Project: 'Active Ageing Index (AAI)'

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Active Ageing Index 2012

Concept, Methodology and Final Results

By

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Acronyms

AAI	Active Ageing Index 2012
EC	European Commission
EU	European Union
Eurofound	European Foundation for the Improvement of Living and Working Conditions
EY2012	European Year for Active Ageing and Solidarity between Generations
HDI	Human Development Index
ISTAT	National Institute for Statistics, Italy
MIPAA	Madrid International Plan of Action on Ageing
OECD	Organisation for Economic Co-operation and Development
ONS	Office of National Statistics, the United Kingdom
RIS	UNECE Regional Implementation Strategy of MIPAA
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
WHO	World Health Organisation

Preface

The Active Ageing Index research project has aimed at providing a new tool for policy makers to enable them to devise evidence-informed strategies in dealing with the challenges of population ageing and its impacts on society. It is predicated on the insight that, in tackling issues associated with population ageing, the successful measures are those which enable and increase older people's participation in the labour market and in social and family activities. By these, and by additional means of access to healthcare, security and lifelong learning, it is commonly agreed that older people are empowered to live independent, healthy and secure lives. The tool that has emerged is called the Active Ageing Index 2012 ("AAI").

The AAI toolset consists of the overall index AAI, as well as gender and domain-specific indices and their constituting individual indicators. Thus, it allows policy makers to base their social policy interventions on the comparative and substantive, quantitative evidence of active ageing indicators and indices for EU Member States and so promote active and healthy ageing for its citizens. The multifaceted design of the active ageing policy discourse will allow setting of policy goals to maintain, even raise, prosperity and social cohesion and improve financial sustainability of public welfare systems.

The context of the AAI project has been that the year 2012 was the European Year for Active Ageing and Solidarity between Generations. It also marked the 10th anniversary of the 2nd World Assembly on Ageing, held in Madrid in April 2002, and the second 5-year cycle of review and appraisal of the implementation of MIPAA.[1] To mark these major occasions, and to contribute to their activities, the Population Unit of the UNECE, the EC's Directorate General for Employment, Social Affairs and Inclusion and the European Centre for Social Welfare Policy and Research have jointly undertaken the research project to construct the AAI and disseminate its findings.

In its design, the AAI draws from the definition offered by the WHO during the 2nd World Assembly on Ageing (2002), base itself on the strands of the EY2012, makes use of the methodology similar to the Human Development Index of the UNDP, connects with the MIPAA/RIS and promotes the activities of the EY2012. It enables credible comparisons between 27 EU countries by quantifying the differential extent to which older people have and can realise their potential in the distinct domains of their lives that determine their active ageing experiences: employment; social activity and participation; and independent, healthy and secure living. The AAI also offers the novelty of including an additional 4th domain that goes beyond the actual outcomes of active ageing and captures how EU countries differ with respect to the capacity and enabling environment for active ageing. In this pursuit, the AAI also offers the transversal breakdown by gender, so as to highlight the specific social policy goal of reducing gender disparity in positive experiences of ageing.

The work undertaken in the AAI project can be seen to fulfil a number of aspirations:

- To raise awareness of the contributions that older people make to society and also encourage dialogue on issues of policy on active and healthy ageing.

[1] More details about the EY2012 can be found at: http://europa.eu/ey2012; for information about MIPAA and RIS, see http://www.unece.org/pau/age/welcome.html

- To provide unique insights to national policy makers for the fact that such comparative perspective is often not possible from national studies alone.
- To help influence how existing large-scale comparative data-sets can be further developed to provide the evidence necessary in formulating social policies, especially in the policy discourse of active and healthy ageing.
- To connect with the process of monitoring progress in the implementation of MIPAA and RIS.
- The replication of the AAI in the future will help track progress over time and evaluate the outcomes of policy reforms.

To undertake this project in the most rigorous manner, the project partners had the services of the UNECE Expert Group on Active Ageing (the Expert Group), comprising distinguished international experts from UNECE, the EC, the OECD and academia as well as from Eurofound and EUROSTAT and the national statistical agencies of Italy and the UK (ISTAT and ONS respectively) and representatives of policymaking bodies of national governments (Belgium Federal Ministry of Social Security) and the civil society (AGE Platform Europe). The project team also undertook consultations with other experts and stakeholders, and made presentations in major fora to introduce the AAI project and its findings to a wider audience. Amongst the most notable of them are:

- The World Demographic and Ageing Forum, in St. Gallen (August 2012);
- The UNECE Ministerial Conference on Ageing, in Vienna (September 2012);
- The 11th Meeting of National Coordinators of the EY2012, in Brussels (September 2012);
- The Gulbenkian Foundation's International Conference 'Ageing and social innovation', in Lisbon (November 2012);
- The 5th Annual Meeting of the UNECE's Working Group on Ageing, in Geneva (November 2012); and
- The Closing Conference of the EY2012 under the Cyprus Presidency of the Council of the European Union, in Nicosia (December 2012).

The work reported in this paper includes the definition of active ageing used for the particular purpose of measurement of active ageing outcomes and capacities in EU countries (**Chapter 1**). The paper also includes a detailed description of the selection criteria for and requirements of active ageing indicators used in the AAI (**Chapter 2**). The methodology adopted is described next in constructing the gender and domain-specific active ageing indices for each of the 27 EU Member States (**Chapter 3**). The final set of results on the aggregated overall index (all domains together) and the gender and domain-specific indices for each of the 27 EU Member States are presented next (**Chapter 4**). A synthesizing discussion is provided at the end (**Chapter 5**).

This paper is a substantive revision of an earlier methodology paper '*Towards an Active Ageing Index: Concept, Methodology and First Results*', released in July 2012 (Zaidi et al. 2012). In addition to this revision, the final AAI results will also be made available in the form of an Excel Sheet for use and further extension. This flexible tool would therefore allow policy makers to set their own targets, adapted to the specific circumstances and policy challenges in their country.

Chapter 1: Conceptual considerations in measuring active ageing

1.1 Rationale

The context of demographic transition and the resulting phenomenon of population ageing are well known. Rising life expectancy has been observed in almost all European countries, so much so that mortality rates have continued to fall even at late old age in many countries. Emphasis has therefore moved to ensuring that the potential of older people is fully realised and many policy agendas now stress the need for active and healthy ageing in terms of active and healthy years added to life.

What has become clear is the need for a high-quality and independent evidence base to address how the experiences of ageing at the individual level can be combined with higher levels of activities, improved health and greater degree of activity and autonomy. The better the evidence, the easier it is to formulate policy responses and persuade the public about the need for and the benefits of a change. This Active Ageing Index project provides the quantitative evidence required for such policy reforms advocacy, and also to engage key stakeholders to influence formulation and implementation of policies and programmes that can improve the experiences of ageing, the impact towards raising the quality of life of older people and also improving the intertwined financial and social sustainability of public welfare systems in Europe.

Therefore, the core endeavour of the AAI project is to operationalize the multidimensional concept of active ageing. The purpose is to show that the rising longevity reality can become an asset for the societal progress, provided the European policy makers come up with appropriate policy responses in light of the evidence available to activate the potential of older people.

1.2 Policy context at the European level

1.2.1 Designation of 2012 as the European Year for Active Ageing and Solidarity between Generations

In September 2011, the European Union designated 2012 as the European Year for Active Ageing and Solidarity between Generations (Decision 940/2011/EU).[2] It is expected that the EY2012 would facilitate promotion of a culture of active ageing in the European communities based on the principles of society for all ages. Within this framework, the main goal of the EY2012 was 'to raise awareness of the value of active ageing, highlighting the useful contributions older people make to society and the economy, to identify and disseminate good practices, and to encourage policy makers and stakeholders at all levels to promote active ageing'.

At the close of 2012, the EU Social Affairs Ministers endorsed a Council declaration on the EY2012 and the Guiding Principles on Active Ageing and Solidarity Between

[2] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:246:0005:0010:EN:PDF

Generations (Council of the European Union, 2012). These principles reaffirmed that active ageing need to be promoted in the three domains of employment, participation in society and independent living. The principles will serve as a checklist for national policymaking authorities and other stakeholders on what needs to be done to promote active ageing linked to their own situations and challenges.

Furthermore, active ageing is also referred to in 'Europe 2020 – A Strategy for Smart, Sustainable and Inclusive Growth', which specifically highlights the importance of meeting "the challenge of promoting a healthy and active ageing population to allow for social cohesion and higher productivity" (European Commission 2010a: 18). The Innovation Union, which is a flagship initiative under the Europe 2020 strategy, announced European Innovation Partnerships (EIPs) in 2011, so as to mobilise key stakeholders in speeding up innovative solutions to societal challenges (European Commission 2011). This EIP concept is now tested with a pilot European Innovation Partnership on 'Active and Healthy Ageing' (AHA). The EIP-AHA sets out the objective to increase the average healthy lifespan of Europeans by 2 years by 2020 (European Commission 2012). The target is admittedly ambitious, but the measures introduced to attain it will enhance the capacity and enabling environment for active and healthy ageing across the EU Member States.

Active ageing as a policy discourse, based on making use of the potential of older people, is also aligned with the social investment approach, which revolves around the idea that activating certain forward looking social policies can yield high economic and social returns. The European Commission's Social Investment Package explicitly refers to the AAI as a tool to support the implementation of this social investment orientation in social policies (European Commission 2013).

1.2.2 The second 5-year Review and Appraisal of the Implementation of MIPAA / RIS

Although MIPAA does not contain an elaborated definition of active ageing, the Political Declaration signed at the end of the 2nd World Assembly on Ageing emphasizes the two essential elements directly relevant to active ageing policy discourse: the empowerment of older persons and the promotion of their full participation. Moreover, MIPAA contains several policy recommendations concerned with the active participation of older people in society under priority issue 1 of the first priority direction of MIPAA; access to knowledge, education and training under priority issue 4 of the first priority direction; and health promotion and well-being throughout life under priority issue 1 of the second priority direction.[3]

The year 2012 also marked the end of the second 5-year cycle of review and appraisal of MIPAA and its UNECE Regional Implementation Strategy. A major event in this context took place in Vienna during September 2012: the UNECE Ministerial Conference on Ageing "Ensuring a society for all ages: promoting quality of life and active ageing". The declaration adopted at the Vienna Ministerial conference includes

[3] For a discussion, see Sidorenko and Zaidi (2013).

crucial references to active ageing as a policy course to be promoted across the UN European countries.[4] The four priority goals identified are

1. Encourage longer working lives and maintaining work ability;
2. Promote participation, non-discrimination and social inclusion of older persons;
3. Promote and safeguard dignity, health and independence in older age, and
4. Maintain and enhance intergenerational solidarity.

The principal goal of the ministerial conference has been to evaluate the implementation of MIPAA/RIS in the five years since the 2007 León Conference, which marked the first 5-year cycle of review and implementation of MIPAA. Active ageing, in particular the participation of older persons in diverse forms of activities have been the focus of discussions during the ministerial segment of the Vienna 2012 Ministerial Conference. Experts and ministerial panels addressed policy questions such as how best to promote the activity of older persons but also what are the best ways to help older people to remain healthy and autonomous as they age.

1.3 Key elements of the active ageing agenda

In order to fully appreciate the emphasis on the active ageing strategy, distinctions need to be made between 'individual' and 'collective' forms of population ageing as well as between 'demographic' ageing and 'social' ageing.

- The demographic ageing aspects can be either chronological ageing (i.e. a change in age that people of all ages experience; often measured by median 'retrospective age' or the years lived) or 'prospective ageing' (as defined by remaining life years to be expected, see Sandersson and Scherbov 2007, 2010).
- 'Social ageing' is a social construct involving expectations as well as institutional constraints about how older people work and live as they age. It takes into account prospective age, changes in health, life expectancy, survival, morbidity, mortality, cognitive capacity, (dis)ability, workability, life course rescheduling behaviour, 'age inflation' and 'lifetime indexing' (these different aspects are discussed in detail in Marin 2013). In effect, social age can be defined as much by the stage in the life course and the remaining years of life than by the years lived.

The active ageing policy discourse links specifically with the social ageing phenomenon in which, with rising life expectancy on average, it is important to realise the potential of older people. This can be achieved by enabling them to continue to participate in the labour market as well as in other non-market productive social activities and to stay independent and healthy as long as possible.

[4] The Ministerial Conference has been hosted by the Austrian Government under the auspices of the Austrian Federal Ministry of Labour, Social Affairs and Consumer Protection and included the participation of NGOs and the scientific research community. The Conference has been concluded with a Ministerial Declaration, which can be seen at: http://www.unece.org/pau/ageing/ministerial_conference_2012.html

The active ageing policy agenda calls for adjustment of retirement age in line with rising life expectancy, i.e. for higher chronological, but constant to lower prospective age and the abolition of mandatory retirement age, as already demanded in MIPAA's RIS, agreed in Berlin during 2002. There are also requirements of adjustments in the work environment adapted to the ageing workforce so as to extend the working careers (see UNECE 2012a and EUROSTAT 2011). The agenda goes beyond the promotion of paid work: in fact, it demands a proper facilitation and acknowledgement of other social activities, such as unpaid, non-marketed activities that older people undertake, in the form of voluntary activities, care provision and political participation (for arguments, see e.g. European Commission 2002; Walker 2010 and Zaidi and Zólyomi 2012). In particular, the contribution of older people as informal carers for their own parents or spouses and their children and grandchildren needs to be properly acknowledged.

Independent and autonomous living and enabling environment in combination with improvements in health capacity are also important ingredients for active ageing, where access to health care and to assisted technologies are being identified as important facilitators for successful ageing (IOM 2007). For instance, the Danish Presidency of the Council of the European Union inaugurated the EY2012. The main theme of this opening conference of the EY2012 was innovation and how innovation can bring new solutions to the challenges of an ageing society in Europe within the fields of employment, social affairs and health. The principles defined to foster active ageing included supporting Europeans to live healthy, physically active lives, enhance their capacity to live independently through training, rehabilitation and the use of new technologies and to create age friendly environments that aim to empower older citizens (Haekkerup 2012).

Thus, health maintenance activities are an integral part of the experience of healthy and active ageing, and most notably they point not just to the physical health but also to mental well-being and social connectedness. These wider aspects of activity and health have been emphasised in particular by the most widely quoted formal definition of active ageing that comes from World Health Organisation's Ageing and Life Course Programme, included in the document to the 2nd World Assembly on Ageing, Madrid, April 2002 (World Health Organisation 2002). Box 1 provides a narrative on this formal definition of active ageing from WHO.

