 times. The life expectancy at birth has increased by 17 years for men and 18 years for women over the last six decades thanks to decline in child and infant mortality (especially during the fifties and sixties of the last century), rather than increased lifespan of older people.[6]
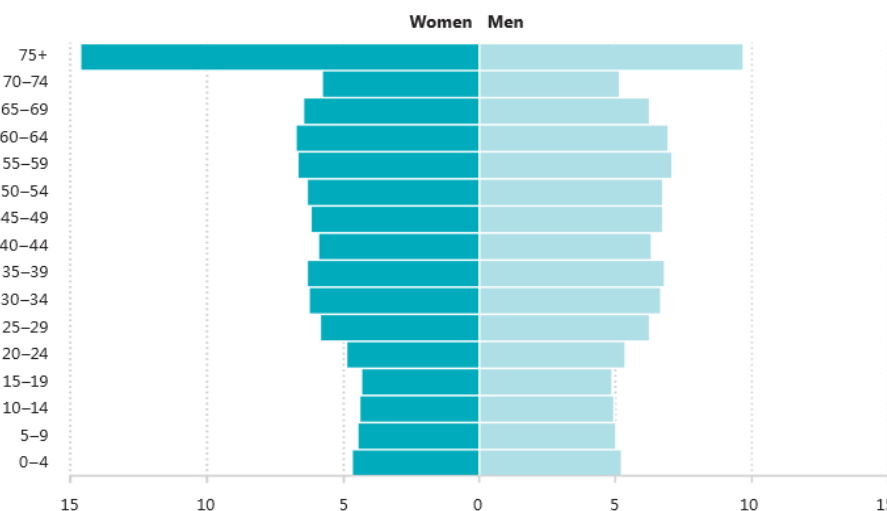
Figure 3. Population by age and sex, per cent

a) 2011

Source: SORS (2014) Women and Men in the Republic of Serbia; based on: SORS, Censuses of Population, Households and Dwellings

b) 2041

Source: SORS (2014) Women and Men in the Republic of Serbia; based on: SORS, Projection of Population with medium fertility rate scenario

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[6] Information provided by Ms. Gordana Bjelobrk, Head of the Division of demography, SORS.

While the life expectancy at birth has been growing, it is still below the EU average (75.3 as against to 80.6, as of 2013). At the same time, the median age in Serbia in 2013 was 42.7 which makes Serbia one of the oldest countries not only in Europe (only three countries of EU have a higher median age — Bulgaria, Italy and Germany (Eurostat database)), but also in the world (database of the United Nations Department of Economic and Social Affairs).

The share of people aged 65 and above in the total population of Serbia in 2013 reached 17.6 per cent. According to population projections by the Statistical Office of the Republic of Serbia (SORS), by 2041 the share of population at age 65 and above will reach, depending on the fertility rate, from 23.6 per cent with high fertility scenario to 25.2 per cent with low fertility scenario (see figure 3 for the population structure).[4, 7] The fertility rate has been declining, and in 2013 it amounted to 1.43, which is below average for EU 28 (1.55) (Eurostat database).

Regarding the sex composition of population of Serbia, women constitute 51.3 per cent of total population and 57.8 per cent of the population at age 65 and above. Life expectancy of women at birth exceeds that of men by 5.3 years, and at age 65 — by 2.6 (2013, Eurostat database).

Data sources and availability

Under this pilot study we favoured the use of the same sources as for the original AAI rather than alternative sources that can provide data for the same indicators. In this way, we used the data from EQLS and national SILC for the indicators 2.3 and 3.1, and 3.2 and 3.3 respectively, rather than the data from the European Health Interview Survey (EHIS), run by the Institute of public health of the Republic of Serbia every six years, that provides data for the indicator 3.3 and close variables for the other mentioned indicators.

The readily available data were extracted from the databases of Eurostat and the Statistical Office of the Republic of Serbia (SORS), and the following surveys: SORS Labour force survey (2010, 2012),[8] European Quality of Life Surveys (EQLS). Additional data were provided by SORS based on the Labour Force Survey (LFS), Survey on Income and Living Conditions (SILC), Survey on corruption in Western Balkans (UNODC, 2011), and Time Use Survey (2010/11). SORS also calculated the indicator 4.2 using the abridged life tables and SILC data on limitations in activities due to health problems.

The Labour Force Survey was for the first time carried out in 1994. In 2008 its questionnaire and methodology was revised in accordance with the Eurostat recommendations. The harmonisation of the questionnaire continued from 2008 through 2014. In 2014 and 2015 the sample was revised to respond to the change in periodicity (first to quarterly and then to continued) (SORS, 2015). The data for the data points used for this pilot study — 2008, 2010, and 2012 — are comparable.

