**Active Ageing Index in Korea -**

Comparison with China and EU Countries

**Abstract**

The evidence-based policymaking relies on the use and robustness of the available data. Many conceptual and operational difficulties restrict this process, not least in making use of evidence to identify policy priorities. The Active Ageing Index (AAI), developed originally for the 28 European Union countries, offers a strong motivation in this respect. This paper reports on the development of the AAI for Korea, a country where speed and level of population ageing is among the highest in the world. Drawing on the comparative analysis of the AAI results for Korea, China, and European countries, we find that Korea’s AAI (35.3) is higher than the average of the AAI for all EU countries (33.9) but lower than China (37.3). Fitting Korea into the overall ranking with the EU countries and China (ranked 7), Korea is ranked 11, just behind Germany (10). The AAI results in Korea show that the employment domain performs extremely well compared with the EU countries, but other domains, especially ‘Social participation’ and ‘Independent, healthy and secure living’ are achieving less favourable outcomes. High employment among the current cohorts of older workers in Korea can be attributed largely to the constraints of low pension income status.

**Key words:** *Active ageing, Population ageing, Korea, China, EU countries, Active Ageing Index, Healthy ageing*

1. **Introduction**

Major East Asian societies of China, Japan and South Korea (hereafter Korea) are undergoing a rapid demographic transition, fast moving to become a “Hyper-Ageing societies[[1]](#footnote-2)” where the proportion of older population aged 60 or over exceeds 30% (HelpAge International, 2015). While these countries are vastly different with respect to their population size and economy, the demographic trends are comparable. All these countries experience longevity and a decrease in birth rates and therefore a rising share of older population in the society. As well as the ever-dropping fertility rate in Korea and a rising life expectancy, the proportion of older people (aged 60 years or above) reached 20.1% in 2017 (United Nations, 2017) and it is predicted that Korea will become a country with potentially the largest proportion of the older population aged 65 or above in the world by 2050 (Population Reference Bureau, 2018).

Despite strong economic growth, there is a growing concern for the well-being of older people in Korea. To address this concern, the government has been working towards promoting the quality of life in old age as one of the national policy objectives over the last decade or so. One main objective of the national governmental policies is to improve the old-age income security system, such as the basic pension, improve social welfare for older people, and promote the contributions of older people. This last mentioned strategic emphasis reflects essential elements of the strategy of active and healthy ageing as is the hallmark of many countries in Europe (Walker & Zaidi, 2016, 2019). However, as yet there is no integrated, composite metric that can be used to measure and promote active and healthy ageing in Korea. Several individual indicators, such as employment, social engagement, the poverty rate, and life satisfaction, which were commonly used in the past, have limitations in describing the specifics and multidimensionality of active and healthy ageing among the Korean older people.

Although there is no social consensus on the meaning of quality of life and active and healthy ageing in Korea, many people, including older people themselves, think that active ageing is one of the desirable ways of living in old age (Choi, 2015). In line with this trend, there are growing voices calling for the development of a way in which to evaluate active ageing including the labour market participation as well as independent living, participation in social activities, and ensuring provision of an enabling environment for active ageing (Zaidi, Parry, & Um, 2018).

This paper explores the availability of active ageing data related to older populations as provided by the major surveys of older populations in Korea. For the purpose of the analysis of the AAI in this paper, we refer to those who are aged 55 or above as ‘older persons’ as this was the age limit used in the majority of the EU AAI. This may seem “young” in many countries where most people aged 55 or above would not consider themselves old. Conventionally, age 60 and over has been widely used to describe “older person”, particularly for the studies on developing countries and in all UN’s demographic projections (United Nations 2017). By including a pre-retirement age group (55-64) in our AAI analysis, this paper seeks to provide a wider and more comprehensive view of activity and engagement of the older population leading to the retirement age in Korea. The paper reviews the relative position of Korea in comparison to the EU countries and China, based on comparable definitions of the overall AAI and its domain-specific indices, to highlight if there any aspects in which Korea does relatively well or worse.

**2. The challenges of population ageing in Korea**

Rising life expectancy is one of the drivers of population ageing. Economic growth and improved standard of living, together with advanced medical technology and sanitary system reduced the crude death rate, resulting in rapid growth of the elderly population. In Korea, life expectancy has improved for both men and women (Table 1). The country as a whole experienced a dramatic increase in life expectancy at birth and at age 60 from 1970 to 2016 (OECD, 2018a). For instance, men and women at age 60 expect to live almost 10 years longer in 2016 than they did in 1970. Generally, women live longer than men and life expectancy at age 60 is growing rapidly for both men and women.

**Table 1 Life Expectancy in Korea from 1970 to 2016 (total, male, and female together)**

|  |  |  |  |
| --- | --- | --- | --- |
| Year | 1970 | 1990 | 2016 |
| Total Population at birth | 62.3 | 71.7 | 82.4 |
| Female at birth | 65.8 | 75.9 | 85.4 |
| Male at birth | 58.7 | 67 | 79.3 |
| Female at age 60 | 18.4 | 20.7 | 27.2 |
| Male at age 60 | 12.7 | 15.5 | 22.5 |

Source: OECD Health Statistics 2018

The other even more significant driver of population ageing in Korea is a decline in fertility rate. While the total population of Korea will continue to increase, the fertility rate is declining so much so that Korea has become one of the countries with the lowest fertility rate. It took only 23 years for the total fertility rate to fall from 6.0 to 2.1 (Kim and Yang, 2009). In 2017, the total fertility rate fell to 1.05, which is considerably below the replacement level of fertility (KOSIS, 2018) {KOSIS, 2018 #395}and relatively low compared with the average of 28 EU countries (1.6) and OECD average (1.7). These demographic trends are likely to bring an imbalance between the demands for the care of older people and the availability of care workers responding to such demands. The traditional familial (informal) care for older people by family members is also likely to be challenged in the future, resulting in a ‘care gap’ (Qureshi and Walker (1989). In the absence of changing roles of older persons in the society, there is also a risk of a conflict between the older and younger generations at the societal level.

However, focusing on challenges only runs the risk of motivating policy reforms that leads to a neglect of the immense opportunities that come with population ageing. The new generation of older population are a powerful resource with the potential to contribute to not just their own well-being but also to sustain a greater economic and social prosperity for society. Central to this is the idea of active and healthy ageing, meaning growing older in good health and as a full member of society, feeling more fulfilled in jobs and in social engagements, more independent in their daily lives and more engaged as citizens. This implies a process of opening opportunities to make people fully engaged and productive throughout their life course (Walker & Zaidi, 2017).