Following the WHO 2002 definition, active ageing is best measured with a dashboard of indicators that can capture diverse and specific aspects of active ageing. For instance, when measuring health there are several factors that would capture specific aspects of active ageing but without fully measuring all-encompassing active ageing outcomes towards it. Take the example of the healthy life expectancy indicator, which could be seen as the closest outcome indicator to measuring healthy living of people when they reach old-age. And yet, because older people can and are willing to remain active even if hampered by less than perfect health, the healthy life expectancy indicator alone would fail to properly account for the differences in the enabling

environment across different institutional settings for people with limitations in activities due to health.[5]

BOX 1
WHO'S DEFINITION OF ACTIVE AGEING

Active ageing is a widely discussed concept and its most widely accepted definition comes from WHO's Ageing and Life Course Programme:

> '*Active ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age*' (World Health Organisation, 2002, pp. 12).

As discussed in detail in Sidorenko and Zaidi (2013), the 2002 WHO policy framework implies policy actions in three areas:

1. "Health", which is understood to be physical health as well as mental and social well-being, following the WHO recommended definition.
2. "Participation", which in turn is understood as a multifaceted array of activities by older persons in social, economic, cultural, spiritual, and civic affairs, in addition to their participation in the labour force.
3. "Security" is concerned with the access of older persons to safe and secure physical and social environment, income security and (when applicable) the securing of a rewarding employment.

Thus, following this definition, the public discourse on active ageing is geared towards greater opportunities for a labour market engagement and also participation towards unpaid work that is productive for individuals concerned as well as for the societies in which they live. Also, the health maintenance activities can be emphasized, and again they point not just to the physical health but also to mental well-being and social connections.

The WHO's concept of active ageing is indeed strongly policy-oriented and points to three important domains of active ageing (as highlighted in Box 1). However, the challenge of constructing an index to assess and monitor progress in terms of active ageing is to select those individual indicators that are simple and understandable and yet they provide a useful way of guiding public policies by highlighting areas of unrealised potential of older people. As discussed below, the strands of the EY2012 provided us more convincing guidelines towards the choice of domains to be covered in the measurement of the active ageing index.

[5] For a recent account of employment propensities and living conditions of people with activity limitations across EU Member States, see Zaidi (2011).

1.4 Domains of the active ageing index, AAI

On the basis of a literature review (in particular WHO 2002; Walker 2010; Eurostat 2011; UNECE 2012a, 2012b; OECD 2008), and also consultations with the UNECE and the European Commission and the Expert Group, a conceptual and empirical framework has been developed to aid the selection and organisation of active ageing indicators into specific domains.

Let us first stipulate the definition of active ageing which has been adopted as a guideline for the empirical work undertaken in the Active Ageing Index project. The definition, as mentioned in Box 2, is drawn from the considerations of key elements of active ageing mentioned above, but also in the light of the definition of WHO and the discussions of the two meetings of the Expert Group, during 10-11 May 2012 and 11-12 October 2012.

BOX 2
DEFINITION ADOPTED FOR THE ACTIVE AGEING INDEX 2012

Active ageing refers to the situation where people continue to participate in the formal labour market as well as engage in other unpaid productive activities (such as care provision to family members and volunteering) and live healthy, independent and secure lives as they age.

This definition and the EY2012 strands complemented our choice that the empirical work of the AAI measurement would fall within the following four domains:

1. Contributions through paid activities: **Employment**
2. Contributions through unpaid productive activities: **Participation in society**
3. **Independent, healthy and secure living**
4. **Capacity and enabling environment for active ageing**

In view of diversities across European countries and across subgroups, the approach adopted here assesses not just how countries and subgroups fare in terms of actual experiences of active ageing but also measure the unrealised potential of older people that can be tapped to improve their quality of life and to make public welfare systems more sustainable. The first three domains of actual experiences of active ageing are drawn from the strands of the EY2012 (as mentioned on the EY2012 webpage):

> *"**Employment** – as life expectancy increases across Europe, pension ages are rising, but many fear that they will not be able to stay in their current jobs or to find another job until they can retire on a decent pension. We must give older workers better chances in the labour market.*
>
> ***Participation in society** – retiring from one's job does not mean becoming idle. The contribution of older people to society as carers for others, typically their own parents or spouses and their grandchildren is often overlooked and so is their role as volunteers. The European Year seeks to ensure greater*

recognition of what older people bring to society and create more supportive conditions for them.

Independent living *– our health declines as we grow old, but a lot can be done to cope with this decline. And quite small changes in our environment can make a big difference to people suffering from various health impairments and disabilities. Active ageing also means empowering us as we age so that we can remain in charge of our own lives as long as possible."*

Following the discussions during the first meeting of the Expert Group (May 2012), it was also agreed to include a fourth domain on active ageing that will capture the capacity and enabling environment aspects of active and healthy ageing. This novelty is inspired by Sen's capability focussed conceptual framework, in which capabilities are defined as substantive opportunities and empowerments to enhance well-being and quality of life, such as life expectancy, health, education, social participation and so forth (see, e.g., Sen 1985, 1993, 2009). This domain is therefore considered as measuring:

- human assets by outcome indicators such as remaining life expectancy;
- health capital with the healthy life expectancy and mental well-being indicators; and
- human capital aspects by educational attainment indicator.

When presenting the distribution of indicators within domains, the 4th domain will therefore be presented as a foundation of the first three domains.

Following this measurement framework, the AAI is divided into two dimensions:

A. Actual experiences of active ageing (containing 1st, 2nd and 3rd domain); and
B. Capacity and enabling environment for active ageing (4th domain).

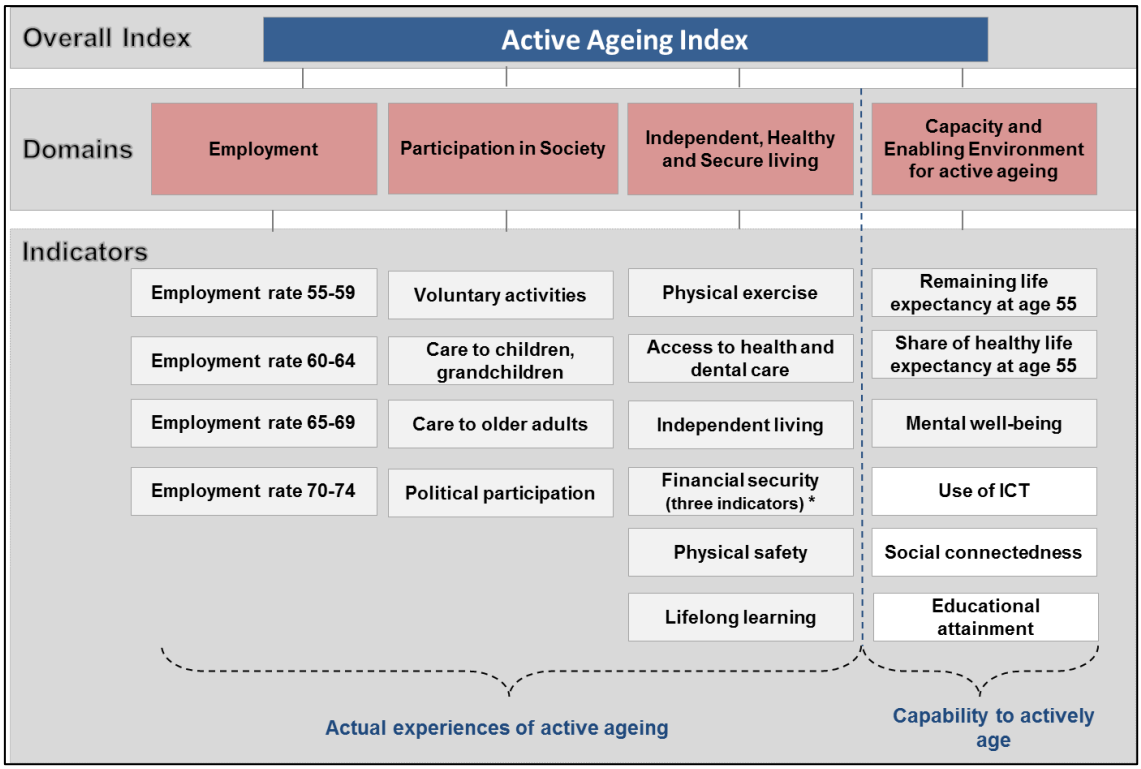
Each of the indicators used in the four domains are further subdivided by gender and they are subsequently used in constructing the gender-specific as well as domain-specific indices (more details of the methodology used are provided in Chapter 3). This step-wise method of constructing the indices allows us the calculation of improvement potentials in each domain of active and healthy ageing and for men and women separately.

The selection and specification of indicators that are capable of assessing active ageing have been driven by the following aims:

- Ability to capture the multidimensional aspects of ageing, as depicted e.g. in the active ageing framework of WHO (discussed in Box 1) and the definition adopted in the AAI project (mentioned in Box 2); and
- Ability to provide not only a 'league table' assessment of active ageing outcomes, but also to formulate policy advice on the basis of the comparative position of countries with respect to active ageing indicators and different domains that comprise active ageing.

Next, Chapter 2 provides a detailed discussion on the criteria used in selecting individual indicators, and also gives the exact definition of the indicators chosen (in Box 3). Figure 1.1 displays the hierarchy for systematically deriving a quantitative overall index for active ageing using a dashboard of indicators and their respective four domains.

Figure 1.1: The domains and indicators of the aggregated Index, AAI



* Financial security aspects are captured by three different indicators: (1) Relative median income of 65+ relative to those aged below 65 (2) No poverty risk for older persons and (3) No severe material deprivation rate (see Box 3 and Annex A.3 for a detailed specification of all individual indicators).

Chapter 2: Selection criteria for and requirements of active ageing indicators

This chapter discusses the criteria applied in the selection of indicators. Annexes A1-A4 provide data for the indicators included in the four domains. They also provide the rationale, a precise definition (with the help of the survey question) and data sources used for the chosen indicators.

2.1 Outcome indicators, instead of input or process indicators

Most importantly, the AAI has been based on outcome indicators, along the lines of Laeken Indicators,[6] instead of 'process' indicators or descriptive information about institutional arrangements. The index based on outcome indicators only takes into account the space relativity and not linkages across different phases of life. Thus, by implication, the indicators currently do not incorporate a life-course perspective. Instead, the AAI points to the situation of current generation of older people, and not to the possible implications of current situation for older generation in 30-40 years from now. Similarly, the issues linked with social security sustainability challenges are not addressed in the measurement of AAI; instead they could be treated as part of the contextual environment within which the active ageing outcomes should be assessed.

2.2 International comparability across EU27 countries

Another factor of paramount importance in the choice of indicators has been the comparability of indicators across countries, to the extent possible. This criterion has made EU-SILC (Survey of Income and Living Conditions), the EU-LFS (the Labour Force Survey) and the European Quality of Life Survey (EQLS) the prime datasets used to estimate active ageing indicators. By implications, we have ruled out indicators drawn from national data sources, however more reliable they might be in relation to those derived from the comparative international datasets.

2.3 Coverage of countries

A starting *minimum syndical* has been the coverage of 27 EU Member States. However, a prospect indicator, one that is pertinent to measuring active ageing and its potential, can sometimes only be drawn from a data source covering only a selected group of EU countries. For instance, the European Social Survey (ESS) covers only 22 EU countries in its 2008 database (missing countries are Austria, Italy, Malta, Luxembourg, and Lithuania),[7] and the SHARE (Survey of Health, Ageing and Retirement in Europe) covers

[6] The Laeken indicators are 18 common statistical indicators on social inclusion which accompanied the Lisbon Strategy 2000 for the purpose of the coordination of national policies based on a set of common European social policy goals. These indicators were subsequently revised by the European Commission's Social Protection Committee Indicators Sub-Group (for a discussion, see Atkinson et al. 2004).

[7] The ESS4, for 2008, contains data for 29 countries, out of which 22 are EU member countries. In the most recent round, ESS5, for 2010, all EU countries are covered, except MT (although data for only 20 countries is available in the first release, as LV and RO are also missing).

only 12 EU countries in its latest database.[8] Likewise, the European Health Interview Survey (EHIS) provides data for a limited set of EU countries.

On the one hand, a full reliance only on indicators for which data on all 27 member States is available would conveniently deal away with issues of missing data for some countries and whether imputations should be carried out or not. On the other hand, such an approach severely limits the indicators that can be selected for the AAI and could render the results and analysis influenced by outliers for specific indicators (see Eurostat 2011, for a stock-taking on existing indicators on active ageing for EU countries). For reasons of limited country coverage, we have not made use of SHARE data and this is despite the fact that SHARE had been identified as a very useful data source to derive active ageing indicators. Upon the advice of the Expert Group, the EQLS is preferred over the ESS because it uses the same questions as the ESS, but has better country coverage than ESS.

One of the challenges in the project has been to also enhance coverage towards non-EU European countries. As mentioned above, the EU-SILC, the EU-LFS and the EQLS have been our main sources of data. The EU-SILC dataset provides additional coverage for (in addition to all EU member States) only Iceland and Norway (and tested in three further countries: Croatia, the Former Yugoslav Republic of Macedonia and Serbia).[9] The EU-LFS dataset provides coverage for the 27 Member States of the European Union, in the acceding country Croatia, three Candidate Countries (Iceland, the former Yugoslav Republic of Macedonia and Turkey), and two EFTA countries (Norway and Switzerland) in 2009.

2.4 Monitoring trends over time

A dashboard of indicators has been used in constructing the overall active ageing index, and it has been considered highly desirable that these indicators (and their aggregation into an overall index) are also available in the future so as to be able to monitor trends over time across countries. For this reason alone, we have ruled out making use of data from special modules included in (say) EU-LFS, ESS or EU-SILC datasets.

On the same grounds, when a suitable indicator is available only from a special study (for example, indicators available from a special Eurobarometer Survey on active ageing), and it has not been obvious whether such an indicator can be calculated again in the future, we have had reasons to drop them from our chosen set of indicators. The

[8] The 1st wave of SHARE was conducted in 2004-2005 in 11 countries (SE, DK, DE, NL, BE, FR, CH, AT, IT, ES and EL and Israel), while the 2nd wave (in 2006-2007) also included CZ, PL and IE. The 3rd wave focused only on collecting data on people's life histories during 2008-2009 (for all wave 2 countries except IE). The 4th wave was conducted in 2010, and four additional countries joined then (EE, HU, PT and SI) – it is in fact the third regular panel wave of the survey following the life history focus in 2008-2009. The scientific use file of the 2010 data would not be released before November 2012.

[9] EU-SILC was launched in 2003 on the basis of an agreement between Eurostat and six Member States (AT, BE, DK, EL, IE and LU) and Norway. It was formally launched in 2004 in 15 countries and expanded in 2005 to cover all of the then EU-25 Member States, together with Norway and Iceland. BG launched EU-SILC in 2006 while RO, introduced the survey in 2007.

exception in this case has been the indicator on physical exercise (i.e. share of people aged 55 years and older doing physical exercise or sport at least 5 times a week) is derived from the Eurobarometer Special Edition 334, for the year 2010 (European Commission 2010b). This exception is warranted since our expectation is that such physical exercise data will be collected in the future in one of the mainstream international surveys (such as EU-SILC and the EQLS).