The Survey on Income and Living Conditions (SILC) was implemented for the first time in Serbia in 2013. According to SORS, by the second wave (2014) the survey was fully harmonized with the EU-SILC.[9]

Given that Serbia started implementing SILC in 2013 there are no data available for the respective indicators for earlier years. Serbia was not covered by 2007 EQLS wave, and did not take part in the European Social Survey (ESS). For the two indicators based on the latter (3.7 and 4.5) proxies were identified for a single point in time:

- Indicator 3.7 Physical safety: the data come from the report "Corruption in the western Balkans: Bribery as Experienced by the Population" (UNODC, 2011)[10] based on a large-scale survey

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[7] Database of the Statistical Office of the Republic of Serbia http://webrzs.stat.gov.rs/WebSite/public/ReportView.aspx
[8] For detailed information on the Labour Force Survey in Serbia see
http://webrzs.stat.gov.rs/WebSite/userFiles/file/Zaposlenost%20i%20zarade/ARSSmet/SMET019050E.pdf
[9] For more information see http://silk.stat.rs/Documents/PD10_366_engl.pdf; http://silk.stat.rs/indexen.aspx

carried out in 2010. The survey question was "How safe do you feel walking alone in your area after dark?" which is close to the respective ESS question.[11] The survey, however, covered only population aged 18–64, therefore only data on the percentage of population aged 55–64 feeling "Safe" or "Fairly safe" are available.

- Indicator 4.5 Social connectedness: based on the Time Use Survey 2010/11 SORS calculated the share of people aged 55+ who indicated in their daily diaries they spent time on social activities with somebody outside of the household.

While the comparability of the proxy for the indicator 3.7 to the original AAI variable is limited, and the proxy for the indicator 4.5 is not really comparable, these proxies answer the questions behind the respective indicators, and therefore can be used for calculating AAI in Serbia.

All in all, the available data allowed for calculation of the 2014 AAI for Serbia. For earlier years only the Employment domain score and some separate indicators of other domains can be calculated. This limits the trend analysis at the moment. However, with continued implementation of SILC, LFS, participation in the next waves of EQLS, it will be possible to see the trends for further years, provided that proxies will be identified for the indicators 3.7 and 4.5.[12]

2014 AAI results for Serbia[13]

Overall 2014 AAI

With 29.4 points Serbia scores 25th if ranked together with the 28 EU countries. If compared to so-called "goalposts",[14] this result represents 52 per cent of the current goalpost for the overall AAI for 28 EU countries, meaning that there is a lot of space for improvement in terms of using the potential of older people to contribute to the economy and society, as well as improving the environment that enables people to age in an active way. Overall men fare better than women: only two EU countries have bigger gender gap (the difference between results for women and for men) than Serbia.

Employment

Minimum retirement age has been increasing in Serbia since 2003 when the minimum retirement age was raised from 55 to 58 for women and 60 to 63 for men, to the latest 2015 reform implying the gradual increase of minimum retirement age for women (till 2031 to 64 years and 10 months) and setting 65 as minimum retirement age for men (ASISP, 2014). Eligibility for pension depends also on the number of years of pensionable contribution (at least 15 years of pensionable service for the retirement at the above mentioned age; 40 / 37 years for an early retirement at age 55 years and 8 months / 8 months for men and women respectively; or 45 years regardless of age for both men and women).

The pattern of employment throughout the age groups in Serbia is of interest: the younger is the group the lower relative position in comparison to EU countries it occupies. It applies to the total rates as well as those by sex. This is similar to the pattern of such countries as Portugal and Romania (and Turkey, see below).

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[10] https://www.unodc.org/documents/data-and-analysis/statistics/corruption/Western_balkans_corruption_report_2011_web.pdf

[11] ESS question: "How safe do you – or would you - feel walking alone in this area [*Respondent's local area or neighbourhood*] after dark? Do – or would – you feel": 1. very safe; 2. safe; 3. unsafe; 4. very unsafe.

[12] Another challenge could be trends analysis of the employment domain indicators starting from 2015. While the data from 2008 to 2013 are strictly comparable, in 2014 there is a break in data series due to the change in periodicity (from semi-annual to quarterly). From 2015 the survey was adjusted to better match the Eurostat Regulations, therefore the data starting from 2015 will not be comparable to the ones from the previous years.
(http://webrzs.stat.gov.rs/WebSite/userFiles/file/Zaposlenost%20i%20zarade/ARSSmet/SMET019050E.pdf).

[13] Data and additional information for the AAI indicators are available in the Annex I.

[14] Reference values for domain scores and the overall AAI which are calculated based on the maximum results among all the countries either for men or for women (whoever do best) observed during a given period of time.

The employment in all age groups in Serbia decreased in both relative (in comparison to 28 EU countries) and absolute terms over a period 2008–2012 (except for employment among men in between 2010–2012, when the rate increased by 0.4 points). The overall domain score went down from 25.5 in 2008 to 19.2 in 2012, with the employment among men decreasing by over 8 points, and among women — by 5 points.

The gender gap (the difference between the results for women and for men) has been narrowing down over the four-year period, but is still significant: –12.2 points in 2014 AAI results (for comparison, the EU average gender gap in terms of employment rate amounts to –9.5 points).