The demographic challenges and ageing population enhance the relevance of investigating the experiences and lifestyles of older people in later life and their social roles. This raises the need for measurement and monitoring tools such as the AAI as well as collecting and analysing statistical AAI data in Korea. The study of active ageing is vital not only for older people but also for younger population in Korea as a way of motivating them invest early in health and social networks during early years of life.

**3. The AAI as a monitoring tool of active ageing in old age**

**3.1 What is the AAI?**

The AAI is an integrated, composite index for measuring the contribution of older people to the society, to their communities and their families. It also captures human capacity and enabling environment for active ageing (Zaidi et al., 2017). Active ageing as measured by the AAI can be considered a prerequisite of well-being and quality life of older people (Zaidi & Stanton, 2015). It derives its inspiration from WHO concept of active ageing (WHO, 2002), introduced at the second World Assembly on Ageing in 2002.

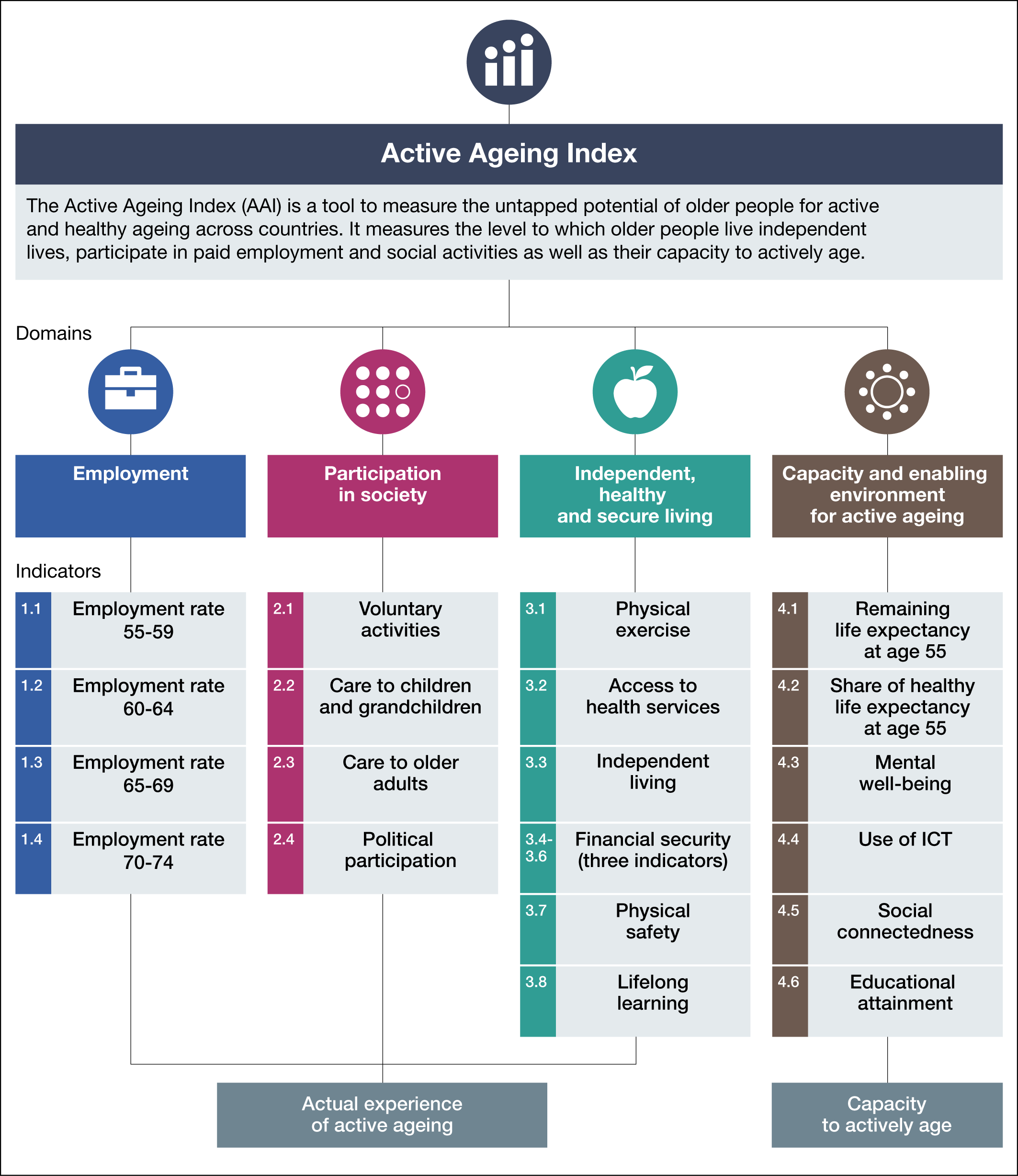
Although the active ageing concept has been widely used in policy, research, and practice, there remains a considerable lack of clarity regarding its interpretation (Clarke & Warren, 2007; Ranzijn, 2010). This is because there is a lack of agreement on what forms active ageing, and it can often be used to mean healthy and productive ageing (Ranzijn, 2010). Rowe and Kahn (1998), in terming the phenomenon as ‘successful aging’, gave high value to the absence of disability and high degree of social engagement. The concept of active ageing is also used interchangeably with healthy ageing or ageing well, especially when a more comprehensive definition of health is adopted.

The WHO’s multidimensional notion of active ageing includes broad aspects of active ageing such as behavioural, personal, physical, social, health and social service, and economic factors. Another distinctive aspect of active ageing is proposed by Fernàndez-Ballesteros and colleagues (2013) based on the psychological background. They define active ageing as a low probability of sickness and disability, high cognitive and physical functioning, positive mood and coping with stress, and controlling and engaging day-to-day life. The AAI focuses on the active ageing concept that was developed based on the work programme of the 2012 European Year of Active Ageing and Solidarity between Generations (Council of European Union, 2012). In the current paper, we follow the same multidimensional concept of active ageing as defined in the context of the AAI project:

“the situation where people are able to live healthy, independent and secure lives as they age and thus continue to participate in the formal labour market as well as engage in other unpaid productive activities (such as volunteering and care provision to family members)” (Zaidi et al. 2013, p. 6).

This definition operationalises the active ageing in four domains (see Figure 1), as used in the latest version of the EU AAI (Zaidi & Stanton, 2015). As in the AAI project, our focus is not to divulge at length on the conceptualisation of active ageing in Korea, rather we focus on the empirical measurement of active ageing through the AAI method adopted for the European countries. Active ageing in our index means staying in labour market longer, contributing to our society by participating in the community and family activities (e.g. as volunteers or passing skills or knowledge to younger people, and care giving to children or older persons), living independently, and promoting individuals’ capacity and enabling environment for active ageing as long as possible.