2.5 Access to micro datasets

EU-SILC and EU-LFS have been among the most suitable datasets for many of the indicators on active ageing, whose data is available readily from the Eurostat website. Thus, it is not a necessary condition in all cases to have the access to micro datasets for the calculation of indicators of our choice. It is nonetheless an important advantage for researchers to have access to micro-data, especially when a breakdown is necessary by gender and by finer age groups, and in testing the sensitivity of the specification of an indicator to the index value. Fortunately, the micro-data of EU-SILC and EU-LFS is available from EUROSTAT and the EQLS was made available by Eurofound at the crucial last stages of the project. Likewise, via UNECE, an access to micro-data of Gender and Generations Survey was also made possible, although the GGS data was not used in the end.

2.6 Data quality, timeliness and availability considerations

The index is as good as the quality of data in its underlying indicators. Robustness (i.e. meeting the statistical requirements of accuracy, reliability and validity) has indeed been sought for in each of the indicators included in the AAI. The adherence to this criterion has not allowed us to use some indicators of relevance. For instance, in many cases, there were doubts about the quality and relevance of 'subjective' response variables. In many cases, the international comparability of subjective responses is also restricted even in the very well composed subjective questions, such as self-reported health questions and questions related to the job satisfaction. For these reasons, a choice has been made that when a subjective variable is subject to serious quality doubts in its international comparability, we avoid using such a variable in the construction of the index.

Furthermore, one crucial goal had been that indicators to estimate indicators using latest sources of data for the EU countries. For this reasons, a decision has been made quite late in the project, upon the advice of the Expert Group, to make use of the EQLS that provided timely data (for year 2011) and provided good coverage (for all 27 EU Member States) for data on older people's participation in society (for the indicators included in the 2nd domain). Upon examining data sources to improve data coverage for the indicator on mental well-being, the EQLS has been preferred over other alternatives, for the fact that it contains the WHO 5-item mental health index.

2.7 Seeking to measure 'unrealised potential' of older people

One of the key endeavours of the AAI is that it should become a stock taking exercise for European countries to identify avenues for policy reforms and, once implemented,

also assess their impact. A good feature of the empirical work reported here is therefore identified as reflecting on 'unrealised potential' of active ageing in individual EU Member States. The UNECE and the European Commission can use this information to encourage countries to identify and undertake appropriate policy reforms. This choice element has been an important consideration in our decision to choose indicators and domains, and it also has implications for the form in which the index would be presented.

To this end, one methodological choice has been to interpret each indicator in reference to an upper goalpost and seek to measure the unrealised potential from the most desired active ageing status (see chapter 3 for more details). For example, the employment domain index of a country will give us the quantitative assessment of what potential can additionally be realised in promoting employment of older workers, either in comparison to the utopian full employment state or a more realistic target in comparison to the best performing benchmark country within, say, EU Member States.

2.8 Assigning normative value judgement

For all indicators to be included in the aggregation to the AAI, it is essential to assign the same normative value judgement of being a positive indicator (i.e. more is better). In some cases, this has not been possible as such. For example, in the case of indicators on care provision, the argument that they are positive indicators is only justified when taking the perspective of valuing informal care in terms of contributions made to the family and society. However, the care provisions by older adults, either to their partners or parents, or to their grandchildren, can also be a constraint impinging on the quality of life of informal carers.

Upon the advice of the Expert Group, a particular attention was drawn to specify the goal of each of the indicators, ensuring that the indicators selected for the first three domains measure the actual activity of older people that makes a positive contribution to the society. It was decided to leave out the normative judgments of the impact on the quality of life of those who are undertaking the activity in question. It was also carefully analysed whether the indicators included in the 4th domain measures the capacity and the enabling environment aspects of active ageing.

In view of this, definitions and data sources were reviewed and additional indicators were discussed at length during the Expert Group meetings and a good number of revisions made to the initial set of indicators proposed by the AAI project team. For example, the indicator on job satisfaction for workers aged 55-64 was excluded, keeping in mind that the sole goal of the 1st domain is to measure the activity in employment of older people and not the quality of jobs. Likewise, it was decided to extend the definition of the political participation beyond working for a political party or action group. Also, the indicator on long-term care benefits and living in institutions was dropped, and replaced with the indicator 'Independent living' with a goal of capturing the freedom to live in one's own home during old age.

BOX 3
INDICATORS SELECTED FOR THE ACTIVE AGEING INDEX

The following active ageing indicators have been selected for populating the four domains:

1) Employment

1.1 Employment rate for the age group 55-59 (EU-LFS 2010)
1.2 Employment rate for the age group 60-64 (EU-LFS 2010)
1.3 Employment rate for the age group 65-69 (EU-LFS 2010)
1.4 Employment rate for the age group 70-74 (EU-LFS 2010)

2) Participation in society

2.1 Voluntary activities: percentage of population aged 55+ providing unpaid voluntary work through the organisations (EQLS 2011)
2.2 Care to children, grandchildren: Percentage of population aged 55+ providing care to their children and/or grandchildren (at least once a week) (EQLS 2011)
2.3 Care to older adults: Percentage of population aged 55+ providing care to elderly or disabled relatives (at least once a week) (EQLS 2011)
2.4 Political participation: Percentage of population aged 55+ taking part in the activities of a trade union, a political party or political action group (EQLS 2011)

3) Independent, healthy and secure living

3.1 Physical exercise: percentage of population aged 55+ who engage in physical activity and sport at least five times a week (Eurobarometer Special edition 334/2010)
3.2 Access to health and dental care: percentage of population aged 55+ who report no unmet need for medical and dental examination (SILC 2010)
3.3 Independent living arrangements: percentage of persons aged 75 and older living in single or couple households (SILC 2010)
3.4 Relative median income: ratio of the median equivalised disposable income of people aged 65+ to the median equivalised disposable income of those aged below 65 (SILC 2010)
3.5 No poverty risk for older persons: percentage of people aged 65+ who are not at the risk of poverty using 50% of the national median equivalised disposable income as the poverty threshold (SILC 2010)
3.6 No severe material deprivation for older persons: percentage of people aged 65+ not severely materially deprived (SILC 2010)
3.7 Physical safety: percentage of population aged 55+ who are not worried about becoming a victim of violent crime (ESS 2010)
3.8 Lifelong learning: percentage of older persons aged 55-74 who received education or training in the 4 weeks preceding the survey (EU-LFS 2011).

4) Capacity and enabling environment for active and healthy ageing

4.1 Remaining life expectancy achievement of 50 years at age 55, using EHLEIS
4.3 Share of healthy life years in the remaining life expectancy at age 55, using EHLEIS
4.3 Mental well-being (for older population aged 55+, using EQLS 2011 and using WHO's ICD-10 measurement)
4.4 Use of ICT by older persons aged 55-74 at least once a week (including everyday), using Eurostat ICT Survey
4.5 Social connectedness: Percentage of older population aged 55+ who meet friends, relatives or colleagues at least once a month, using ESS 2010 / 2008 (for LV and RO) / 2006 (for AT) / 2004 (for LU) / 2002 (for IT)
4.6 Educational attainment of older persons: Percentage of older persons aged 55-74 with upper secondary or tertiary educational attainment (EU-LFS 2010)

2.9 Disaggregating indicators, by gender and age

The distinction between men and women has been considered crucial in the analysis of cross-national differentials for many of the specific single indicators of active ageing. This gender disaggregation can be argued to be a richer outcome, and it required careful choice and calculation of gender-specific indicators (especially since it required access to micro-data in many cases).

Further disaggregation by age groups for employment has also been allowed, although such finer subdivision of data has not always been credible given small sample sizes for other aspects of active ageing. In general, active ageing indicators are defined for the age group above 55. There is no reason to specify an upper age limit per se; although in some cases it would make sense to restrict it to an upper age limit on the basis of conceptual and empirical considerations. For instance, it was rendered important that the upper age limit of 74 is used in calculating employment rate indicators. The age limit was also necessary when the data availability imposed certain limitations, as has been the case of the indicator on the ICT usage.

The age limit of the indicator measuring physical safety (within the independent, healthy and secure living domain) has been set at 55 or more, so as to be consistent with the age limit used in measuring the employment and social activities of older populations (in the 1st and 2nd domain).

2.10 Parsimony over number of indicators selected

Parsimony over the number of indicators selected has been required, especially in view of the fact that the inclusion of a greater number of indicators may restrict the robustness of a composite index like the AAI. For the index to remain stable, the list of selected indicators will remain unchanged over time. However, the list could be reconsidered in the future if deemed necessary. Some of the indicators that are not chosen for the AAI, they will still be useful in providing further contexts when analysing in-depth the outcomes within domains and the clustering of countries on the basis of the overall and gender-specific indices.

Chapter 3: Choice of the aggregation methodology for the AAI

3.1 Introduction

A careful review of existing index construction methodologies has been undertaken in the preparation of work towards constructing the AAI (e.g. UNDP 1990; Akder 1994; Anand and Sen 1995, OECD 2008, Bradshaw and Richardson 2009; Klasen and Schüler 2011; and Kaneda *et al.*, 2011). Initially, a choice had been made in favour of using the z-score methodology, as in Bradshaw and Richardson (2009). The major advantage of the z-score methodology has been that it allowed for the standardisation of indicators of different types and scales around the sample mean. Thus, using this method, indicators measuring the share of the population and those reported in other measurement units (such as years in life expectancy indicators) were conveniently expressed as a standardised deviation from the mean, rendering them comparable and thus aggregating them in a single index, as the arithmetic means of the z-scores.

While the z-scores methodology provided a convenient way to normalise results, by anchoring them around the mean, this also rendered comparisons over time more difficult without additional transformations of the data. This is for the fact that indicators referring to the time t+1 in the future will be standardised around the mean values observed in t+1, which if significantly different from the present time t, will make them temporally incomparable with the present. The AAI_{t+1} will then rank countries according to the new reality in terms of active ageing observed in t+1.

During the second Expert Group meeting, and also in subsequent discussions with the project partners, it was decided that the methodology adopted in the aggregation of the selected active ageing individual indicators to the domain-specific and to the overall AAI should be similar to that used in the HDI of the UNDP.

Moreover, in light of substantial gender differentials in the different aspects of active ageing in Europe (e.g. on employment rates, in engagement of care provision activities and life expectancy and health outcomes in later stages of life) and for the importance of gender-targeted policy actions for EU policy makers (for example, in the context of EU 2020 targets), it was decided that the AAI will also be disaggregated by gender. The decision for creating a separate index for men and for women was also motivated by such practices in other contexts (see for example Klasen and Schüler 2011; and Permanyer 2011), also on the basis of discussions with the Expert Group and the initial analysis of individual indicators. Thus, the methodology described below applies to the overall AAI as well as to the gender-specific indices.

Note also that the missing values (if any) are not imputed as each available method for statistical imputations carried their own methodological limitations and imputation could restrict the credibility as well as the comparability (across space as well as inter-temporally) of the AAI. The approach used allows us to point out those fields of missing data where data collection is highly desirable in the countries in question.

3.2 Description of the methodology

The methodology chosen in the constructing the AAI should reflect a transparent method to present the dashboard of indicators of active ageing. The 22 indicators selected are aggregated to the AAI by following four methodical steps:

1. First, all active ageing indicators are expressed as positive indicators, taking on a positive normative judgement meaning that the higher the value, the better the active ageing outcome. For instance, the financial security indicator of at-risk-of-poverty is expressed in terms of no poverty risk. The indicators capturing the care provision by older people are considered positive because of the emphasis on the value of the care provision for the society.
2. Second, each of the indicators is expressed in percentage terms, with a lower goalpost of 0 and an upper goalpost of 100. Note here that the assumption of the upper goalpost of 100 cannot always be interpreted as the optimum, as it implies the unlikely utopian target of fullest possible active ageing. Thus, for example, the target goalpost of the employment rate indicator for older workers is assumed to be full employment.
3. Third, for each domain, the arithmetic weighted average of the indicators is calculated. Note here that the resulting domain-specific indices are made up of a different subset of indicators (as is obvious from the description in Box 3). These results then give us four gender-specific indices, one for each domain, namely: Employment domain index; Participation-in-society domain index; Independent-healthy-and-secure-living domain index and the capacity-and-enabling-environment-for-active-ageing domain index.
4. Finally, the overall aggregated indicator is then calculated as the arithmetic weighted average of the domain-specific indices. The final explicit weights used for the four domains are, respectively, 35, 35, 10 and 20 for four domains (see Box 4 for more details, in particular the difference between the explicit and implicit weights). These weights and also those used in Step 3 are drawn from the recommendations of the Expert Group (Table 3.1 gives the value of explicit and implicit weights assigned in the aggregation of indicators to a domain-specific index, and subsequently the weights assigned for each domain in aggregating the domain-specific indices to construct the overall AAI).

One critical issue has indeed been that of weighting. In the absence of unequivocal theoretical and empirical grounding on the contribution (i) of each indicator to a certain domain and (ii) of each domain to active ageing, it was decided to use weights recommended by the Expert Group (see Box 4 for more discussion).

The important consideration is that there are also implicitly different weights attached to indicators and to domains, as determined by the relative size of the indicator value and the domain-specific index value, respectively. It is for this reason that the impact of any indicator on the domain, and that of the domain-specific index on the overall AAI, have been analysed very carefully, and the final choice of explicit weights has been calibrated, to meet the recommendations of the Expert Group for the weighting.

Table 3.1: Weights (explicit and implicit) assigned to individual indicators and domains

Indicators / Domains	Explicit weight for an indicator (proportion within the domain)	Explicit weight for a domain	Implicit weight for indicators and domains
Employment rate 55-59	25%		58%
Employment rate 60-64	25%		27%
Employment rate 65-69	25%		10%
Employment rate 70-74	25%		5%
1st domain: Employment	100%	35%	28%
Voluntary activities	25%		19%
Care to children, grandchildren	25%		46%
Care to older adults	30%		22%
Political participation	20%		13%
2nd domain: Participation in society	100%	35%	19%
Physical exercise	10%		2%
Access to health and dental care	20%		26%
Independent living	20%		24%
Relative median income	10%		12%
No poverty risk	10%		13%
No material deprivation	10%		13%
Physical safety	10%		9%
Lifelong learning	10%		1%
3rd domain: Independent, healthy and secure living	100%	10%	21%
Remaining life expectancy of 50 at 55	33%		37%
Share of healthy life expectancy at 55	23%		22%
Mental well-being	17%		19%
Use of ICT	7%		4%
Social connectedness	13%		12%
Educational attainment	7%		6%
4th domain: Capacity and enabling environment for active ageing	100%	20%	32%

Note also that the gender-specific indices (for the domains, and also AAI_{female} and AAI_{male}) are constructed taking into consideration the values for the gender-specific indicators, but using the same weights as for the total population. A calculation of this sort makes it easier to analyse the disparity between men and women. Also, differences between the gender-specific AAIs refer to gender differences within countries and not to differences across country for one particular gender.[10]

[10] If the AAI_{gender} for each country is compared to the AAI_{gender} of the top performing country, this would provide a picture of how good/bad for example women in country A are in comparison to women in a benchmark country, and not only in comparison to the male counterparts in their own country.