Social participation

In comparison to the EU countries Serbia scores rather high — 10 out of 29 with 20.1 points. This result is mainly due to a high level of care to children and grandchildren (indicator 2.2): almost 50 per cent of people aged 55 and above are providing such care at least once a week. The share of persons 55+ doing voluntary activities at least once a week (indicator 2.1) is rather low (2 per cent). Twelve per cent of older people are providing care to older adults (indicator 2.3) and 17.7 per cent are active in terms of political participation (indicator 2.4) (these indicators values are respectively just below and just above the average rate of the EU countries).

Men seem more active in terms of social participation than women across all the indicators of this domain. This is true for both absolute numbers and relative position in comparison to EU. Thus, men score the first in care to children and grandchildren (women occupy the third position); in care to older adults men are the fourth, while women are 26th.

Independent healthy and secure living

This domain score is of 60.3 points for Serbia. Only one EU country has a lower result in this domain. Serbia scores high in relative median income (with 100 points Serbia scores among the top five countries). At the same time Serbia scores 29th in access to health and dental care (68 per cent of older people did not report any unmet need for medical or dental treatment), independent living arrangements (63.7 per cent of people aged 75+ live in single or couple households); 27th in physical exercise (only 3.6 per cent of older people are undertaking regular physical exercise or sport activities) and no material deprivation; 26th in no poverty risk. For physical safety the score is above EU average (74.4 per cent of older people are feeling safe in their neighbourhood alone after dark).[15]

Regarding financial security indicators (3.4–3.6) although the median income of older people is not lower than the one of those aged below 65, the indicators of no poverty risk and no material deprivation are rather low: 12.8 per cent of people aged 65+ are at risk of poverty, and 17 per cent are living in conditions of severe material deprivation. It is important to note that for women at age 65 and above these indicators values are lower than for men, even in case of the relative median income where for men it is above 100 but for women only 94.2 points. Older women in Serbia appear to be less protected in terms of financial security.

Women fare better in physical activities, access to health/dental services, and independent living arrangements. In addition to the above-mentioned gender gap in financial security indicators, men have also significantly higher results in physical safety which is a common trend in the other countries.

The only indicator in this domain for which it is possible to see the trends over a four-year period is the 3.8 Lifelong learning, however there were no significant changes (it went up by 0.2 points in the period 2008–2012).

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[15] This could be the result of using a proxy for this indicator, which limits the comparability, as it takes into account the replies of the people aged 55–64, and often this age group tends to feel more safe than the older groups (based on ESS 4, 5 and 6 waves data for 29 countries).

Capacity and enabling environment for active ageing

In this domain Serbia scores 22nd out of 29 with 48.1 points. This result is mainly due to a rather high level of healthy life years (indicator 4.2, which has an important weight of 23.3). Apart from the indicator 4.2, only 4.6 Education attainment is above EU average — 68.8 per cent of older people have upper secondary of tertiary education. The social connectedness indicator, for which a proxy was used is 8 points below EU average: 40.4 per cent of older people engage in social activities with somebody outside of the household.

As it is the case for the life expectancy at birth, the life expectancy at 55 is also lower in Serbia than in the EU countries, bringing the indicator 4.1 (Remaining life expectancy achievement of 50 years at age 55) below the EU countries results as well.

Mental well-being (4.3) and the use of ICT (Internet) (4.4) are also lower in comparison to EU: 38.2 per cent of people aged 55 and above feel rested, calm and in good spirits; and only 11 per cent of older people use the Internet at least once a week.

Women fare better than men in life expectancy and social connectedness. For all the other indicators men have higher results than women.

Over a four-year period life expectancy has been gradually increasing as have been use of ICT and educational attainment.

TURKEY

Context: ageing in Turkey

Although currently the population of Turkey is relatively young, with the proportion of population aged 65 and above of 7.7 per cent in 2013 and the median age of 30.4, the population projections show that this share will be growing with unprecedented speed and will reach 10.2 per cent in 2023, 20.8 per cent in 2050 and 27.7 per cent in 2075 (see figure 4). This is under a lower fertility scenario.[16] The median age will increase to 34 in 2023, 42.9 in 2050 and 47.4 in 2075 (Turkish Statistical Institute, 2013; 2013a). The population aged 65 and above will itself increase 4.6-fold in the upcoming 50 years (OECD, 2015).

The ageing of population of Turkey is due to the combination of increasing life expectancy and decline in fertility:

- Infant and child mortality has been decreasing (e.g. it has shrunk to a third between 2000 and 2015), however its rate is still three times higher than the EU 28's (World Bank database, 2015). The lifespan of older people has been growing. All this ensured increasing life expectancy. In 2013 life expectancy at birth amounted to 78.2 (this is below EU28 average, but higher than in 9 of its countries (Eurostat database).
- Total fertility rate, though high in comparison to the EU countries (2.08 in 2013 vs 1.55 for EU28) (Eurostat database)), saw a significant reduction since 1970. According to Population Census data in the end of the 1970s the total fertility rate was at the level of 3.41 (Turkish Statistical Institute, 2013a).