**Figure 1 Domains and indicators of the Active Ageing Index**



Source: Zaidi and Stanton (2015), p13.

**4. Research Methods**

Although the availability of data for the AAI indicators is reasonably good for Korea, in some cases it is not entirely comparable with the harmonised EU data due to the definitions and methods used in different surveys across countries. Nonetheless, with some adjustments and compromise, the degree of which depends on the data availability in Korea, we computed the indicators for all four AAI domains so that the Korean indicators can capture the same phenomenon as much as possible with the indicators used for the European countries. In calculating the AAI for China, we have followed the same approach that we used in our recent report on ‘Comparative Study on Active Ageing: Experiences of EU Members of States for Policy Development in China' (Zaidi, Um, Xiong, & Parry, 2018).

In Korea, there are three nationally representative longitudinal studies relevant for the AAI data on older population:

1. Korea Longitudinal Study of Ageing (KLoSA);
2. Korean Retirement and Income Study (KReIS); and
3. Survey of Living Conditions and Welfare Needs of Older Koreans (SLWKO).

The KLoSA, currently consists of six waves between 2006 and 2016. The lower limit for the age of panel respondents (i.e. people followed over time) is 45 years old, excluding those individuals in long-term care institutions and residents of the Che-Ju Island (Angrisani & Lee, 2011).

The Korean Retirement and Income Study (KReIS) is a nationally representative longitudinal survey of households with at least one family member aged 50 years or above. The survey first collected data from 2005 and is a biennial longitudinal study with a primary focus on tracking the retirement status and income security of those middle-aged adults and older people in Korea.

The Survey of Living Conditions and Welfare Needs of Older Koreans has been conducted by the Korean Institute for Health and Social Affairs and the Ministry of Health and Welfare since 2008. The survey is nationally representative, and the data were collected from adults aged 65 years or above, excluding those in residential care homes.

Annex A1 explains all of the definitions of the indicators used in the AAI in 28 European countries (Zaidi et al., 2017) and the definition and data sources that we chose for the AAI in Korea. To construct the 22 indicators, we extract data mostly from the three surveys and from statistical reports from both national (Korean Statistical Information Service) and international organisations (WHO, UN, and OECD). All indicators used here have 2014 as the reference year (except for ‘Remaining Life Expectancy at Age 60’ (2012), ‘Use of ICT’ and ‘Independent Living’, which is for 2015).

**5. Key findings of the AAI in Korea**

The replicability of the AAI for Korea needs careful consideration, as the survey methods and definitions used vary from those used in the European countries. Nonetheless, as shown in Annex A1, it is feasible to derive indicators from existing datasets in Korea which are comparable with the 28 EU AAI work. In this section, we discuss how the AAI can be calculated for Korea and present key findings from the AAI analysis, with a comparison to our recent study on AAI in China (Zaidi et al., 2018) {Zaidi, 2018 #389}{Zaidi, 2018 #389}and the average of 28 EU countries from the latest results (Zaidi and Stanton 2015). Using China as a comparator will help shed further light as China shares common cultural background with Korea.

The calculation of AAI for Korea applies the same explicit weights for an individual indicators and domains as used in the 28 EU AAI analysis. Box 1 explains how to interpret the AAI results and more information on the weighting methods can be found in the methodology report of the AAI (Zaidi et al. 2013).

|  |
| --- |
| **Box 1: How to interpret the Active Ageing Index?** |
| The AAI score shows measures the contribution of older people, and the extent to which older people are enabled to participate in the economy and society and to live independently. It is constructed in such a way that scores can range from 0 to 100. The intention was to ensure that any conceivable community, from the least to the highest developed, can fit into this range, but it also implies that the actual AAI will never get close to the minimum or maximum values. For target setting, such a theoretical maximum of 100 is of little practical value. Hence, other more realistic benchmarks are needed, showing what potentials could be realistically mobilised over a reasonable time horizon.  Every country can make further progress, even those that currently have the highest AAI scores. This can be demonstrated using the AAI value calculated for a fictitious country which features all the maximum observed values for each indicator, across countries and for men or for women, whichever gender does best, over the respective time. Other possibilities for benchmarking are to either undertake pairwise comparison by looking at another reference country or to look at the gender gap within a country and try to close it.  The AAI value for the fictitious country achieving the best observed score for each indicator is a realistic goalpost of the AAI for the longer term. The domain-specific scores and the overall AAI calculated using these maximum observed indicators’ value are referred to as the ‘AAI goalpost’ in this report. The estimated goalpost for the overall AAI in EU countries is 56.4. |

Source: Zaidi and Stanton (2015), pp.6

In the overall AAI, Korea is slightly higher than the average of 28 EU countries (33.9) (see Table 2), with an overall index value of 35.3 but slightly lower than 37.3 for China. Fitting Korea and China into the overall ranking with the 28 EU countries, Korea is ranked 11, in the upper-middle cluster of countries, just behind Luxembourg (9th) and Germany (10th) and China would be 7th out of 30 countries.

The gender division of the AAI for Korea provides some interesting insights, as this could be an important aspect in bringing about social progress (Bennett & Zaidi, 2016). The overall indices for males and females in Korea are 40.9 and 30.9, respectively. This would put Korean males in 6th position, alongside United Kingdom (5th) and the Ireland (7th) while Chinese male would rank 4th. In contrast, Korean females are positioned at 19th (alongside Spain (18th) and Lithuania (20th)) while Chinese female would rank 9th. This large gender difference may occur due to Korean males’ higher rate in the employment domain (overall employment index is 61.2%) than females (overall employment index is 32.2%). Such gender difference was also found in some EU countries, especially in the Southern European countries, with traditionally more patriarchal societal setting (Zaidi et al., 2017).

In terms of the contribution to the overall AAI in Korea, the first domain ‘Employment’ has a high contribution (45%), followed by the fourth domain (‘Capacity and enabling environment for active and healthy ageing’ (34%)), the third domain (‘Independent, healthy and secure living’ (17%)), and the second domain (‘Participation in society’ (4%)), respectively (see Figure 2). Korea shows very low contribution from social participation compared to China and 28 EU average while there is very high contribution from employment.

**Figure 2 Comparison in contribution to total AAI value in Korea, China and 28 EU average (overall, male, and female together)**

**5.1 Employment domain**

The employment domain, which measures the engagement of older people in the labour market, demonstrates the top performance both overall and for males in Korea compared to China and the average of 28 EU countries. An explanation for the high employment rate is touted as a relatively immature state of public pension system in Korea and a high rate of self-employment among workers with lesser chances to build a decent retirement pension income in comparison to full-time employees. According to the Additional Economically Active Population Survey for Older Workers in 2018, nearly 60% of older people aged 55-79 in Korea say that they work primarily to earn money for living. As expected, the labour participation rate decreases with age from 64.7% for the age group 55–59 years to 25.5% for the oldest group (70–74 years) and the same patterns were found in both China and the EU average. The contribution to the total employment AAI value from the youngest male group (aged 55–59 years) with 64.7% is the largest and similar to the EU average (62.2%), but slightly higher than China (56.7%).