BOX 4

WEIGHTING METHOD USED IN THE CONSTRUCTION OF THE AAI

An important element of the AAI methodology is the choice of weights to be assigned to individual indicators when aggregating indicators to a domain-specific index (and, likewise, weights to be assigned to individual domains when aggregating domain-specific indices to the overall AAI). Previously, the AAI results were produced using equal weights for all indicators within each domain and equal weights for all domains in the AAI. This method was preferred for the fact that it involved no value judgement of researchers to uphold the relative importance of a domain, or an indicator within a domain. However, this equal weighting method came under scrutiny during the 2nd Expert Group meeting, and subsequently a number of decisions were made to revise the weighting methodology used in the construction of the AAI:

- It was agreed that different explicit weights must be considered for different domains of the AAI, and also for different indicators within a domain.
- It should be taken into account that indicators with higher values have an implicitly greater weight to the domain-specific index, and vice versa. Likewise, the domain with a higher value of the index will carry implicitly higher weight to the overall AAI, and vice versa.
- Members of the Expert Group were requested to carry out a weighting simulation exercise using the Excel sheet containing AAI results. In the week following the 2nd Expert Group meeting, the AAI team received 10 recommendations, from the Expert Group as well as from the project partners, specifying what should be the weight for each domain and for each indicator within a domain.

Upon the recommendations, it was essential to make a distinction between 'explicit' and 'implicit' weights (whose values are reported in Table 3.1).

- **Explicit weights:** These are the final set of weights assigned to individual indicators and domains. They are obtained after assuming an initial value of explicit weights and then re-adjusting them so that the values of the resulting **implicit weights** match with those recommended by the experts.
- **Implicit weights:** The implicit weight for an indicator is obtained by multiplying the value of explicit weight with the value of the indicator when aggregating the indicators to a domain-specific index; likewise, the implicit weight for each domain is derived from a multiplication of an explicit weight for the domain and the value of the domain-specific index.

The differences between explicit and implicit weights can be best understood by looking at the relative weights assigned to the 1st and 2nd domain. The final explicit weight for both the 1st and the 2nd domain are set at 35% each. However, these equal weights for the first two domains are the outcome of the calibration that was essential given the relatively low values of the 2nd domain index. The end result is the equal explicit weight but the implicit weights are 28% and 19%, respectively for the 1st and 2nd domains, and they are in line with the recommendations of the Expert Group.

Thus, to reiterate, the implicit weights for each indicator/domain were estimated as a multiplication of the explicit weight and the indicator/domain value. The value of the explicit weight is calibrated so that the chosen final implicit weights match with those recommended by the Expert Group. Note also that collinear indicators would also imply double weighting for a given domain, but an analysis of the correlation of indicators within domains assured that this was not the case (see sensitivity analysis undertaken in Zaidi et al. 2012).

The methodology employed for the calculation of the AAI presents some notable advantages for the purpose of measuring the active ageing phenomenon in European countries. Most importantly, it allows for the AAI to be displayed in an appealing manner by informing policy makers about the untapped potential of older people observed in their country. In this way, countries can be compared on how they fare in achieving active ageing outcomes, but it is also possible to disaggregate the AAI into the contributions of each domain to the final score, thus showing which domains should merit specific actions from public policies. In the end, the decisive argument in favour of this aggregation method was the numerical interpretation of the index for a wider audience which was not possible in other methods (e.g. as in the z-score methodology used previously in constructing the AAI; for details, see Zaidi et al 2012).

The measure of gender differences makes it possible to compare gender equality in the overall AAI within each country, but also how equal women are in comparison to men in each of the four domains. However, it is limited to the comparison of men and women within a country and does not account for the relative position of each to an overall benchmark value. For each domain and for the AAI, indicators are arithmetically averaged. This means that the relative good performance of a country in one domain may offset the relative worse performance in another.

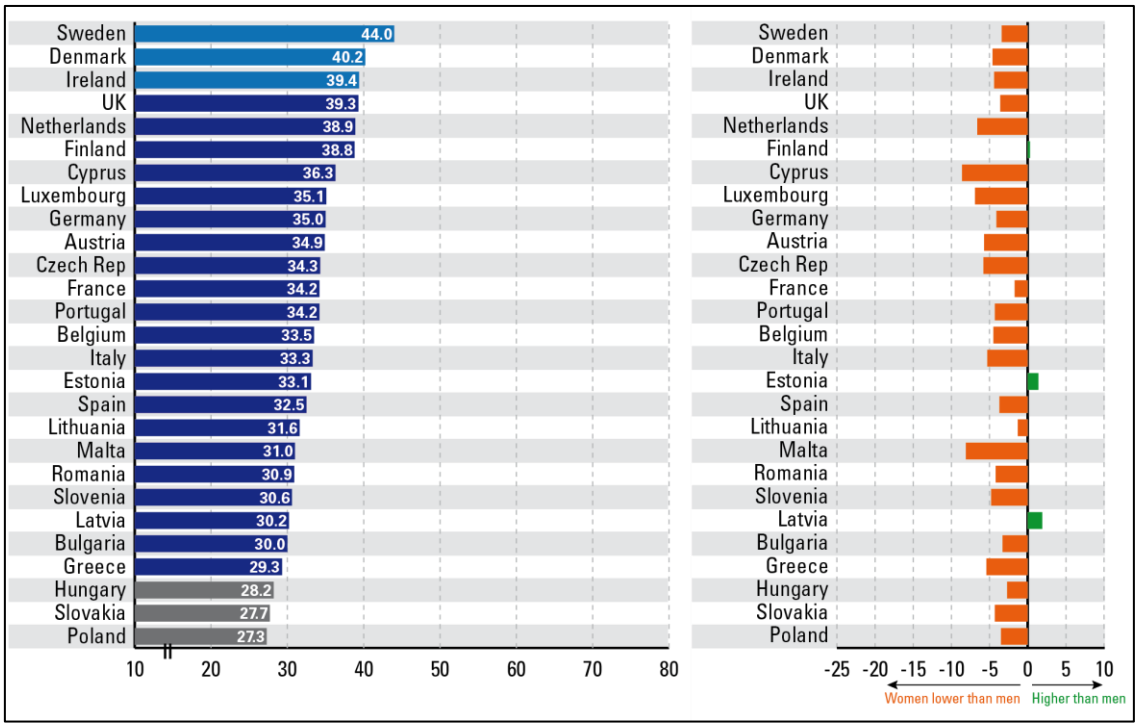
Chapter 4: Final Results for EU27 Member States

4.0 Results for the overall index, AAI

4.0.1 Ranking of countries for the overall index

Two Nordic countries, namely Sweden and Denmark, as well as Ireland, the United Kingdom and the Netherlands come at the top of the ranking across EU Member States (see Figure 4.1). In contrast, the majority of the Central and Eastern European countries, as well as Greece, are at the bottom of the ranking and have a clear scope for further improvements. Cyprus is the only Southern European country to be among the top ranked EU countries, positioning itself alongside Finland and Luxembourg. The Czech Republic performs exceptionally well in comparison to other EU Member States from Central and Eastern Europe.

Figure 4.1: Ranking of countries by the overall AAI (all domains together) for the total population and for differences between men and women



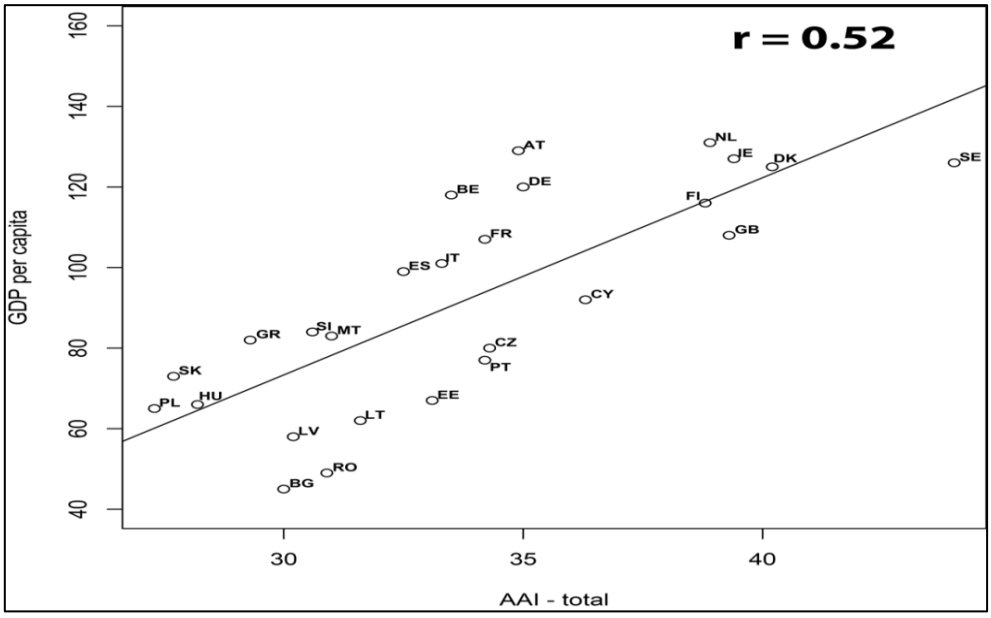
The numerical value of the AAI shows that even the top performing countries must aim for further improvements. For example, even Sweden which is a front runner, has a significant untapped potential as it falls short by more than half (56%) from the most desired status possible. The countries on the other end of the spectrum (Poland, Slovakia and Hungary) have a larger gap (in excess of 70%) and thus they require greater policy efforts as they have a clearly higher untapped potential with respect to active and healthy ageing.

In almost all countries, women fare worse than men, particularly so in the three Southern European countries (Cyprus, Malta and Greece) but also surprisingly in the Netherlands and Luxembourg. The opposite is true only for the two of the Baltic States

(Latvia and Estonia) and also there are only marginal gender differences in the neighbouring Finland and Lithuania.

A positive correlation with per capita GDP shows that the countries with relatively higher standards-of-living are generally more successful in experiences of active ageing and in generating better capacity and enabling environment for active and healthy ageing among older people (see Figure 4.2). Note here that the correlation does not imply causality, and in this case the causality could run in either direction: higher GDP lead to generating more opportunities for active ageing or the active ageing phenomenon linked with (say) untapping of the employment potential of older workers lead to economic prosperity. Also, there is no one-to-one relationship, as some countries with the same national wealth do better in terms of active ageing outcomes. For example, Cyprus does remarkably better in active ageing in comparison to many other Western and Southern European countries (e.g. Greece and Belgium), despite having a lower or similar GDP per capita.

Figure 4.2: AAI ranking in relation to the aggregate measure of GDP per capita (a proxy of average standard of living)



* **r** stands for the Pearsons correlation coefficient between GDP per capita and the overall AAI. Luxembourg has been left out from this scatterplot as it is clearly an outlier in terms of GDP per capita. The line is drawn using the method of LTS - Least Trimmed Squares – which is a common robust method to determine regression. Unlike the standard least squares method, which minimises the sum of squared residuals over n points, the LTS method attempts to minimise the sum of squared residuals over a subset, k, of those points, so as to be not being unduly affected by the presence of outliers.

4.0.2 Contribution of the domains to the overall index, AAI

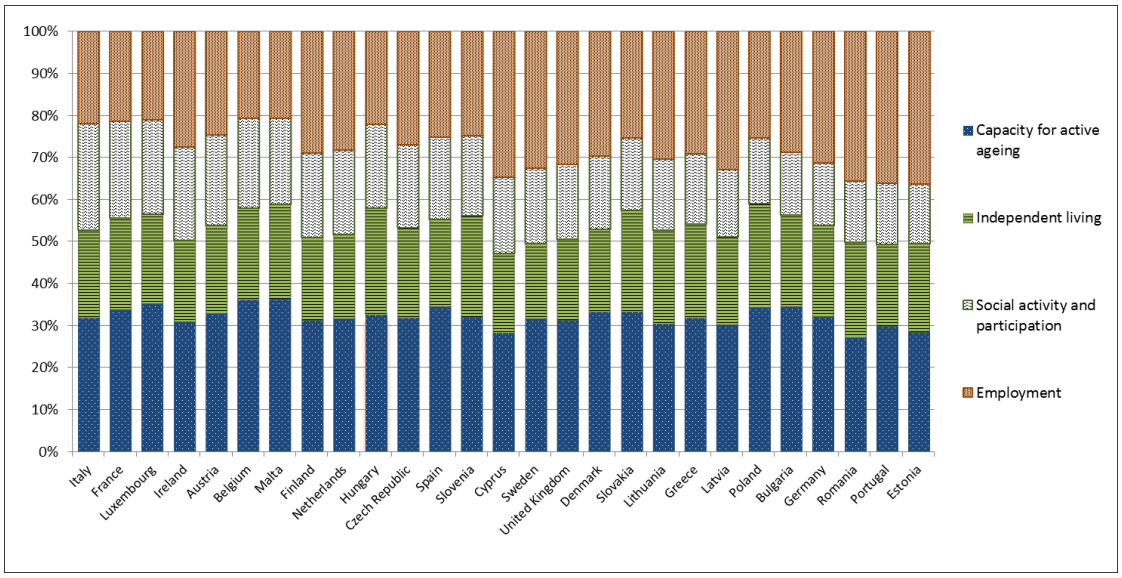
It is also important to see the contribution of each domain to the overall AAI in the diverse group of EU countries (results are presented in Figure 4.3).

- For example, the relative contribution of the domain capacity and enabling environment to the AAI is the highest in the case of Luxembourg, Belgium and

France (in the Western Europe); Bulgaria and Poland (in Central and Eastern Europe) as well as in Malta and Spain (in the Southern Europe).

- The countries with the highest relative contribution in the independent, healthy and secure living domain are Hungary, Poland, Slovenia and Slovakia while Sweden, Cyprus and Ireland record the lowest contribution for this domain to the overall index.
- With regard to participation in society, the domain contribution to the overall index is largest in Italy and France as well as in Luxembourg, Ireland and Austria while Estonia, Portugal and Romania record the lowest contribution from this domain.
- Cyprus and Portugal, and also Estonia, Romania and Latvia stand out among the countries with the highest relative contribution from the employment domain, while France, Italy and Spain as well as Luxembourg and Belgium are well behind in their contribution from the same domain.