In terms of the sex composition of the population in Turkey women represent 49.8 per cent of the total population, and 56.5 per cent of the population aged 65 and above. Life expectancy of women at birth exceeds that of men by 5.7 years, and at age 65 — by 3.5 (2013, Eurostat database).

Figure 4. Age structure of the population in Turkey, projections

Source: Turkish Statistical Institute (2013). Elderly Statistics. Based on: Population Censuses, 1935-1990; Population Estimates, 2000-2007; Address Based Population Registration System (ABPRS) Results, 2008-2013; 2013 Population Projections, 2023-2075

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[16] With total fertility rate naturally going down and after reaching 1.65 in 2050, goes up to 1.85 in 2075.

Data sources and availability

The readily available data were extracted from the databases of Eurostat (LFS and SILC) and the Turkish Statistical Institute (TSI), and the surveys EQLS and ESS. These data allowed calculating the indicators of the first and second domains; as well as indicators 3.1, 3.8, 4.1, 4.3, 4.4 (2010 and 2012), and 4.6 for the same data points as for the EU 28. For the indicators based on ESS, namely 3.7 and 4.5, the data are available only for 2008 (as Turkey did not participate in any further rounds); therefore it will not be possible to see trend in these indicators. For the indicator 4.2 the calculations were done by the authors for one data point in time, based on the life tables for the year 2009 and SILC data for 2007 extracted from the Eurostat database.

The Turkish Statistical Institute calculated the following indicators:

- Based on national SILC: 3.2, 3.4–3.6[17]
- Based on the Address Based Population Registration System (ABPRS): the indicator 3.3 (from 2010 only)
- Based on ICT survey: the indicator 4.4 for 2008.

The Labour Force Survey has been carried out by the Turkish Statistical Institute since 1988; since 2004 it has been following the Eurostat standards.[18]

The Turkish Statistical Institute has been conducting Income and living conditions survey annually since 2006. The survey is in compliance with the Eurostat standards and produces data comparable to those of the EU countries.[19]

The overall AAI and its domain scores were calculated for three data points in time keeping in mind that for three out of 22 indicators the data are available only for one data point, and thus the trend analysis is somewhat limited.[20]

Field visit

From 16–18 September 2015 in order to finalise the pilot study trough face-to-face consultations with stakeholders, a field visit to Ankara by the two representatives of the UNECE Population Unit was organised. During the visit a number of bilateral consultations with the representatives of the Ministry of Family and Social Policy, Hacettepe University, UNFPA and others took place. On 17 September a one-day meeting hosted by the Ministry of Family and Social Policy was held. It was attended by some 30 participants from different ministries, including Ministry of Education, Ministry of Development, Turkish statistical institute (TSI), NGOs, and universities. The pilot study preliminary results were presented by UNECE. Missing data or explanations for the lack of data for some indicators were provided by the stakeholders, particularly by TSI; a number of solutions were suggested for filling data gaps. The stakeholders expressed their support in finalising the pilot study by the end of the year 2015 and assured they would provide UNECE with the required information.

Following the field visit TSI provided ECE with additional data, particularly for the indicators based on SILC (3.2, 3.4–3.6) for three data points in time, which made it possible to calculate the third domain scores and subsequently the overall AAI.

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[17] For the financial security indicators (3.4–3.6) data in the Eurostat database were only available for 2006.

[18] For information on the Turkish Labour Force survey see http://www.tuik.gov.tr/MicroVeri/Hia_2014/english/index.html

[19] For information on the Income and living conditions survey see http://www.tuik.gov.tr/MicroVeri/GYKA_2014/english/index.htmlt

[20] As in case of Serbia, the changes to the survey methodology were introduced in February 2014 in order to bring it in accordance to the EU requirements. These include: change in frequency; sampling design; changes in certain definitions; plus the new administrative division will be taken into account, as will be the new population projections estimates. This makes the data for the years before 2013 not comparable with those form 2014 onwards. However, TSI is planning to do retrospective estimations of the LFS indicators up to the year 1988. For more information see http://www.tuik.gov.tr/MicroVeri/Hia_2014/english/downloads/explanations.pdf.

2014 AAI results for Turkey[21]

Overall 2014 AAI

Turkey's overall AAI is of 27.6 points, which would put the country at the 28th place if compared to the 28 EU countries. The overall score has been gradually growing over the four-year period (4 points over 2008–2012). The 2014 AAI for Turkey amounts to 49 per cent of the "goalpost"[22] for the EU countries. There is a significant space for increased use of the untapped potential of older people in all domains. The higher results could be achieved also by narrowing down the gender gap which is quite large in Turkey: the overall AAI for men is 8 points higher than for women; only one EU country has a bigger gender gap. This difference is mainly due to the gender gap in Employment and Enabling environment domains.