**5.2 Participation in society domain**

Overall, older people in Korea show very low social participation rate and feature at the bottom of the ranking when comparing overall, male and female scores with the EU average scores and China. Korean older persons’ voluntary activities (with 8.1%) are similar to the average of EU countries (8.6%), but the other remaining three indicators were very low with 0.3% in political participation, 5% providing care to children or grandchildren, and 2.2% providing care to adults. Childcare service provision and long-term care for older people are nearly universal in Korea, which may explain why there are a very low proportion of older people reporting care for grandchildren or older adults. This may also be caused by data limitation, i.e. the KLoSA permits information only on care to grandchildren aged 10 years or below. This is due to children aged 10 and over participates in after school programmes or private lessons. China shows slightly higher voluntary participation rates (9.6%) than Korea and the average of EU countries, but there is no data on political participation. Providing care to children or grandchildren is very high in China, with 32.9% that is similar to the EU average. Older people in Europe, on average, are much more likely to participate in political activities in society. In addition, the higher economic security of middle-aged and older people may allow them to spend much more time on care for grandchildren, which may not be possible for many older people in Korea who are obliged to work for a living. In addition, another reason for low involvement in providing care to children or adults, according to the SLWKO (2017), is because more than 70% of older Koreans live separately from their adult children.

**5.3 Independent, healthy and secure living domain**

The third domain, which contains many indicators, measures the condition for independent, healthy and secure living in old age. Like the second domain, Korea is ranked among the lowest (28th) in this domain while China is ranked (29th) slightly lower than Korea. The first three indicators — ‘physical exercise’, ‘unmet medical treatment’, and ‘independent living’ — represent a relatively higher score compared to other indicators in this domain. Around 32.1% of the Korean elderly (37% males and 28.4% females) take part in physical exercise regularly. These numbers are much higher than the average of EU countries (16% males and 15.2% females), but less than China (41.5% males and 53.4% females). There is very low unmet medical need in Korea compared to the EU average and China. As many as 75.6% of older people aged 75 or above live independently in Korea. This is slightly lower than the EU average (84.2%) but much higher than China (45.4%). Older people in Korea share Confucian values and this social-cultural tradition tends to prefer living with their children. Therefore, older Koreans may not necessarily consider living independently of their sons and daughters as a positive phenomenon. However, as mentioned above, the trend is towards the diminution of co-residence with children over the last three decades.

The financial well-being (three financial-security-related indicators) of older people in Korea is the worst condition compared with their Chinese and European counterparts. The relative median income accounted for 47.4 (49.4 males and 44.9 females) and no poverty risk accounted for only 52.6% (62.2% males and 30.6% females), and material deprivation accounted for 62.8% (73.9% males and 47.6% females). The score of relative median income and no poverty risk is lower than both China (87.1 relative median income and 71.1% no poverty risk) and the EU average (86.3 relative median income and 93.0% no poverty risk). The history of the government introducing public pensions is short in Korea, so the scale of the pension payment expenses is still insignificant. Thus, many older people continue to work as long as they physically can (Korea has one of the highest rates of economically active people over the age of 65), but this does not necessarily prevent them from falling into poverty (International Labour Organization, 2014).

Finally, no material deprivation was reported at 62.8% (73.9% males and 47.6% females) compared to 71.1% reported in China and 90.0% in the EU average. These figures are very much in line with other poverty studies (Jones & Urasawa, 2014; OECD, 2017), as the gap in household income and the rate of poverty between elderly people and non-elderly people is gradually widening in Korea (Seok, 2010; Statistics Korea, 2017). In 2017 (OECD, 2018b), around 45% of the population of persons aged 65 years or above in Korea lived in relative poverty. This was the highest proportion among OECD countries and nearly four times higher than the OECD average.

The public safety is measured by the percentage of older people who feel safe walking alone at dark night. Overall, Korean older people felt safer with 71.2% reporting no problem walking at night than 69.3% of the average of 28 EU countries. The last indicator, ‘lifelong learning’, was reported to be 5.5% (5.7% males and 5.4% females), which is a lot higher than China (0.5%), but it is similar to the average of the 28 EU countries (4.5%).

**5.4 Capacity and enabling environment for active and healthy ageing domain**

The first two indicators of this domain relates to the remaining life expectancy at age 60. We derived this information from various WHO international databases. The remaining life expectancy at age 60 scored 53.3% (46.7% males and 60% females) in Korea. Older men scored worse than women, which is the case in many countries in Europe. The share of healthy life years in the RLE at age 60 is 80.8% (82.4% males and 78.1% females). In general, both these indicators show that older women in Korea outlive their counterpart but not necessarily healthier. Interestingly, the remaining life expectancy of people aged 60 or above is higher than China (42.2) and almost same as the EU average (53.8%), the share of remaining healthy life expectancy is slightly lower than China (82.1%) but much higher than the EU average (53.2%).

Korean older people scored slightly lower (50.7%) in relation to their mental well-being status (51.9% males and 49.8% females) than the average (63.9%) of the 28 EU countries (67.6% males and 60.9% females) and China with 75.1% (80.5% males and 68% females). In contrast, as expected in a strong information technology country, the use of ICT by older people (64.3%) in Korea is much higher than their EU counterparts (average is only 38.3%) and China (3.9%). The low figure for China is in line with the result found in the 2015 report by the China Internet Network Information Center.

The ‘social connectedness’ indicator is measured by how often older people have interacted with friends, relatives and family in the last month. Nearly 60% of older people in Korea report having regular contact with others and women tend to score better than men, in Korea as well in many European countries and China. The last indicator of ‘educational attainment’ reveals that Korean older men have a similar score (58.1%) compared to the average score of European older men (63.5%) and nearly two times higher than China (25.5%). However, the overall score and older women’s score are much lower in Korea (43% and 31.1%, respectively) than the EU average (58.6% and 54.1%), but higher than China (21.6% and 17.9%). As may be expected, the cohort of the current study comprises older people, many of whom have no formal education or low educational qualifications. This is particularly the case for female elderly persons (aged 65 years or above) in Korea, who are from a generation whose main role was housekeeping and caring for children or elders (Yang & Klassen, 2010).