Figure 4.3: Contribution of domains to the overall index, AAI (men & women together)



Although these results report on the relative contribution of four domains to the AAI, they do not imply that the countries with the lowest relative contribution from a domain are also the ones performing the worst within that domain. The ranking of countries within each of the four domains are shown in Table 4.1 below. For example, Portugal and Estonia perform relatively worse in the participation-in-society domain and they are indeed the ones with the lowest contribution of this domain to their overall AAI value. However, they are not the countries performing the worst in the participation-in-society domain: Poland, Bulgaria and Romania are the low ranked countries in this respect. Sweden ranks first in the overall AAI, but only leads in two of the domain-specific indices, employment and capacity and enabling environment for active ageing. Ireland fares at the top in the participation in society domain, and Denmark does best in the independent, healthy and secure living.

Table 4.1: Ranking of EU Member States, on the basis of the overall AAI and the domain specific indices (men & women together)

OVERALL			1. Employment			2. Participation in society			3. Independent, healthy and secure living			4. Capacity and enabling environment for active ageing		
Rank	Country	Value	Rank	Country	Value	Rank	Country	Value	Rank	Country	Value	Rank	Country	Value
1	Sweden	44.0	1	Sweden	41.0	1	Ireland	25.2	1	Denmark	79.0	1	Sweden	69.5
2	Denmark	40.2	2	Cyprus	36.1	2	Italy	24.1	2	Sweden	78.7	2	Denmark	66.7
3	Ireland	39.4	3	UK	35.5	3	Luxembourg	22.6	3	Netherlands	77.7	3	Netherlands	61.6
4	UK	39.3	4	Portugal	35.3	4	Sweden	22.6	4	Finland	76.6	4	Luxembourg	61.6
5	Netherlands	38.9	5	Estonia	34.4	5	France	22.4	5	Germany	75.8	5	UK	61.4
6	Finland	38.8	6	Denmark	34.0	6	Netherlands	22.4	6	UK	75.7	6	Ireland	60.8
7	Cyprus	36.3	7	Finland	32.0	7	Finland	22.4	7	Ireland	75.7	7	Finland	60.7
8	Luxembourg	35.1	8	Romania	31.4	8	Austria	21.4	8	Luxembourg	74.7	8	Belgium	60.3
9	Germany	35.0	9	Netherlands	31.4	9	Belgium	20.4	9	France	74.6	9	France	57.8
10	Austria	34.9	10	Germany	31.2	10	Denmark	20.1	10	Slovenia	74.4	10	Austria	57.5
11	Czech Rep	34.3	11	Ireland	31.0	11	UK	20.0	11	Czech Rep	73.8	11	Germany	56.2
12	France	34.2	12	Latvia	28.3	12	Czech Rep	19.4	12	Belgium	73.4	12	Spain	56.1
13	Portugal	34.2	13	Lithuania	27.4	13	Cyprus	18.7	13	Austria	73.0	13	Malta	56.1
14	Belgium	33.5	14	Czech Rep	26.4	14	Spain	18.3	14	Hungary	71.9	14	Czech Rep	54.4
15	Italy	33.3	15	Austria	24.6	15	Malta	18.2	15	Lithuania	70.6	15	Italy	52.8
16	Estonia	33.1	16	Bulgaria	24.6	16	Slovenia	16.7	16	Romania	70.1	16	Bulgaria	51.7
17	Spain	32.5	17	Greece	24.4	17	Hungary	16.1	17	Malta	70.1	17	Cyprus	51.1
18	Lithuania	31.6	18	Spain	23.3	18	Lithuania	15.3	18	Estonia	70.0	18	Portugal	50.8
19	Malta	31.0	19	Slovenia	21.6	19	Germany	14.9	19	Italy	69.9	19	Slovenia	48.8
20	Romania	30.9	20	Luxembourg	21.1	20	Portugal	14.3	20	Cyprus	69.1	20	Lithuania	47.9
21	Slovenia	30.6	21	France	21.0	21	Greece	14.2	21	Poland	67.5	21	Estonia	47.1
22	Latvia	30.2	22	Italy	20.9	22	Latvia	13.9	22	Spain	67.3	22	Poland	46.7
23	Bulgaria	30.0	23	Slovakia	20.1	23	Slovakia	13.7	23	Slovakia	67.0	23	Greece	46.7
24	Greece	29.3	24	Poland	19.8	24	Estonia	13.3	24	Portugal	66.7	24	Slovakia	45.9
25	Hungary	28.2	25	Belgium	19.8	25	Romania	12.9	25	Greece	65.2	25	Hungary	45.9
26	Slovakia	27.7	26	Malta	18.3	26	Bulgaria	12.9	26	Bulgaria	65.2	26	Latvia	45.4
27	Poland	27.3	27	Hungary	17.8	27	Poland	12.2	27	Latvia	63.2	27	Romania	42.0

4.1 Results for the 1st domain: Employment

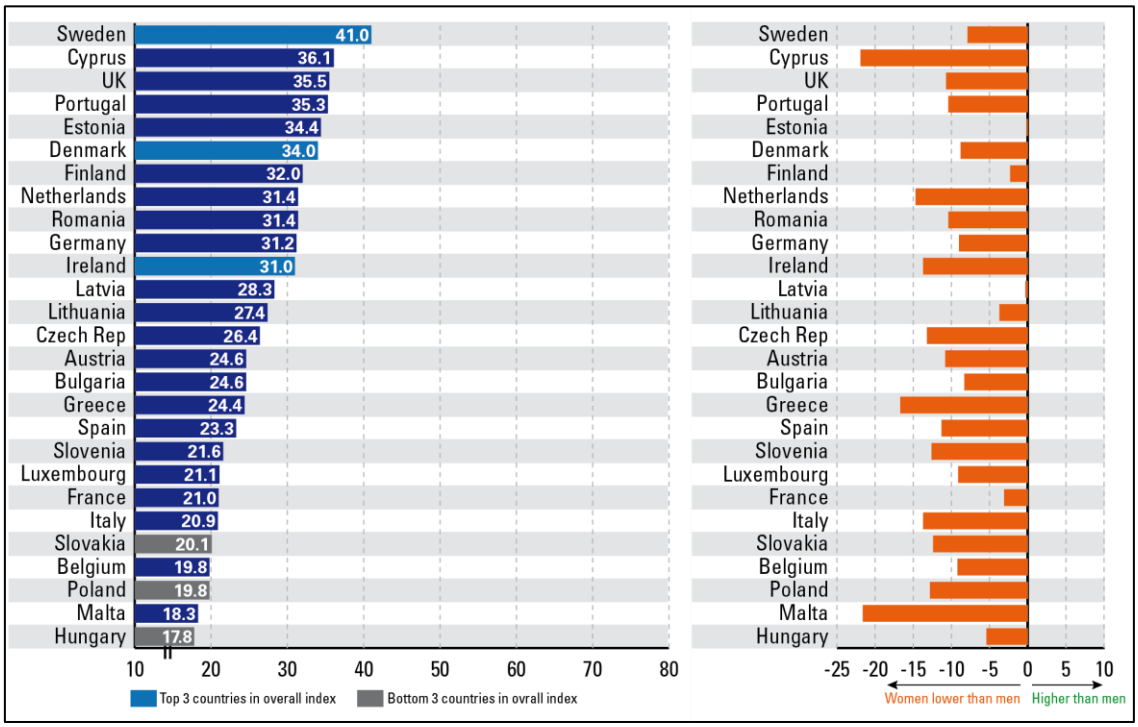
The first domain used in the measurement of the AAI concerns with the contribution of older people in the labour market. It contains four indicators:

1.1. Employment rate for the age group 55-59
1.2. Employment rate for the age group 60-64
1.3. Employment rate for the age group 65-69
1.4. Employment rate for the age group 70-74

4.1.1 Ranking of countries for the 1st domain

The top-performing countries stand out as Sweden, Cyprus, the United Kingdom and Portugal followed by Estonia and Denmark not far behind (see the left hand side panel of Figure 4.4). In contrast, Hungary, Malta, Poland and Belgium are the countries with the highest potential for further improvements in the employment of older workers. Five other countries showing a similar extent of room for improvements with index values around 20% include Slovakia, Italy, France, Luxembourg and Slovenia. While Ireland is one of the top three ranked countries in the overall index, its performance in the employment domain falls behind ten other countries.

Figure 4.4: Ranking of EU countries using the 1st domain Index, for the total population and for differences between men and women



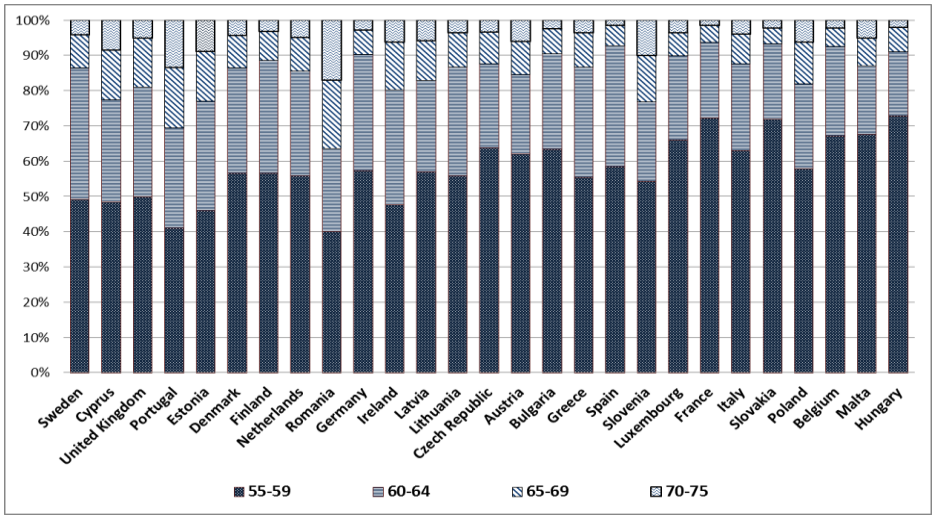
Gender differences in the employment domain are illustrated on the right hand side panel of Figure 4.4. It is obvious that women score worse than men in all countries (except Estonia and Latvia). While the difference is hardly observable in the case of Latvia and Estonia (only 2% and 3% points respectively) and also stays low in Finland, Lithuania, France and Hungary (below or close to 5% points), it reaches as high as 20%

points in Cyprus and Malta indicating that there is a great untapped potential for women's engagement in the labour market in these two countries. Gender disparity in employment is also relatively high in the Netherlands, Italy and Ireland. Such large gender gaps point to significant potential for improvement in these countries; indeed, if active ageing is possible for men in a given country, it should also be possible for women in the same country.

4.1.2 Contribution of individual indicators to the 1st domain

Figure 4.5 shows the relative contribution of four individual indicators to the employment domain for each country. The higher or lower contribution of a particular indicator does not necessarily reflect higher or lower performance on the indicator. It signals the degree to which a given indicator determines the domain index values for the countries, and ultimately their rankings in the domain, depending on the relative performance of the country on the given indicator. It is in fact equivalent to the implicit weight assigned to the indicators in each country.

Figure 4.5: Contribution of indicators to the 1st domain (men & women together)



The relative contribution of the four indicators to the domain index is almost the same in Denmark and Lithuania, but due to its better performance in all four indicators Denmark is ranked higher in the domain (6th as opposed to the 13th position of Lithuania).

In Poland, it is the employment rate of those aged 55-59, and to a lesser extent of those aged 60-64, that affects particularly adversely the country's ranking in the employment domain. The top position of Sweden, on the other hand, is largely an outcome of high performance of this country with respect to employment of workers in the age group 60-64.

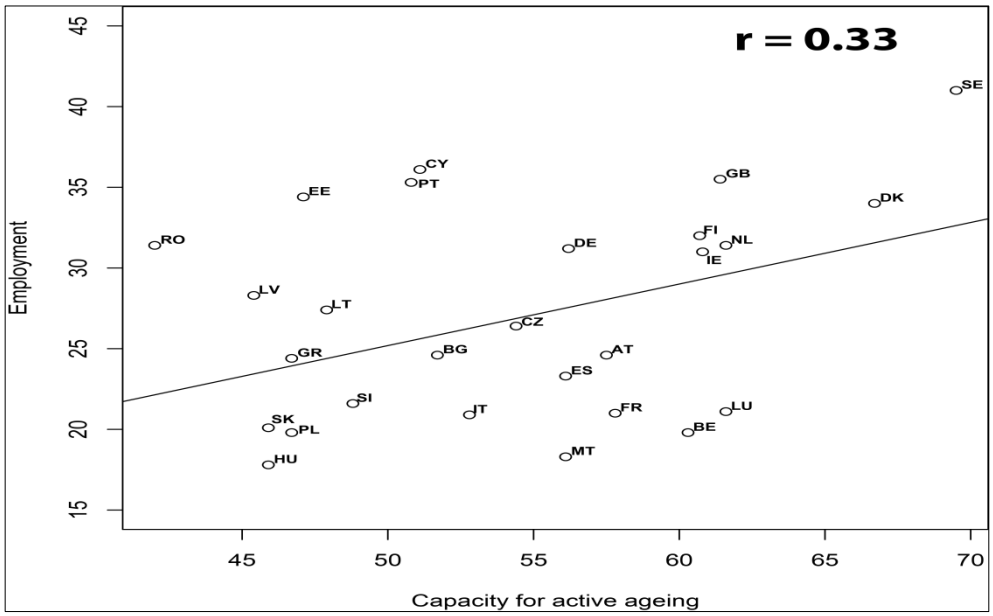
The contribution of the employment rate for the two other age groups (65-69 and 70-79) to the domain remains very low compared to that of the other two younger age groups in general. Romania and Portugal are the two notable exceptions in this regard. In their case, the relatively high ranking is due to the fact that both do remarkably well in terms of the employment rate of so-called 'silver' workers (aged 65-59 and 70-74).

Sweden, and also Germany, offer good examples of higher outcome in terms of employment rate for the 60-64 age group, and this reflects the better work incentives in pension systems in these two countries towards extending working life. On the other hand, Romania and Portugal and also Cyprus, show higher contribution from employment activity beyond the age of 65 (in the age group 65-69 and 70-74). The higher employment activity beyond retirement age in these countries may partly reflect better work environment for an ageing workforce and partly be due to constraints of low pension income outcomes.

4.1.3 Relationship between employment and capacity-and-enabling-environment-for-active-ageing domains

In evaluating active ageing outcomes in specific domains, it is important to also account for differentials in the capacity and enabling environment for active ageing across these countries. For example, it is only fair to compare active ageing outcomes between Sweden and Romania by factoring in differences in terms of the capacity and enabling environment.