Employment

The retirement age in Turkey is 60 years for men and 58 for women with at least 7,200 days of contribution. The 2006 reform implies an increase of the minimum pension eligibility age after 2036 (to reach 65 for men from 2036 to 2044, and 65 for women from 2036 to 2048) (Brook, A. / Whitehouse, E. R., 2006; OECD, 2015). There were a number of changes to the Turkish pension system from 1960s: a most significant one was the abolishment of the minimum pension eligibility age in 1969 allowing for a very early retirement (after having been registered in the social security system for 25 years and having contributed for 5,000 days). This made it possible to retire by age 40. With the reforms of 1999 and 2006 the minimum pension eligibility age is growing at a slow pace. In this manner in 2008 eligible for pension were men at age 46 and women at age 42.[23]

When compared to the EU countries Turkey would be at the 18th place in the ranking in terms of employment. The pattern of employment rate throughout the age groups is similar to that of Serbia (and therefore, Portugal and Romania; see above): the older is the group the higher position it has in the ranking.

Over a four year period the relative position of Turkey has grown from 20 to 18 by gaining three points. The employment was growing in all age groups and for both sexes. In absolute terms for women the employment rate has increased more than for men in the age group 65–69. However, given the big gender gap in this domain, in relative terms the employment increased for women significantly more than for men, e.g. in the age group 65–69 the increase for men was 6.1 per cent, while for women — 22.8. Nevertheless, the gender gap has actually grown over the period 2008–2012, and reached 22 points. Only one country in the EU has a higher difference between the employment rate of men and that of women.

Social participation

Social participation increased over a period 2007–2011/12, and in 2014 AAI Turkey ranks 25th (29th in 2007). This is mainly due to a rise in care to children and grandchildren (indicator 2.2), and to older adults (indicator 2.3). The increase in the indicator 2.2 could be in a large part assigned to the change in the question in between second and third EQLS waves.[24] In 2011/12 30.6 per cent of older population of Turkey provided care to their children, grandchildren at least once a week.

14.3 per cent of people aged 55 and above provide care to older adults on a weekly basis (this score is above EU average result). The voluntary participation is practically at zero: only 0.5 per cent of older people engage in voluntary work weekly. The indicator 2.4 is also very low with about 4 per cent of older people being active in political participation.

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[21] Data and additional information for the AAI indicators are available in the Annex II.
[22] Reference values for domain scores and the overall AAI which are calculated based on the maximum results among all the countries either for men or for women (whoever do best) observed during a given period of time.
[23] Approximately, based on the Figure 3 in Brook, A. and E. R. Whitehouse (2006), page 11.
[24] In 2007 wave the question was about frequency of caring and educating children outside of paid work, while in 2011/12 it expanded to include also grandchildren, plus the wording change to "caring" only.

For women this domain score is higher than for men thanks to more active participation in provision of care to children, grandchildren and older adults. For these indicators Turkish women have above EU average results (in providing care to older adults they score 5th). Men have higher results in political participation and voluntary activities (though the latter are 0 for women and 1 for men).

Independent healthy and secure living

With 58.1 points Turkey holds 29th position in the ranking with the EU countries. The two above average indicators are relative median income (3.4) and physical safety (indicator 3.7: 72 per cent of older people feel safe when walking alone after dark in their neighbourhood).

Despite the fact that older people's median income is at least as high as that of people at age below 65 (or higher), the indicator of no poverty risk (3.5) is relatively low in comparison to the EU (14.4 per cent of older people are at the risk of poverty); moreover 60 per cent of older people live in the situation of severe material deprivation (indicator 3.6).

Seventy-nine per cent of Turkish older people reported no unmet need for medical or dental treatment.

About 60 per cent of the Turkish older people (75+) live in single or couple households (indicator 3.3), which is significantly lower than in the EU countries (84 per cent of average).

Only 0.2 per cent of older people reported they had participated in learning activities during the last four weeks (indicator 3.8 Lifelong learning).

There was a decrease of about 1 point in this domain score over the period 2008–2010. This is mainly due to a decline in the indicator 3.2, and a more minor decline in the indicators 3.5 and 3.6. An increase of about 2 points is observed during the second period in question (thanks to a rise in the indicators 3.2 and 3.6; the indicator 3.5 continued to go down). The relative position went from 26 to 29.

The difference between the results for women and men in this domain is below EU average. Men do score higher than women in this domain, specifically in the indicators 3.1, 3.2, 3.5, 3.6, and 3.7. Regarding the indicator 3.4 (relative median income), for which the 100 value is imposed as the maximum, men and women have the same result of 100.[25]

Capacity and enabling environment for active ageing

Turkey scores 28th in this domain with 44.6 points. The indicators of mental well-being (4.3), use of ICT (4.4) and Educational attainment (4.6) have been increasing gradually over the period 2008–2012 but are at the moment lower than in the EU countries (except for 4.3 where Turkey holds the 28th position). Thus, 48 per cent of people aged 55+ feel calm, relaxed and in good spirits (indicator 4.3); only 14 per cent of older people have upper secondary or tertiary education. Only 8 per cent use the Internet on a weekly basis.

There is a gap in life expectancy between women and men which is below average EU; however in terms of health life expectancy men in Turkey have much higher results than women — the gap is higher than in any EU country.[26] This points to the higher level of limitations in daily activities due to health problems among women than among men.