Table 2 AAI index and domain-specific indictor scores of Korea, China, and the average of EU countries

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Korea** | | | **China** | | | **The EU Average** | | |
|  |  | Both | M | F | Both | M | F | Both | M | F |
| **AAI** | **Overall index** | 35.3 | 40.8 | 30.7 | 37.3 | 40.9 | 33.8 | 33.9 | 35.8 | 32.1 |
| **Rank in 28 EU + China** | 11 | 6 | 19 | 7 | 5 | 9 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| **D**  **O**  **M**  **A**  **I**  **N**  **1st** | **1.1** Employment rate 55-59 | 64.7 | 86.5 | 48.0 | 56.7 | 73.0 | 40.8 | 62.2 | 69.3 | 55.3 |
| **1.2** Employment rate 60-64 | 51.9 | 71.2 | 44.7 | 44.7 | 53.3 | 36.9 | 31.6 | 38.6 | 25.1 |
| **1.3** Employment rate 65-69 | 38.6 | 50.7 | 27.3 | 35.4 | 40.5 | 30.4 | 11.6 | 15.1 | 8.5 |
| **1.4** Employment rate 70-74 | 25.5 | 36.4 | 17.4 | 26.0 | 34.2 | 18.8 | 6.1 | 8.2 | 4.3 |
| **Index** | 45.2 | 61.2 | 32.2 | 40.7 | 50.2 | 31.7 | 27.9 | 32.8 | 23.3 |
| **Rank in 28 EU + China** | 1 | 1 | 4 | 3 | 2 | 5 |  |  |  |
|  |  | Both | M | F | Both | M | F | Both | M | F |
| **D**  **O**  **M**  **A**  **I**  **N**  **2nd** | **2.1** Voluntary activities | 8.1 | 6.2 | 10.5 | 9.6 | 9.0 | 10.5 | 8.9 | 9.6 | 8.4 |
| **2.2** Care to children | 5.0 | 1.8 | 7.1 | 32.9 | 30.3 | 35.4 | 32.5 | 30.6 | 33.9 |
| **2.3** Care to older adults | 2.2 | 2.4 | 2.1 | 13.4 | 15.7 | 11.2 | 12.9 | 11.8 | 13.7 |
| **2.4** Political participation | 0.3 | 0.4 | 0.1 | - | - | - | 17.2 | 20.5 | 14.6 |
| **Index** | 4.0 | 2.8 | 5.1 | 18.3 | 18.2 | 18.5 | 17.7 | 17.7 | 17.6 |
| **Rank in 28 EU + China** | 30 | 30 | 30 | 13 | 14 | 10 |  |  |  |
|  |  | Both | M | F | Both | M | F | Both | M | F |
| **D**  **O**  **M**  **A**  **I**  **N**  **3rd** | **3.1** Physical exercise | 32.1 | 37.0 | 28.4 | 46.8 | 41.5 | 53.4 | 15.6 | 16.0 | 15.2 |
| **3.2** No unmet needs of health and dental care | 94.1 | 94.7 | 93.6 | 68.5 | 72.1 | 64.7 | 88.2 | 88.6 | 87.8 |
| **3.3** Independent living | 70.4 | 78.3 | 65.6 | 45.4 | 52.4 | 38.6 | 84.2 | 84.2 | 84.2 |
| **3.4** Relative median income | 47.4 | 49.4 | 44.9 | 87.1 | 87.8 | 85.9 | 86.3 | 89.8 | 83.7 |
| **3.5** No poverty risk | 52.6 | 62.2 | 30.6 | 71.1 | 71.5 | 70.6 | 93.0 | 94.6 | 92.0 |
| **3.6** No material deprivation | 62.8 | 73.9 | 47.6 | 71.1 | 74.1 | 68.4 | 90.0 | 91.7 | 88.9 |
| **3.7** Physical safety | 71.2 | 81.4 | 64.5 | 91.9 | 92.5 | 91.4 | 69.3 | 78.0 | 61.8 |
| **3.8** Lifelong learning | 5.5 | 5.7 | 5.4 | 0.5 | 0.5 | 0.5 | 4.5 | 3.4 | 5.5 |
| **Index** | 60.1 | 65.6 | 54.0 | 59.6 | 61.7 | 57.7 | 70.6 | 72.1 | 69.3 |
| **Rank in 28 EU + China** | 28 | 27 | 30 | 29 | 29 | 28 |  |  |  |
|  |  | Both | M | F | Both | M | F | Both | M | F |
| **D**  **O**  **M**  **A**  **I**  **N**  **4th** | **4.1** RLE achievement | 53.3 | 46.7 | 60.0 | 42.2 | 40.0 | 46.7 | 53.8 | 48.8 | 58.1 |
| **4.2** Share of healthy life | 80.8 | 82.4 | 78.1 | 82.1 | 83.3 | 78.1 | 53.2 | 57.1 | 50.1 |
| **4.3** Mental well-being | 50.7 | 51.9 | 49.8 | 75.1 | 80.5 | 68.0 | 64.6 | 68.2 | 61.6 |
| **4.4** Use of ICT | 64.3 | 69.2 | 61.7 | 3.9 | 3.8 | 4.0 | 40.8 | 44.8 | 37.1 |
| **4.5** Social connectedness | 59.5 | 54.9 | 62.9 | 43.3 | 43.8 | 42.8 | 49.0 | 48.0 | 50.0 |
| **4.6** Education | 43.0 | 58.1 | 31.1 | 21.6 | 25.5 | 17.9 | 59.7 | 64.9 | 55.1 |
| **Index** | 60.2 | 59.3 | 61.1 | 53.2 | 54.0 | 52.3 | 54.4 | 54.7 | 54.2 |
| **Rank in 28 EU + China** | 8 | 8 | 5 | 17 | 17 | 16 |  |  |  |

Note: *M = male, F = Female*

**6. Synthesising discussion**

Many countries have recognised the need for public policy to improve the well-being and quality of life amongst its older population. In the past, retirement was often seen as a “crisis” with a negative impact on one’s quality of life (van Solinge & Henkens, 2008). However, thanks to rising longevity and better health in old age, it is now seen more as an increasingly active phase of life where older people continue to contribute to their society. This requires public policy responses to focus on providing opportunities along with an enabling environment for active forms of ageing in their later life. There is very little research existing on active ageing in Korea compared to Western countries, despite the fact that the country is facing one of the most rapidly ageing population.

This paper constructs the Active Ageing Index for Korea, following the methodology used for the AAI for the 28 EU countries (cf. Zaidi et al. 2013; Zaidi and Stanton 2015). Although we have replicated the EU AAI with as much diligence as possible, some indicators are not exactly the same as in the EU AAI and China due to data availability and varying methods used in the surveys across these countries. Considering potential differences in definitions used in the AAI methodology, cautions are necessary in interpreting differences between Korea and other countries. The methods used for constructing the AAI indicators will affect the comparative position we found in our results.