Figure 4.6: Relating employment domain index with the capacity-and-enabling-environment-for-active-ageing index



The scatterplot in Figure 4.6 shows how employment index links with the index of the capacity and enabling environment for active ageing. The results show that the correlation between these two indices is not strong (r=0.33), implying that the employment outcomes for older populations are driven by factors other than those included here in measuring the capacity and enabling environment for active ageing (such as healthy life expectancy, mental well-being, social connections, etc.).

For example, the differences across BENELUX countries show that despite the same score on the capacity and enabling environment for active ageing index for the three countries, Luxembourg and Belgium have much lower employment outcomes for older

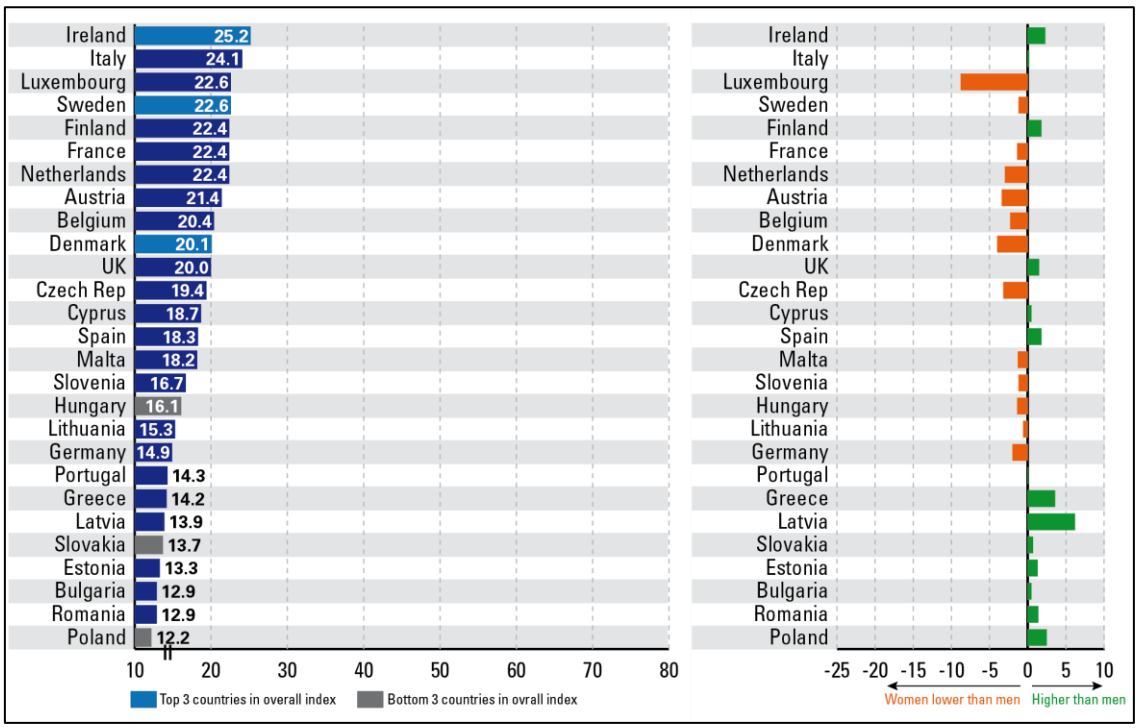
workers than those observed for the Netherlands. This raises the all-important question what insights Belgium and Luxembourg can draw from the labour market and pension policies of the Netherlands.

4.2 Results for the 2nd domain: Participation in society

The second domain used for measuring active ageing index contains four individual indicators:

2.1 Voluntary activities: Percentage of older population aged 55+ providing unpaid voluntary work through the organisations.
2.2 Care to children, grandchildren: Percentage of older population aged 55+ providing care to their children/grandchildren (at least once a week).
2.3 Care to older adults: Percentage of older population aged 55+ providing care to elderly or disabled relatives (at least once a week).
2.4 Political participation: Percentage of older population aged 55+ taking part in the activities of meeting of a trade union, a political party or political action group.

Figure 4.7: Ranking of EU countries using the 2nd domain Index, for the total population and for differences between men and women



4.2.1 Ranking of countries for the 2nd domain

When looking at the index for the participation in society domain, the three top-performing countries are Ireland, Italy and Luxembourg (Figure 4.7). In contrast, Poland, Romania and Bulgaria stand at the bottom of the country ranking within this domain, with an overall index score almost half of that of the best performing countries within EU27. Hungary performs better in this domain in comparison to its

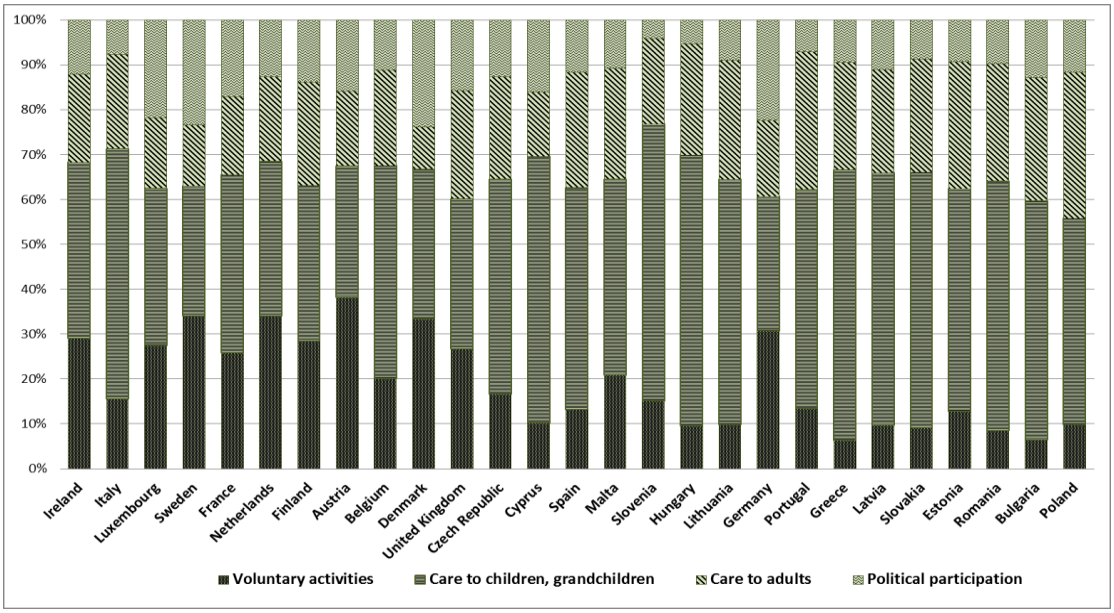
position in the overall AAI. In contrast, Denmark fares relatively worse in this domain (the 10th position among the 27 EU Member States) than in the overall AAI (the 2nd position).

With respect to gender differences, women tend relatively more often to score better than men in this domain. The gender difference is particularly notable in Latvia and Greece, where women does better than men. The opposite is true in Luxembourg.

4.2.2 Contribution of individual indicators to the 2nd domain

As Figure 4.8 shows, out of the four indicators that constitute the participation-in-society domain, it is generally the indicator on care to children/grandchildren whose relative contribution to the domain is the most pronounced. In ten of the 27 EU countries, this indicator is responsible for more than 50% of the overall domain results. Therefore, this indicator has a large implicit weight and thus a high impact on the ranking of countries.

Figure 4.8: Contribution of indicators to the 2nd domain (men & women together)



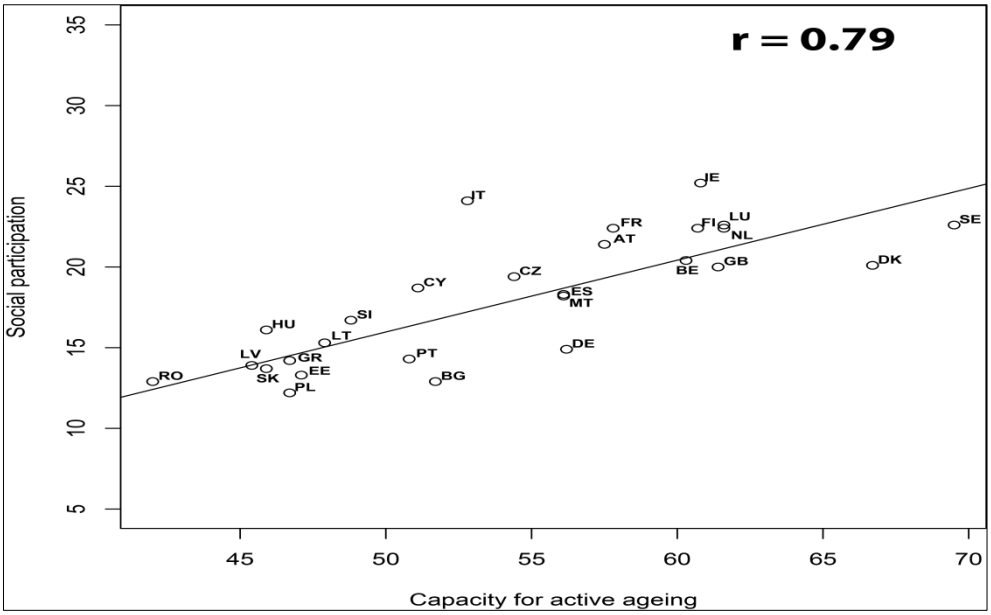
- The low ranking of Poland is, for instance, mainly due to the low percentage in volunteering activities through organisations, but it also scores low in the indicator with respect to care provision to children, grandchildren.
- The high ranking of Sweden in this domain mostly reflects the high share of its population engaged in volunteering and political activities. Its loss of top position is primarily due to a lower share of the population engaged in personal

care for elderly (10% in comparison to EU average 13%) and the care provision to children, grandchildren (26% in comparison to EU average 32%).[11]

4.2.3 Relationship between participation-in-society and capacity-and-enabling-environment-for-active-ageing domains

Figure 4.9 plots the relationship between the indices for the participation in society domain and the capacity and enabling environment for active ageing domain. There is high correlation between these two indices (r=0.79) which show that the active ageing capacity as captured by indicators of the 4th domain (such as healthy life expectancy, mental well-being, social connections, etc.) are strong associates of social participation outcomes for older populations across EU countries. Notable results are observed for Ireland and Italy, whose social participation index score is higher in comparison to other countries of comparable active ageing capabilities.

Figure 4.9: Relating participation-in-society and the capacity-and-enabling-environment-for-active-ageing indices



[11] However, there are some conceptual caveats which should be kept in mind in the interpretation of the indicators on care provision since the state provisions in Sweden for these two purposes are much higher than in many other EU countries.

4.3 Results for the 3rd domain: Independent, healthy and secure living

The third domain is the largest of the four domains used for measuring the active ageing index. It contains the following eight individual indicators of active and healthy ageing:

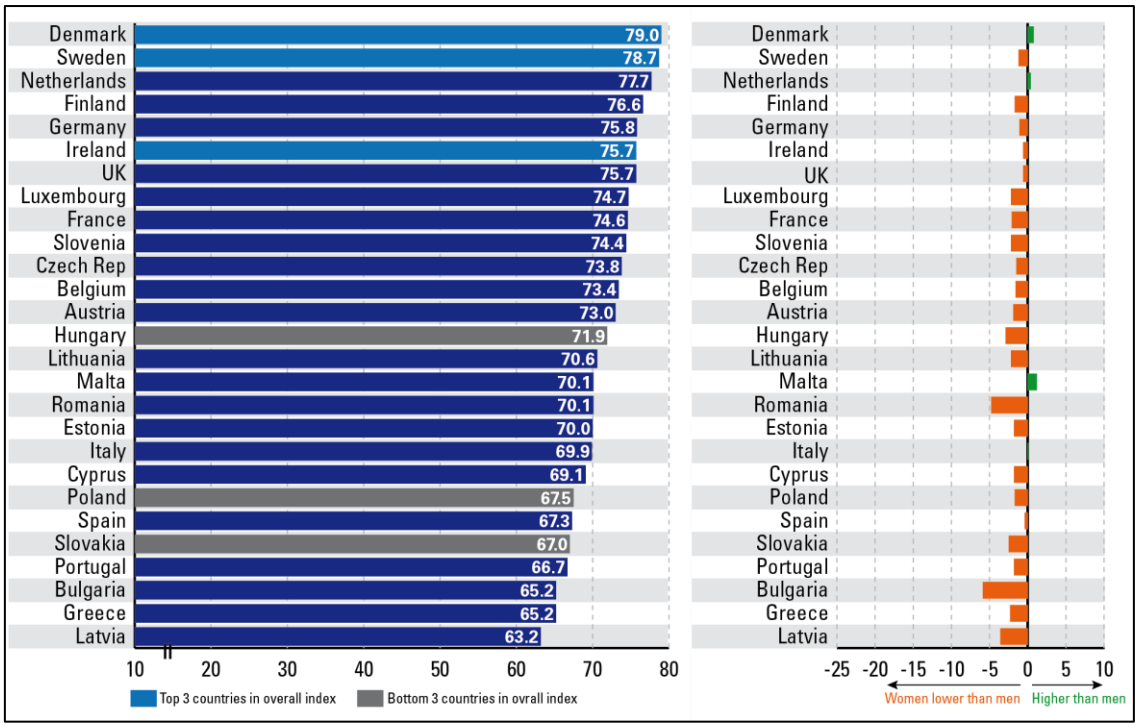
4.1. Physical exercise: percentage of older population aged 55+ who engage in physical activity and sport at least five times a week.
4.2. Access to health and dental care: percentage of older population aged 55+ who report no unmet need for medical and dental examination.
4.3. Independent living arrangements: percentage of persons aged 75 and older living in single or couple households.
4.4. Relative median income: ratio of the median equivalised disposable income of people aged 65+ to the median equivalised disposable income of those aged below 65.
4.5. No poverty risk for older persons: percentage of people aged 65+ who are not at the risk of poverty using 50% of the national median equivalised disposable income as the poverty threshold.
4.6. No severe material deprivation for older persons: percentage of people aged 65+ not severely materially deprived.
4.7. Physical safety for older population: percentage of older population aged 55+ who are not worried about becoming a victim of violent crime.
4.8. Lifelong learning: percentage of older persons aged 55-74 who received education or training in the 4 weeks preceding the survey.

4.3.1 Ranking of countries for the 3rd domain

Denmark, Sweden and the Netherlands are the top ranking countries in the independent, healthy and secure living domain (Figure 4.10). On the other extreme, Latvia, Bulgaria and Greece are ranked at the bottom indicating that older people have a much harder time to live an independent, healthy and secure life in these countries. Interestingly, Hungary and Poland, which are among the three bottom ranked countries in the overall active ageing index perform relatively well in this domain.