Use of ICT (4.4) is especially low among women: if 13 per cent of older men use the Internet at least once a week (which is one point lower than the next country in the ranking), only 3 per cent of older women do so (lagging behind the next country by 8 points). Similar situation is in the indicator Educational attainment (4.6) (20 per cent of men vs 8.5 per cent of women have upper secondary or tertiary education).

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[25] The Turkish Statistical Institute who provided the data for 2008, 2010, and 2012 gave the figure of 100 for both men and women. In 2006 (the year for which data are available from the Eurostat database) the results for women were higher than for men (114 vs 111).

[26] Comparison if for the year 2008.

CONCLUSION: CHALLENGES AND WAY FORWARD

In the course of the pilot studies, with the invaluable support of the consulted experts, it became possible to identify data for and calculate all the indicators of the Active Ageing Index for both, Serbia and Turkey. Importantly, it was possible to have all the data separately for men and women which allowed calculating the gender gap (see above).

The indicators based on the questions of the European Social Survey — 3.7 Physical safety, and 4.5 Social connectedness — are problematic for both countries as Turkey did not participate in the survey since 2008, and Serbia never did so. The use of two alternative variables (proxies) for these indicators in case of Serbia somewhat limits the comparison with other countries, though the comparison is still possible given relatively low weights of the mentioned indicators in the overall AAI.

In case of Turkey there was no need to use any alternative variables, but for three indicators the data for earlier years had to be used. These include the indicators 3.7 and 4.5, but also 4.2 Share of healthy life years in the remaining life expectancy at age 55, for which the authors did the calculations based on data from years 2007 and 2009. This also limits the comparison with the most recent AAI results of other countries: an increase, though moderate, was observed over the period 2008–2012 for the overwhelming majority of the EU countries.

In both countries the surveys data from which are used the most for AAI indicators, namely LFS and SILC, have been implemented regularly and are in compliance with the Eurostat requirement. This should make it possible to regularly update the data for AAI, and calculate further waves of the index, provided continued participation in EQLS and that proxies will be identified for the ESS indicators.

The countries can use the index to monitor the trends in active ageing outcomes at the national level. In this case, the use of alternative variables would not be an issue, provided they are close to the original ones and can be regularly calculated.

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ANNEX I. Data for AAI indicators for Serbia

Employment

1.1 Employment rate for the age group 55-59

Definition	Employment rate is the share of employees 55-59 years old in the total population aged 55-59		
Source	Data provided by SORS based on national Labour Force Survey (LFS)		
Year	2008	2010	2012
Total	46.3	41.8	41.7
Men	60.1	52.3	52.7
Women	33.3	31.6	31.4

1.2 Employment rate for the age group 60-64

Definition	Employment rate is the share of employees 60-64 years old in the total population aged 60-64		
Source	Data provided by SORS based on national LFS		
Year	2008	2010	2012
Total	24.7	22.0	20.7
Men	35.5	33.3	31.2
Women	15.8	12.2	11.1

1.3 Employment rate for the age group 65-69

Definition	Employment rate is the share of employees 65-69 years old in the total population aged 65-69		
Source	Data provided by SORS based on national LFS		
Year	2008	2010	2012
Total	17.7	13.3	9.1
Men	22.1	17.5	11.8
Women	14.1	9.9	7.0

1.4 Employment rate for the age group 70-74

Definition	Employment rate is the share of employees 70-74 years old in the total population aged 70-74		
Source	Data provided by SORS based on national LFS		
Year	2008	2010	2012
Total	13.4	8.0	5.5
Men	17.4	10.4	7.0
Women	10.2	6.1	4.3

Social participation

2.1 Voluntary activities

Definition	Same as in the original AAI	
Source	European Quality of Life Survey[27]	
Year	2007	2011/12
Total	—	2.0
Men	—	3.0
Women	—	1.3

2.2 Care to children and grandchildren

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007	2011/12
Total	—	49.8
Men	—	54.0
Women	—	46.7

2.3 Care to older adults

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007	2011/12
Total	—	12.0
Men	—	15.6
Women	—	9.0

2.4 Political participation

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007	2011/12
Total	—	17.7
Men	—	23.2
Women	—	13.5

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[27] Serbia did not take part in the second wave of EQLS

Independent, Healthy and Secure Living

3.1 Physical exercise

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007[28]	2011/12
Total	—	3.6
Men	—	3.1
Women	—	4.0

3.2 Access to health and dental care

Definition	Same as original AAI
Source	Calculated by SORS based on national SILC
Year	2013[29]
Total	68.2
Men	66.9
Women	69.2

3.3 Independent living arrangements

Definition	Same as original AAI
Source	Calculated SORS based on national SILC
Year	2013
Total	63.7
Men	61.8
Women	65.0

3.4 Relative median income

Definition	Same as original AAI
Source	National SILC (available from Eurostat database)
Year	2013
Total	100.0 (1.0)
Men	100.0 (1.1)
Women	94.2 (0.9)

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[28] The respective question was introduced into EQLS starting from the third wave only.
[29] Serbia started carrying out SILC in 2013.