The AAI results in Korea show that the employment domain performs extremely well compared with the 28 EU countries and China, but other domains, especially ‘Social participation’ and ‘Independent, healthy and secure living’ are achieving less favourable outcomes in Korea. An explanation for high employment participation rate is that older persons work longer due to a relatively immature state pension system and a high rate of self-employment among workers, who are less able to build a decent retirement pension income in comparison to full-time employees (Yang & Klassen, 2010). This situation in Korean labour market offers a different perspective compared to the European countries, where employment in the later phase of life can be interpreted as somewhat independent and healthy way of ageing. In Korea, on the other hand, majority of the current cohorts of older adults are 'constrained' to participate in the labour market because of the insufficiency of pension income. This phenomenon in the Korean context nonetheless gives us a sense of how active and engaged older Korean workers are but it is doubtful whether this can be considered as 'healthy' way of ageing in the absence of adequate levels of pensions and age-friendly work environment.

The labour market system requires reforms, in particular to provide legislations to remove ageism in the hiring and retention decisions of employers. The wage system needs to shift away from seniority wages to competence-based wages. The mandatory retirement age needs to rise up to 65 with pension bonus/ malus system strengthened. Rigorous research is necessary on studying relationship between age and productivity to highlight the importance of contributions of older workers to the society in general and to employers.

Older persons in Korea show similar participation rate in voluntary activities compared to the EU average but low in political activities. Korean older persons also report lower involvement in providing care to their grandchildren or adult family members compared with the same phenomenon in many countries in the EU. This may be because childcare service provision and long-term care for older people is nearly universal in Korea and many older persons are obliged to work for a living due to immature state pension. One possible way to improve social participation rate among older people is to improve older person’s image within the Korean society and change the mindset that the end of one’s career life can also be a time of empowerment. There should be a policy support to encourage older people to remain connected to the society and contribute to their communities and families. Another way to improve social participation rate is to provide living allowance for older people with low income who do not receive public funds but can actively engage in volunteer activities such as helping polices, assisting cultural and sporting events, and guiding tourist sites or cultural facilities. Introducing a special law that allows older people to set up social contributory foundations with minimum requirements can also lead them to participate more in social movements (this recommendation is along the lines of the special law on Non-Profit Organisation in Japan).

The life expectancy at age 60 and years in good health is continuously increasing in Korea. In contrast, mental well-being status of older persons is lower than what is observed on average for the EU countries and for China. This is in line with many recent research reports showing that Korea has one of the highest elderly suicide rates among the OECD countries and one of the main causes of suicidal death is the depression and social isolation in old age (Lee, Yang, & Lyu, 2017). There is an urgent need for social policies promoting enabling environment for the older population, with special attention to their mental well-being. The financial well-being of older persons in Korea is the worst compared with their Chinese and European counterparts. The poverty risk and material deprivation in old age is very high and the relative median income for older persons is very low. It shows an existence of vast income inequality in the country and how much the current welfare system requires reforms in supporting the low-income groups in their old age.

To address poverty among the older population in Korea, the government should improve the Basic Old-Age Pension for the low-income group and strengthen the quality of employment for older workers close to the state pension age. The Korean pension system needs to improve by, say, integrating basic pension, national pension (contributory-pension), and national basic livelihood assistance (income-tested public assistance) into a two layer-system of pensions consisted of basic pension and income-related contributory pension. The amount of basic pension (non-contributory pension) needs to increase for the elders aged 65 and over with guarantees of pension income above the poverty line, especially for those whose income are lower than upper 30% of incomes of all elders. In addition, the replacement rate of the suggested state pension (the two-layer-public pension integrated into one system) needs to be increased to at least 50% or more (nb. the OECD average is 65%). To make the system sustainable, it is important to consider raising contribution rate (insurance premium) of the National Pension Insurance. Compared to other public pensions (government employees, soldiers, and employees of private schools) average pension amount of the National Pension, which covers more than 90% of Korean workers is less than 1/4th of that of the other public pensions. The contributors of other pension schemes pay almost double the level of contribution of the national pension.

The AAI Korea confirms the feasibility of constructing the AAI in non-European countries and its usefulness to understand and monitor progress of active ageing in the country. Our analysis suggests that the effective welfare system for older people must incorporate the principles for active ageing in responding to the rapidly changing ageing society in Korea, and to improve quality of life in old age and the meet the aspiration of new generation of older persons.

We recommend that a further study should focus on developing the AAI indicators that are adapted to the Korean context. It must consider the cultural characteristics of Korean older population with a focus on social determinants of active ageing. For example, there is a cultural value attached to extended families and living together in multigenerational households. In addition, receiving financial support from adult children is more common in Korea compared to Western countries. Thus, policymakers should respect and promote positive traditions and cultural activities and remove stereotypes from outdated cultures. It is therefore important that the AAI for Korea should incorporate additional components that may improve the utility of the AAI so that it can be used for evaluating the social policy outcomes for active ageing experiences of older people. In addition, it is also important that the AAI continues to improve and explore the possibility to become a global instrument with a consensual set of domains and indicators of healthy and active ageing.

**References**

Angrisani, M., & Lee, J. (2011). *Harmonization of Cross-National Studies of Aging to the Health and Retirement Study*. Working paper. Labor and Population. RAND.

Bennett, R., & Zaidi, A. (2016). Ageing and development: Putting gender back on the agenda. *International Journal on Ageing in Developing Countries, 1*(1), 5-19.

Choi, S. (2015). Active ageing in South Korea. In A. Walker & C. Aspalter (Eds.), *Active Ageing in Asia*. London: Routledge.

Clarke, A., & Warren, L. (2007). Hopes, fears and expectations about the future: what do older people's stories tell us about active ageing? *Ageing & Society, 27*(4), 465-488.

Council of the European Union (2012), ‘Council Declaration on the European Year for Active Ageing and Solidarity between Generations (2012): The Way Forward’, 17468/12, SOC 992, SAN 322. Available at: <http://europa.eu/ey2012/BlobServlet?docId=9231&langId=en>

Fernández-Ballesteros, R., Caprara, G., Schettini, R., Bustillos, A., Mendoza-Núñez, V., Orosa, R., & Zamarrón, M. D. (2013). Effects of University Programs for Older Adults. Changes in cultural and group stereotypes, self-perception of aging, and emotional balance. . *Educational Gerontology, 39*, 119-131.