Figure 4.10 also shows that with the exception of Denmark, the Netherlands and Malta, where women have similar conditions for independent, healthy and secure living compared to men, women in the majority of countries score worse than men. This is especially the case in some of the Central and Eastern European EU Member States, such as Romania, Bulgaria, Latvia, Hungary and Slovakia, but also in Greece. Differences between men and women however remain relatively small across countries (below 5% points, with the exception of Bulgaria).

Figure 4.10: Ranking of EU countries using the 3rd domain Index, for the total population and for differences between men and women



4.3.2 Contribution of individual indicators to the 3rd domain

The top position of Denmark, Sweden and the Netherlands in the 3rd domain reflect their high performance at the single indicators level. In particular, Denmark excels in physical safety and lifelong learning indicators. Less than 8% of the Danish older population report problems regarding physical safety as opposed to more than 40% in Greece and Slovakia. It is therefore not surprising that the relative contribution of the physical safety indicator to the domain is high in Denmark; other countries with higher contribution for this indicator are Poland and Latvia (see Figure 4.11).

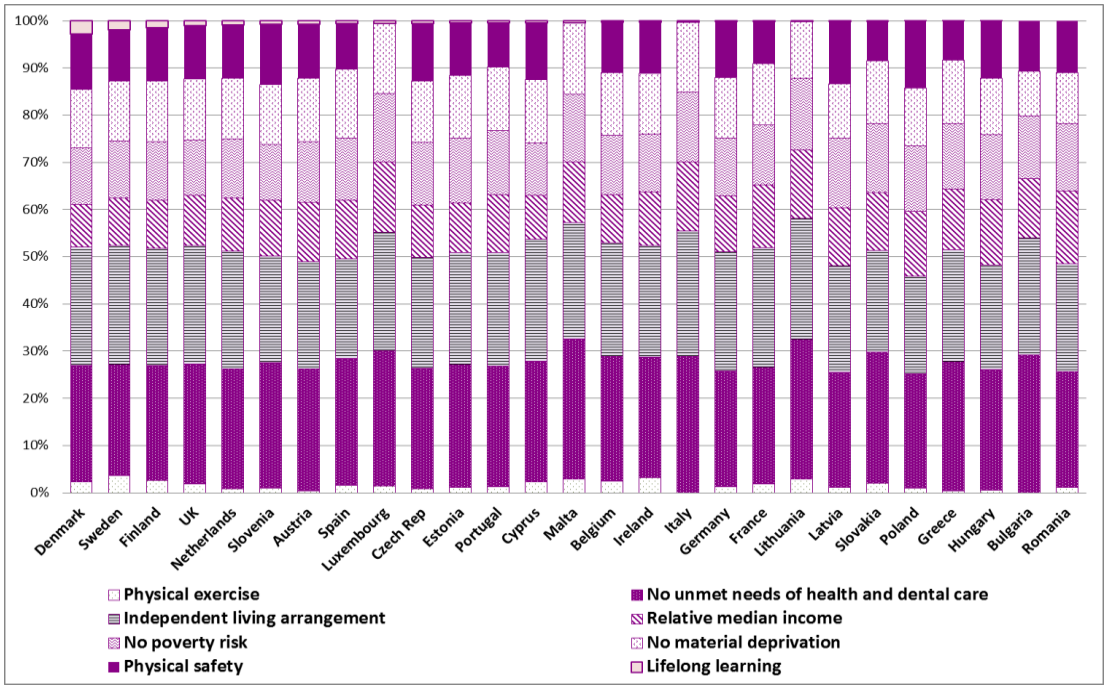
The share of those participating in lifelong learning is below 1% in Greece and Slovakia together with Hungary and Poland while in Denmark it reached 22%. Denmark has the highest relative contribution from the lifelong learning indicator.

While a relatively high share of the older population (over 95%) tends to have no unmet needs of health and dental care in Slovenia, the Netherlands, Belgium, Denmark, Ireland, Luxembourg and the United Kingdom, the corresponding figure is only 77% in Latvia and Romania highlighting the extent of room for improvement in the lowest performing countries. Malta, Bulgaria and Lithuania stand out for their relative contribution of the unmet needs indicator to the domain index (Figure 4.11).

Country performance in the area of financial security for older people varies depending on the particular indicator. In terms of relative poverty risk, the three best performing countries are the Czech Republic, Hungary and the Netherlands. Cyprus and Bulgaria are the worst performers. The proportion of older people not affected by severe material deprivation ranges from 56% in Bulgaria though around 70% in Latvia,

Lithuania and Romania to over 99% in Luxembourg, Denmark, the Netherlands and Sweden.

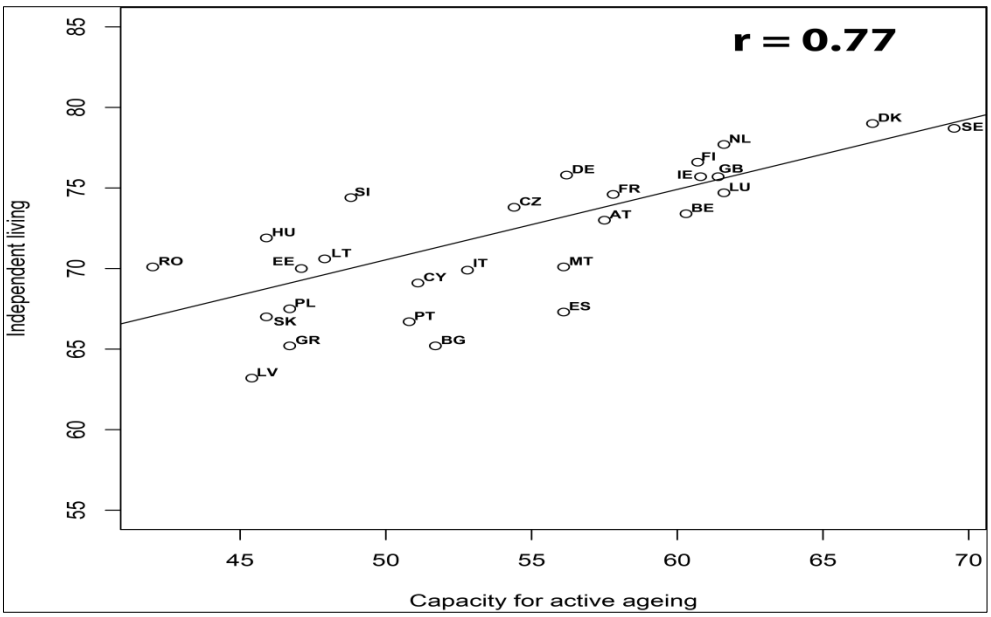
Figure 4.11: Contribution of indicators to the 3rd domain (men & women together)



4.3.3 Relationship between independent-healthy-and-secure living and capacity-and-enabling-environment-for-active-ageing domains

Figure 4.12 shows that the relationship between independent, healthy and secure living index and the index for the capacity and enabling environment for active ageing domain is also strong. There is high correlation between these two indices (r=0.77) which show that the active ageing capacity is strongly associated with the independent living outcomes. Notable results are that Spain, Italy and Greece and also Bulgaria and Latvia score relatively low in the independent, healthy and secure living in comparison to other countries of comparable active ageing capacities.

Figure 4.12: Relating independent-healthy-and-secure living index with the capacity-and-enabling-environment-for-active-ageing index

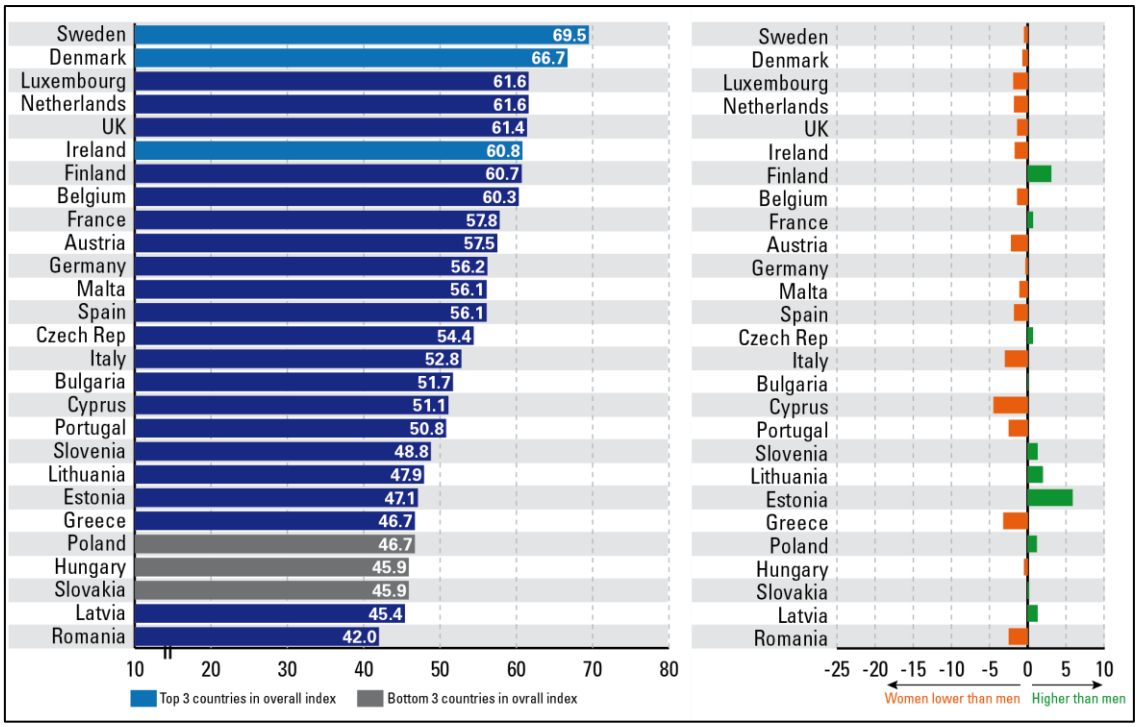


4.4 Results for the 4th domain: Capacity and enabling environment for active ageing

The domain capacity and enabling environment assesses a number of indicators that can be considered as pre-requisites for active ageing or factors that facilitate or contribute to active ageing. It is similar to a measure of potential for active ageing. Among the pre-requisites for active ageing are first of all to be able to live longer (i.e. life expectancy) in a healthy condition (e.g. share of life expectancy lived in good health, mental well-being). Among the enabling factors or active ageing capital are use of ICT, social contacts and educational attainment. Thus, the following six indicators have been included in this domain:

4.1. Remaining life expectancy achievement of 50 years at age 55
4.2. Share of healthy life years in the remaining life expectancy at age 55
4.3. Mental well-being
4.4. Use of ICT by older persons aged 55-74 at least once a week (including everyday)
4.5. Social connectedness: Percentage of older population aged 55+ who meet friends, relatives or colleagues at least once a month
4.6. Educational attainment of older persons: Percentage of older persons aged 55-74 with upper secondary or tertiary educational attainment

Figure 4.13: Ranking of EU countries using the 4th domain Index, for the total population and for differences between men and women



4.4.1 Ranking of countries for the 4th domain

Overall, countries which are in the top five of the aggregated AAI are also forerunners in this particular domain (see Figure 4.9). The exception is Luxembourg, which does remarkably well in terms of capacity and enabling environment for active ageing, but then seems to fall short of fulfilling its potential in the aggregated AAI. The same could also be said of Belgium and Spain, which rank considerably higher in the domain of capacity and enabling environment for active ageing (8th and 12th respectively) than in the overall AAI (14th and 17th). On the opposite direction, Cyprus and Portugal manage to age actively – aggregate AAI – despite having relatively lower capacities and enabling environment for active ageing.

Differences between women and men in the index values of this domain are relatively small (see right panel of Figure 4.8) particularly if compared to the results of the 1st domain. While the index values for women are lower than that of men in the majority of countries indicating better capacity and enabling environment for active ageing for men, there are some countries, for instance Estonia, Finland, Lithuania and Slovenia, where the opposite is the case.

4.4.2 Contribution of individual indicators to the 4th domain

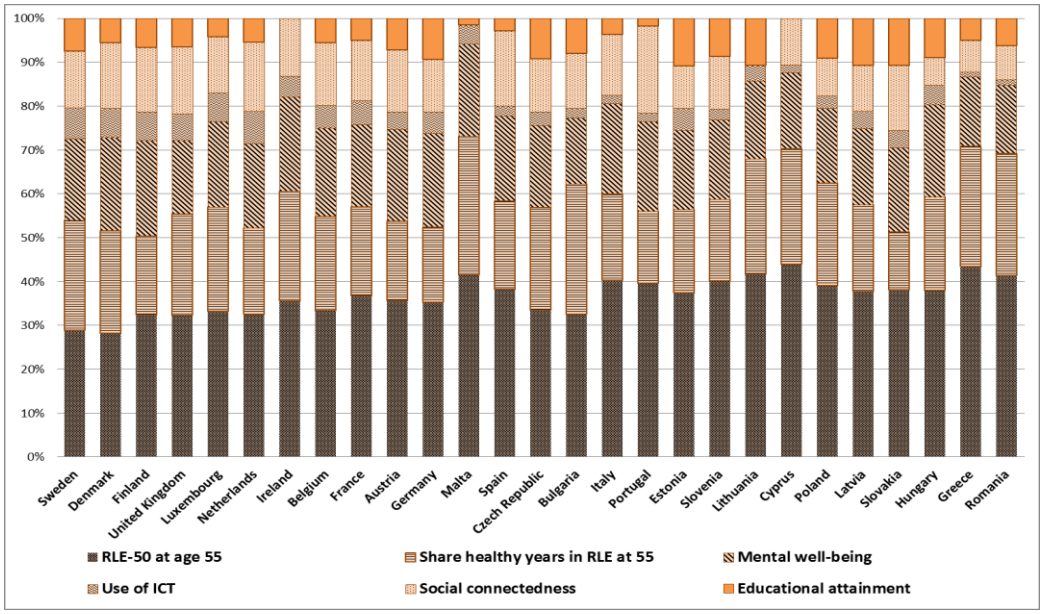
A closer look at the indicators that make up this domain shows that France, Italy and Spain have the highest life expectancies at the age of 55, but a great share of this life expectancy is apparently lived in poor health, both physical and mental. This inverse relation is not always the case though. Sweden has, for instance, a high life expectancy at 55 and yet good health indicators for its older population. Members States from

Central and Eastern Europe and Portugal seem to have the worst of two worlds: relatively lower life expectancy at 55 and a relatively poor health condition.

As for the relative contribution of the remaining life expectancy at 50 indicator, the Southern European countries have a relative contribution in excess of 40% (see Figure 4.14). Malta in particular score high for the remaining life expectancy and healthy life expectancy indicators, and Romania and Bulgaria score high for the contribution of the healthy life expectancy.