3.5 No poverty risk

Definition	Same as original AAI
Source	National SILC (available from Eurostat database)
Year	2013
Total	87.2
Men	90.1
Women	85.2

3.6 No severe material deprivation

Definition	Same as original AAI
Source	National SILC (available from Eurostat database)
Year	2013
Total	73.1
Men	77.2
Women	70.1

3.7 Physical safety

Definition	Percentage of people aged **55–64** who are feeling **safe** or **fairly safe** to walk alone after dark in their local area
Source	Data provided by SORS based on the results of a study implemented in 2010 by SORS for the UNODC report "Corruption in the Western Balkans: Bribery as Experienced by the Population", 2011
Year	2010
Total	74.4
Men	83.8
Women	62.9

3.8 Lifelong learning

Definition	Same as original AAI		
Source	Data provided by SORS based on national LFS		
Year	2008	2011	2012
Total	0.2	0.4	0.4
Men	0.2	0.6	0.5
Women	0.2	0.3	0.3

Capacity and enabling environment for active ageing

4.1 Remaining life expectancy achievement of 50 years at age 55

Definition	Same as original AAI		
Source	Eurostat database		
Year	2008	2010	2012
Total	44.8	45.2	46.0
Men	41.2	41.6	42.0
Women	48.2	48.8	49.6

4.2 Share of healthy life years in the remaining life expectancy at age 55

Definition	Share of disability-free years in the remaining life expectancy
Source	Data provided by SORS
Year	2013[30]
Total	67.4
Men	71.6
Women	64.1

4.3 Mental well-being

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007	2011/12
Total	—	38.2
Men	—	42.8
Women	—	34.8

4.4 Use of ICT

Definition	Same as original AAI		
Source	Data for 2008 and 2010 provided by SORS based on the survey on ICT usage in households and by individuals[31]; for 2012 — extracted from UNECE database		
Year	2008	2010	2012
Total	6.1	9.6	11.0
Men	6.2	12.4	12.0
Women	5.9	7.3	10.0

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[30] The calculation of the healthy life years in Serbia started in 2015. The data will be available annually starting from the year 2013.
[31] The survey is fully harmonized with the Eurostat methodology.

4.5 Social connectedness

Definition	Share of people aged 55+ who indicated in their daily diaries they spent time on social activities with somebody outside of the household
Source	Data provided by SORS based on the Time Use Survey 2010/11[32]
Year	2010/11
Total	40.4
Men	38.2
Women	42.4

4.6 Educational attainment

Definition	Same as original AAI		
Source	Data provided by SORS based on national LFS		
Year	2008	2010	2012
Total	65.3	66.3	68.8
Men	70.8	71.5	73.9
Women	60.1	61.3	63.9

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[32] http://webrzs.stat.gov.rs/WebSite/repository/documents/00/00/81/50/G20126015E.pdf

ANNEX II. Data for AAI indicators for Turkey

Employment

1.1 Employment rate for the age group 55-59

Definition	Ratio of employed persons to the non-institutional working age population (for the age group 55-59)		
Source	Eurostat database, Labour Force Survey (LFS) (http://ec.europa.eu/eurostat/cache/metadata/en/lfsa_esms.htm)		
Year	2008	2010	2012
Total	30.3	32.4	35.0
Men	44.7	46.3	50.8
Women	16.3	18.8	19.6

1.2 Employment rate for the age group 60-64

Definition	Ratio of employed persons to the non-institutional working age population (for the age group 60-64)		
Source	Eurostat database (LFS)		
Year	2008	2010	2012
Total	23.8	25.8	27.7
Men	35.8	37.7	40.4
Women	13.1	14.8	15.9

1.3 Employment rate for the age group 65-69

Definition	Ratio of employed persons to the non-institutional working age population (for the age group 65-69)		
Source	Eurostat database (LFS)		
Year	2008	2010	2012
Total	17.5	18.9	19.6
Men	27.7	29.0	29.4
Women	9.2	10.6	11.3

1.4 Employment rate for the age group 70-74

Definition	Ratio of employed persons to the non-institutional working age population (for the age group 70-74)		
Source	Eurostat database (LFS)		
Year	2008	2010	2012
Total	11.9	12.7	13.1
Men	19.4	20.7	21.0
Women	5.9	6.3	6.8

Social participation

2.1 Voluntary activities

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007	2011/12
Total	2.7	0.5
Men	3.7	1.0
Women	1.6	0.0

2.2 Care to children and grandchildren

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007	2011/12
Total	10.7	30.6
Men	4.8	27.6
Women	16.9	33.4

2.3 Care to older adults

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007	2011/12
Total	7.8	14.3
Men	8.4	10.9
Women	7.1	17.8

2.4 Political participation

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007	2011/12
Total	5.2	3.9
Men	7.3	6.4
Women	2.7	1.5