HelpAge International. (2015). *Global AgeWatch Index 2015 Insight report*. London

International Labour Organization. (2014). *Social protection for older persons: Key policy trends and statistics*.

Jones, R. S., & Urasawa, S. (2014). *Reducing the High Rate of Poverty Among the Elderly in Korea* (No. 1163), OECD Publishing, Paris.

KOSIS. (2018). Vital Statistics of Korea. Retrieved 30.08.2018, from Korean Statistical Information Service <http://kosis.kr/eng/>

Lee, J., Yang, J., & Lyu, L. (2017). Suicide Among the Elderly in Korea: A meta-analysis. *Innovation in Aging, 1*(1). doi:<https://doi.org/10.1093/geroni/igx004.1507>

OECD. (2017). *How's Life? 2017: Measuring Well-being*. Retrieved from Paris:

OECD. (2018a). *OECD Health Statistics 2018*. Retrieved from <http://www.oecd.org/els/health-systems/health-data.htm>

OECD. (2018b). *Poverty rate (Indicator)*. OECD Publishing

Population Reference Bureau. (2018). 2018 World Population Data. Retrieved 30.08.2018, from Population Reference Bureau <http://www.worldpopdata.org/>

Qureshi, H., & Walker, A. (1989). *The Caring Relationship: Elderly People and Their Families*. London: Macmillan.

Ranzijn, R. (2010). Active ageing – another way to oppress marginalized and disadvantaged elders? Aboriginal elders as a case study. *Journal of Health Psychology, 15*(5), 716-723.

Rowe, J. W., & Kahn, R. L. (1998). *Successful aging*. New York: Pantheon.

Seok, S. (2010). Poverty Transition and Income Change of Low Income Households in Korea. *Korean social security studies, 26*(3), 25-47.

Statistics Korea. (2017). *2017 Statistics on the Aged*. Republic of Korea

United Nations. (2017). *World Population Ageing 2017*. United Nations, New York

van Solinge, H., & Henkens, K. (2008). Adjustment to and satisfaction with retirement: Two of a kind? *Psychology and Aging, 23*, 422-434.

Walker, A., & Zaidi, A. (2016). New Evidence on Active Ageing in Europe. *Intereconomics, 51*(3), 139-144. doi:10.1007/s10272-016-0592-0

Walker, A., & Zaidi, A. (2017). 'A New Approach to Ageing in Europe: Making Longevity an Asset’,*MOPACT Policy Brief 10*. University of Sheffield, MOPACT

Walker, A., & Zaidi, A. (2019). Strategies of Active Ageing in Europe. In A. Walker (Ed.), *The Future of Ageing in Europe*. Singapore: Palgrave Macmillan.

WHO. (2002). *Active Ageing - A Policy Framework, A contribution of the WHO to the 2nd UN World Assembly on Ageing*. Retrieved from Madrid, Spain: <http://www.who.int/ageing/publications/active_ageing/en/>

Yang, J., & Klassen, R. T. (2010). *Retirement, Work and Pensions in Ageing Korea* (J. Yang & R. T. Klssen Eds.). Oxon: Routledge.

Zaidi, A., Gasior, K., Hofmarcher, M. M., Lelkes, O., Marin, B., Rodrigues, R., . . . Zolyomi, E. (2013). *Active ageing index 2012 concept, methodology and final results*. Methodology Report, UNECE /European Centre Vienna/ European Commission, March 2013.: [www.euro.centre.org/data/aai/1253897823\_70974.pdf](file:///C:\Users\JU\Downloads\www.euro.centre.org\data\aai\1253897823_70974.pdf)

Zaidi, A., Gasior, K., Zolyomi, E., Shmidt, A., Rodrigues, R., & Marin, B. (2017). Measuring active and healthy ageing in Europe. *Journal of European Social Policy, 27*(2), 138-157.

Zaidi, A., Parry, J., & Um, J. (2018). *DEVELOPING A TOOLKIT TO MONITOR IMPLEMENTATION OF THE MADRID INTERNATIONAL PLAN OF ACTION ON AGEING IN THE CONTEXT OF THE ASIA-PACIFIC REGION*. Retrieved from Bangkok: <https://www.unescap.org/sites/default/files/SDWP%202018-02_Asghar%20Zaidi.pdf?fbclid=IwAR3wBJPcOKcQqTMsnlib2H7VLecA6etcEqcSPMqJKUDWw9XaRsj83Yp20qo>

Zaidi, A., & Stanton, D. (2015). *Active Ageing Index 2014: Analytical Report*. Report prepared by the Centre for Research on Ageing, University of Southampton, under contract with United Nations Economic Commission for Europe (Geneva), co-funded by European Commission’s DG for Employment, Social Affairs and Inclusion (Brussels).

Zaidi, A., Um, J., Xiong, Q., & Parry, J. (2018). *Comparative Study on Active Ageing: Experiences of EU Member States for Policy Developments in China*. Forthcoming report of EU-China Social Protection Reform Project, Beijing.