Independent, Healthy and Secure Living

3.1 Physical exercise

Definition	Same as in the original AAI	
Source	European Quality of Life Survey[33]	
Year	2007	2011/12
Total	—	6.0
Men	—	9.5
Women	—	2.6

3.2 Access to health and dental care

Definition	According to the Turkish Statistical Institute (TSI), the calculation is done following the original definition of AAI		
Source	Data provided by TSI based on national Survey on Income and Living conditions (SILC)		
Year	2008	2010	2012
Total	77.0	73.4	79.1
Men	75.6	73.3	79.4
Women	78.2	73.4	78.8

3.3 Independent living arrangements

Definition	According to TSI, the calculation is done following the original definition of AAI		
Source	Received from TSI based on the data of the Address Based Population Registration System[34]		
Year	2008[35]	2010	2012
Total	—	57.6	59.9
Men	—	56.2	58.3
Women	—	58.6	60.9

3.4 Relative median income

Definition	According to TSI, the calculation is done following the original definition of AAI		
Source	Data provided by TSI based on national SILC		
Year	2008	2010	2012
Total	100	100	100
Men	100	100	100
Women	100	100	100

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[33] The respective question was introduced into EQLS starting from the third wave only.
[34] Though the system includes institutionalised population (http://www.turkstat.gov.tr/PreTablo.do?alt_id=1059), the definition of the variable concerns the population living in households only.
[35] Data are available starting from 2010.

3.5 No poverty risk

Definition	According to TSI, the calculation is done following the original definition of AAI		
Source	Data provided by TSI based on national SILC		
Year	2008	2010	2012
Total	89.1	88.6	85.6
Men	89.4	88.6*	86.8
Women	88.9	88.6*	84.8

* *as provided by TSI*

3.6 No severe material deprivation

Definition	According to TSI, the calculation is done following the original definition of AAI		
Source	Data provided by TSI based on national SILC		
Year	2008	2010	2012
Total	34.4	33.4	39.4
Men	37.7	36.3	41.9
Women	31.9	31.3	37.6

3.7 Physical safety

Definition	Same as in the original AAI		
Source	European Social Survey (ESS)[36]		
Year	2008	2010	2012
Total	71.8	—	—
Men	77.3	—	—
Women	65.6	—	—

3.8 Lifelong learning

Definition	Same as in the original AAI		
Source	Eurostat database (LFS)		
Year	2008	2011	2012
Total	0.1	0.2	0.2
Men	0.1	0.1	0.1
Women	0.1	0.2	0.2

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[36] Turkey did not take part in further rounds of ESS

Capacity and enabling environment for active ageing

4.1 Remaining life expectancy achievement of 50 years at age 55

Definition	Same as original AAI		
Source	Eurostat database		
Year	2009*	2010	2012
Total	50.0	50.8	52.0
Men	45.6	46.6	47.4
Women	54.0	54.8	56.4

* Data for previous years are not available

4.2 Share of healthy life years in the remaining life expectancy at age 55

Definition	Same as original AAI
Source	Life tables extracted from Eurostat database (available for the years 2009–2014); SILC data on self-perceived health form Eurostat database (2007); calculated by authors
Year	2007 (SILC), 2009 (Life tables)
Total	48.6
Men	57.4
Women	41.4

4.3 Mental well-being

Definition	Same as in the original AAI	
Source	European Quality of Life Survey	
Year	2007	2011/12
Total	32.9	48.1
Men	39.0	53.0
Women	26.4	43.8

4.4 Use of ICT

Definition	Same as original AAI		
Source	TSI (provided revised data for 2008), and Eurostat database		
Year	2008	2010	2012
Total	4.2	6.0	8.0
Men	7.4	9.0	13.0
Women	1.3	2.0	3.0

4.5 Social connectedness

Definition	Same as in the original AAI		
Source	European Social Survey (ESS)[37]		
Year	2008	2010	2012
Total	48.6	—	—
Men	51.4	—	—
Women	45.6	—	—

4.6 Educational attainment

Definition	Same as original AAI		
Source	Eurostat database (LFS)		
Year	2008	2010	2012
Total	12.0	12.3	14.0
Men	17.4	17.9	20.1
Women	7.2	7.3	8.5

[37] Turkey did not take part in further rounds of ESS

ANNEX III. List of experts consulted under the framework of pilot studies

A. SERBIA

Ms. Gordana BJELOBRK
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Ms. Ljiljana SEKULIC
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Ms. Natasa TODOROVIC
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Mr. Milutin VRACEVIC
Health and care program manager
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B. TURKEY

Ms. Eda Evin AKSU
Expert
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Turkish Statistical Institute

Ms. Şebnem BEŞE CANPOLAT
Head of Demographic Statistics Department
Turkish Statistical Institute

Mr. Muharrem Gürleyen GÖK
Expert
Turkish Statistical Institute

Ms. Dilek GÜDER
Vital and Gender Statistics Group Leader
Turkish Statistical Institute

Mr. Coşgun GÜRBOĞA
Head of The Department of Elderly Services
General Directorate of Disabled and Elder Services
Ministry of Family and Social Policy of Turkey