**Annex A1: Data availability Information and definition on AAI indicators for the four domain**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Survey title** | | | **European AAI**  **Definition** |  | **Remarks**  **/ Sources** |
| KLoSA | KReIS | SLWKO |  |
| **Year** | 2014 | 2015 | 2014 | **Korean AAI Definition** |
| **Age** | 45 + | 50+ | 65+ |  |
| **Sample** | 7,029 | 5,254 | 10,451 |  |
| ***1. Employment*** | | | | | | |  |  |  |  |
| Age 55-59 | O | O | X | Employed persons are those:  - who works during the reference week, even for just one hour  - who were not at work but had a job or business (including absent because of, e.g., illness, holidays). | Employment means being engaged in any paid job, running own business or working for family or relative’s business (unpaid) for at least one hour last week | All datasets include the question relating to the job types, work hour, full-time / part-time.  Used KLoSA data |
| Age 60-64 | O | O | X |
| Age 65-69 | O | O | O |
| Age 70-74 | O | O | O |
| ***2. Social Participation and relationships*** | | | | | | |
| Voluntary activities  (Age 55+) | O | O | O  (Age 65+) | % of older population aged 55+ providing voluntary activity (at least once a week) | % of older population aged 60+ providing unpaid community and voluntary service activities (via organisations or individually)  % of older people aged 55+ participating in political activities (political parties, interest groups) | For voluntary activities, used the survey by Ministry of Culture, Sports and Tourism  For political activities, it used the KLoSA data |
| Political activities  (Age 55+) | O | O | O  (Age 65+) | % of older population aged 55+ taking part in the activities of meeting of trade union, a political party or political action group |
| Care to children / grandchild  (Age 55+) | O | O | O  (Age 65+) | % of older population aged 55+ providing care to their children, grandchildren (at least once a week) | % of older population aged 55+ providing care to their children, grandchildren (at least one hour per week) | Used KLoSA data |
| Care to adults (Age 55+) | O | O | O  (Age 65+) | % of older population aged 55+ providing care to elderly or disabled relatives (at least once a week) | % of older population aged 55+ providing care to their parents or parents-in-law / relatives (at least one hour per week) | Used KLoSA data |
| ***3. Independent, healthy and secure living*** | | | | | | |
| Physical exercise | O | X | O  (65+) | % of people aged 55 years and older undertaking physical exercise or sport almost every day. | Percentage of people aged 55 years and older undertaking physical exercise per week. | EU question asks about daily exercise but, the Korean data asks about average hours per week  Used KLoSA data |
| Access to health and dental care | O | X | O  (65+) | % of people aged 55 years and older who report no unmet need for medical and dental examination or treatment during the 12 months preceding the survey. | Percentage of people aged 55 years and older who report no national health insurance or the medical aid programme during the last two years. | In Korea, there are two types of health care programmes; National Health insurance and Medical Aid Programme.  Used KLoSA data |
| Independent living: aged 75+ | O | O | O | % of people aged 75 years and older who live in a single person household or who live as a couple with no dependent children. | Percentage of people aged 75 years and older who live in a single person household or as a couple | KReIS data |
| Relative median income (aged 65+) | O | O | O | The relative median income ratio is defined as the ratio of the median equivalised disposable income of people aged 65 and above to the median equivalised disposable income of those aged below 65. | The relative median income ratio is defined as the ratio of the median equivalised disposable income of people aged 66 and above to the median equivalised disposable income of those aged 18-65. | KOSIS |
| No poverty risk for older people (aged 65+) | O | O | O | % of people aged 65 years and older who are not at risk of poverty (risk of poverty = those with an equivalised disposable income after social transfers below the at-risk-of-poverty threshold, 50% of the national median equivalised disposable income after social transfers). | % of people aged 66 years and older who are not at risk of poverty (risk of poverty = those with an equivalised disposable income after social transfers below the at-risk-of-poverty threshold, 50% of the national median equivalised disposable income after social transfers). | KOSIS |
| No severe material deprivation for older people (aged 65+) | O | O | O | % of people aged 65 years and older who are not severely materially deprived. Severe material deprivation refers to a state of economic and durable strain, defined as the enforced inability to afford at least four out of the below nine:  - To pay their rent, mortgage or utility bills;  - to keep their home adequately warm  - to face unexpected expenses;  - To eat meat or proteins regularly;  - To go on holiday;  - a television set;  - a washing machine;  - a car; or a telephone. | Percentage of people aged 65 years and older who are not severely materially deprived.  People aged 65+ who can spend money on at least for out of 9 material items every month. | No direct question on capacity to afford material items. We used the consumption variables in the KLoSA. |
| Feeling safe to walk after dark | X | X | X | % of people aged 55 years and older who are feeling very safe or safe to walk after dark in their local area. | % of people aged 55 years and older who are feeling very safe or safe to walk after dark in their local area. | Used data from the KOSIS 2014 Social Survey Report |
| Lifelong learning (aged 55-74) | O | O | O  (65+) | % of people aged 55 to 74 who stated that they received education or training in the four weeks preceding the survey. | % of people aged 55 to 74 who stated that they received education or training in the past one year and average hours per month. | Used KLoSA |
| ***4. Capacity and enabling environment for active and healthy ageing*** | | | | | | |
| Remaining life expectancy achievement | X | X | X | 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 | Using UN data, Remaining life expectancy at 60 divided by 45 | Website: http://data.un.org/Search.aspx?q=life+expectancy |
| Share of healthy life years in the remaining life expectancy | X | X | X | Healthy Life Years (HLY) measures the remaining number of years free of activity limitations caused by health problems. It combines information on quality and quantity of life. | Using WHO data, Remaining healthy life expectancy at 60 | Website: http://apps.who.int/gho/data/node.imr.WHOSIS\_000007?lang=en |
| Mental well-being | O | X | X | Mental well-being (using WHO-5 Index  Over the last two weeks:  Q1: I have felt cheerful and in good spirits  Q2: I have felt calm and relaxed  Q3: I have felt active and vigorous  Q4: I woke up feeling fresh and rested  Q5: My daily life has been filled with things that interest me  Response categories of each of these five survey questions are (scale):   1. All of the time = 5 2. Most of the time = 4 3. More than half of the time = 3 4. Less than half of the time = 2 5. Some of the time = 1 6. At no time = 0 | KLoSA can extract from CES-D questionnaires:  Q1: I was happy  Q2: I felt depressed  Q3: I felt everything I did was an effort  Q4: My sleep was restless  Q5: I enjoyed life  Response categories of each of these 5 questions are (scale):   1. Rarely or none of time (< 1day) = 1 2. Some or a little of the time (1-2 days) = 2 3. Occasionally or a moderate amount of time (3-4 days) = 3 4. Most or all of the time (5-7 days) = 4 | Scale is converted as follow:  Response code 1 (Rarely or none of time) represent the worst and the next three 2,3, and 4 respectively.  We can then calculate raw sum score of the five variables and score of 5 will represent the worst score and score of 20 will represent the best score. The score of 10 or above will represent good mental well-being  Used KLoSA data |
| Use of ICT | O | O | O  (65+) | Share of people aged 55-74 using the Internet at least once a week. | Share of people aged 55-74 using the Internet at least once a week. | Used OECD’s statistic report on use of OECD data (2019) |
| Social connectedness | O | O | O  (65+) | The indicator measures the share of people aged 55 or more that meet socially with friends, relatives or colleagues at least once a week. “Meet socially” implies meet by choice, rather than for reasons of either work or pure duty. | The indicator measures the share of people aged 55 or more that meet socially with friends, relatives or colleagues at least once a week. “Meet socially” implies meet by choice, rather than for reasons of either work or pure duty. | Used KLoSA data |
| Educational attainment | O | O | O  (65+) | Percentage of older persons aged 55-74 with upper secondary or tertiary educational attainment. | Percentage of older persons aged 55-74 with upper secondary or tertiary educational attainment. | Used KLoSA data |

Note: O = data available, X = non-available

1. According to HelpAge International (2015), there can be four types of societies based on the proportion of older people: Young Society: less than 10% of population aged 60 and over; Ageing Society: 10-19% of the total population aged 60 and over; High-Ageing Society: 20-29% of the total population aged 60 and over; and Hyper-Ageing Society: 30% or more of population aged 60 and over. [↑](#footnote-ref-2)