As for the other enabling factors – use of ICT, social contacts and educational attainment – each indicator seems to tell a different story as far as the country ranking is concerned. Overall, however, social connectedness is one of the indicators with greater scope for improvement for countries and one where there are substantial cross-country differences. Portuguese and Spanish fare very well in maintaining social contacts in old age, but this is far from being the case for Greek and Cypriot older people who are much less likely to maintain social contacts with friends or relatives. This makes them closer to the Germans and Central and Eastern European counterparts, which are in general far more socially isolated.

Figure 4.14: Contribution of indicators to the 4th domain (men & women together)



Finally, with regard to educational attainment, Portugal, Malta, Spain, Italy or Greece do not just compare unfavourable with the EU average, but they are also relatively far behind that average (the difference ranging from 20% points for Greece to 40% points in the case of Portugal). In contrast, this is one indicator where Member States from Central and Eastern Europe and also Germany do best. The relative contribution of educational attainment is high in Latvia, Lithuania, Slovakia and Estonia (close to 10%) and remarkably low in Portugal (1.7%).

Chapter 5: Synthesizing discussion

The Active Ageing Index reported in this paper has been calculated for the 27 EU Member States, with a focus on the current generation of older people (in most cases for those aged 55+), and using the data for the latest year (data correspond to 2010 and 2011 in most instances). Most importantly, it covers diverse aspects of active and healthy ageing, by measuring older people's potential with respect to not just employment but also to their unpaid familial, social and cultural contributions as well as their independent, healthy and secure living. It also captures how EU countries differ with respect to capacity and enabling environment for active and healthy ageing. It offers the breakdown by gender, to highlight the specific social policy goal of reducing gender disparity in experiences of ageing across EU countries.

The core endeavour of the AAI is to offer to a wide range of users (e.g. policy makers, researchers, students, private businesses) a flexible toolset that helps them understand the challenges of ageing and also what policies and programmes can possibly be utilised to tackle them. The AAI tool is made available in an easy-to-use transparent way, which will allow its users to add new data and indicators, additional countries or regions within the countries, with disaggregation across subgroups. It will also be possible for users to apply different weighting methods (if necessary) to the indicators and domain-specific indices depending upon the situation in the country in question and policy goals.

The project results reported in this paper show advancement over previous work in many ways, particularly in providing internationally comparable evidence on the relative position of EU countries with respect to the untapped potential of older people in various diverse aspects of active and healthy ageing. The AAI offers a start in this respect and future studies must continue to build on this and the earlier work towards measuring active ageing potential. The substantive pieces of additional future research that are identified as a result of the discussions and research during the AAI project address the following research questions:

- What is the link between active ageing and the quality of life of older people?
- How and what forms of active and healthy ageing contribute to improving financial sustainability of public welfare systems?
- How do the active ageing experiences differ by subgroups (such as differences between the high educated and others; between the people with disabilities and others)?
- What various forms of activities and healthy living are preferred by older people, and what factors that help or hinder them? How do such preferences differ by various demographic and socio-economic characteristics?
- What are the social policy contexts in which differences in active and healthy ageing exist and what could be the role of social policies in maintaining or accentuating these differences across countries and subgroups?
- What explanatory factors show the impact of the life course experiences for the purpose of design of better active ageing policies?

Also it can be emphasized that the AAI should not be a static index; instead it should stay up to date with the changing views of active ageing in the future. For the future course of the AAI construction work, the following issues of methodology and scope will assume importance:

- Monitoring of active and healthy ageing outcomes over time, including filling in data gaps, analysing changes over time (possibly with two years intervals) and also showing retrospective trends;
- Making improvements in scope and country coverage of the AAI, in particular expanding the coverage to other non-EU European and OECD countries.

In the longer-term, the extension and adaptation of this index to other global regions can be envisaged. However, before extending it to other countries, the index needs to gain acceptance by key stakeholders at the EU level. It is also important to maintain the continuity of the index, adhering to the currently agreed list of indicators and the aggregation methodology. Additional research is planned within the newly funded FP7 project MOPACT (Mobilising the potential of Active Ageing), which includes a work package on potential for realising active ageing, to be undertaken by researchers based at the University of Sheffield, the European Centre Vienna and the University of Southampton.

References

Akder, A. (1994), 'A Means to Closing Gaps: Disaggregated Human Development Index', Human Development Report Office Occasional Paper No. 18. UNDP: New York.

Anand, S. and A. Sen (1995), 'Gender Inequality in Human Development: Theories and Measurement', Human Development Report Office Occasional Paper No. 19. UNDP: New York.

Atkinson, A.B., E. Marlier and B. Nolan (2004) 'Indicators and Targets for Social Inclusion in the European Union', JCMS 2004, Volume 42, Number 1. pp. 47–75

Bardhan, K. (1999), 'UNDP's gender-related indices: a critical review', *World Development*, 27(6), pp.985-1010.

Bradshaw, J. and D. Richardson (2009), 'An Index of Child Well-Being in Europe', *Child Indicators Research*, 2:319-351.

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

European Commission (2013) "Towards Social Investment for Growth and Cohesion – including implementing the European Social Fund 2014-2020", Communication from the Commission to the European Parliament, The Council, the European Economic And Social Committee and The Committee of the Regions. COM(2013) 83 final.

European Commission (2012), 'Taking forward the Strategic Implementation Plan of the European Innovation Partnership on Active and Healthy Ageing (EIP-AHA)', COM (2012) 83 final.

European Commission (2011). 'State of the Innovation Union 2011', Report from the commission to the European parliament, the council, the European economic and social committee and the committee of the regions, Brussels, 2.12.2011, COM(2011) 849 final. Available at:

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0849:FIN:en:PDF

European Commission (2010a), 'EUROPE 2020 A Strategy for smart, sustainable and inclusive growth', Brussels, 3.3.2010 COM (2010) 2020 Final. Available on: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF

European Commission (2010b), 'Sport and Physical Activity', Special Eurobarometer 334 (Wave 72.3). TNS Opinion & Social: Brussels.

European Commission (2002), 'Europe's response to world ageing: Promoting economic and social progress in an ageing World', A contribution of the European Commission to the 2nd World Assembly on Ageing, 143 final. Available at: http://europa.eu.int/comm/employment_social/social_situation/docs/com2002_0143_en.pdf

EUROSTAT (2011), 'Active ageing and solidarity between generations – A statistical portrait of the European Union 2012', Eurostat Statistical Books, Luxembourg: Publications Office of the European Union. Available at: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-EP-11-001/EN/KS-EP-11-001-EN.PDF

Haekkerup, K. (2012), 'Speech at the opening of conference of the European Year of Active Ageing and Solidarity between Generations', Copenhagen.

Institute of Medicine (IOM) (2007), 'The Future of Disability in America;, Washington, DC: The National Academies.

Kaneda, T, M. Lee, and K. Pollard, K. (2011), 'SCL/PRB Index of Well-Being in Older Populations - Final Report Global Ageing and Monitoring Project', Washington DC: Population Reference Bureau.

Klasen, S. and D. Schüler (2011), 'Reforming the Gender-Related Development Index and the Gender Empowerment Measure: Implementing Some Specific Proposals', *Feminist Economics*, 17(1): 1-30.

Marin, B. (2013), *Welfare in an Idle Society? Reinventing Retirement, Work, Wealth, Health and Welfare*, Aldershot: Ashgate.

OECD (2008), 'Handbook on Constructing Composite Indicators: Methodology and User Guide', OECD, European Commission, Joint Research Centre, Paris. Available at: http://composite-indicators.jrc.ec.europa.eu/Handbook.htm

Permanyer, I. (2011), 'Are UNDP Indices Appropriate to Capture Gender Inequalities in Europe?', in *Social Indicators Research*, DOI 10.1007/s11205-011-9975-6.

Sanderson, W.C. and S. Scherbov (2010), 'Remeasuring Ageing', *Science* 329: 1287

Sanderson, W.C. and S. Scherbov (2007), 'A New Perspective on Population Ageing', *Demographic Research* 16, Article 2: 27–58.

Sen, A. K. (1985) 'Well-being, Agency and Freedom: The Dewey Lectures 1984', *The Journal of Philosophy*, 82 (4), pp. 169-221.

Sen, A. K. (1993). 'Capability and Well-Being', in M. Nussbaum and A. K. Sen (eds.),*The Quality of Life*. Oxford: Oxford University Press.

Sen, A.K. (2009a) *The Idea of Justice*, Penguin: London.

Sidorenko, A. and A. Zaidi (2013), 'Active Ageing in CIS Countries: Semantics, Challenges, and Responses', *Current Gerontology and Geriatrics Research*, Volume 2013, Article ID 261819. Available at: http://dx.doi.org/10.1155/2013/261819

UNECE (2012a), 'Active Ageing', UNECE Policy Brief on Ageing No. 13, June 2012, United Nations Economic Commission for Europe, Geneva. Available at:

http://www.unece.org/fileadmin/DAM/pau/age/Policy_briefs/ECE-WG.1.17.pdf

UNECE (2012b), 'Active Ageing and Quality of Life In Old Age', Report prepared by Clemens Tesch-Roemer of German Centre of Gerontology, ECE/WG.1/16, United Nations Economic Commission for Europe, Geneva. Available at: http://www.unece.org/index.php?id=30027

UNDP (1990), 'Human Development Report 1990', Published for the United Nations Development Programme (UNDP), New York, Oxford University Press. Available at: http://hdr.undp.org/en/media/hdr_1990_en_front.pdf

Walker, A. (2010), 'The Emergence and Application of Active Aging in Europe' in Naegele, G., ed., *Soziale Lebenslaufpolitik*. Wiesbaden: VS Verlag fuer Sozialwissenschaften, pp. 585-601.

Warburton, D., C. Nicol, and S. Bredin (2006), 'Health benefits of physical activity: the evidence', *Canadian Medical Association Journal*, 174(6) doi: 10.1503/cmaj.051351

World Health Organisation (2002), 'Active Ageing - A Policy Framework', A contribution of the World Health Organization to the Second United Nations World Assembly on Ageing, Madrid, Spain, April 2002.

Zaidi, A. (2011) "The situation of working-age people with disabilities across the EU", Research Note 5 Social Situation Observatory – Income distribution and living conditions, Commissioned by DG Employment, Social Affairs and Inclusion, European Commission. Available at: http://www.socialsituation.eu/research-notes/SSO2011%20RN5%20Disability_Final.pdf

Zaidi, A. and E. Zólyomi (2012), "Active Ageing: What Differential Experiences across EU Countries?" *European Papers on the New Welfare*, Paper No. 17: Counter-ageing Policies. Available at: http://eng.newwelfare.org/2012/04/13/active-ageing-what-differential-experiences-across-eu-countries/#.UBJqYCIhEfg

Zaidi, A., K. Gasior, M. M. Hofmarcher, O. Lelkes, B. Marin, R. Rodrigues, A. Schmidt, P. Vanhuysse and E. Zolyomi (2012) "Towards An Active Ageing Index: Concept, Methodology and First Results" EC/UNECE, Active Ageing Index Project, UNECE Grant ECE/GC/2012/003, European Centre for Social Welfare Policy and Research, Vienna, July 2012.

Annex A.1: Information on chosen indicators for the 1st domain: Employment

1.1 Employment rate for the age group 55-59

Definition	Employed persons are those: • Who are aged 15 year and over (16 and over in ES, IT, UK and SE); (15-74 years in DK, EE, HU, LV, FI and SE); • who during the reference week performed work, even for just one hour a week, for pay, profit or family gain; • who were not at work but had a job or business from which they were temporarily absent because of, e.g., illness, holidays, industrial dispute or education and training.
Goal (rationale)	To capture employment activities of older workers at a late stage of their careers.
Survey question	Did you do any paid work in the 7 days ending Sunday the [*date*], either as an employee or as self-employed? 1 Yes 2 No Even though you were not doing paid work, did you have a job or business that you were away from in the week ending Sunday the [*date*] (and that you expect to return to)? 1 Yes 2 No 3 Waiting to take up a new job/business already obtained
Source	EU-LFS
Year	2010
Notes	The rationale for choosing employment rate over economic activity is that the activity (and not being available to undertake activity) is important in measuring the experiences for active ageing. The issue on how to capture the potential for employment was also considered and it is considered that this might be partly captured in the indicator 'healthy life expectancy'. One limitation of the indicator is that it makes no distinction between part-time and full-time workers.

1.2 Employment rate for the age group 60-64

Definition	Definition of employed persons the same as for indicator 1.1
Goal (rationale)	To capture employment activities of older workers at the very late stage of their careers, especially during the ages when a good majority of workers in the EU countries exit the labour market for retirement.
Survey question	Same as for indicator 1.1
Source	EU-LFS
Year	2010
Notes	Same as for indicator 1.1

1.3 Employment rate for the age group 64-69

Definition	Same as for indicator 1.1
Goal (rationale)	To capture labour market engagement of older people close to or beyond the normal retirement age
Survey question	Same as for indicator 1.1
Source	EU-LFS
Year	2010
Notes	Same as for indicator 1.1

1.4 Employment rate for the age group 70-74

Indicator name	Employment rate for the age group 70-74
Definition	Same as for indicator 1.1
Goal (rationale)	To capture labour market engagement of older people well beyond the normal retirement age in many of the countries in question.
Survey question	Same as for indicator 1.1
Source	EU-LFS
Year	2010
Notes	Same as for indicator 1.1; also, in many EU countries people of this age might not declare that they worked at least one hour for pay (or profit) during the reference week (the ILO definition in the Labour Force Survey), especially since they work only occasionally.

Employment (TOTAL)		1.1 Employment rate 55-59	1.2 Employment rate 60-64	1.3 Employment rate 65-69	1.4 Employment rate 70-74
Nr.	**Country**	**LFS-2010**	**LFS-2010**	**LFS-2010**	**LFS-2010**
1	Belgium	53.1	20.2	4.1	1.8
2	Bulgaria	62.2	26.6	7.0	2.4
3	Czech Republic	67.1	25.2	9.5	3.6
4	Denmark	76.9	40.8	12.3	6.0
5	Germany	71.5	41.0	8.6	3.6
6	Estonia	63.1	42.8	19.7	12.1
7	Ireland	58.9	40.4	16.7	7.8
8	Greece	53.9	30.5	9.5	3.5
9	Spain	54.4	32.0	5.3	1.5
10	France	60.6	17.9	4.0	1.3
11	Italy	52.7	20.5	7.0	3.4
12	Cyprus	69.7	41.9	20.3	12.3
13	Latvia	64.3	29.4	12.8	6.7
14	Lithuania	61.1	33.8	10.7	3.9
15	Luxembourg	55.7	20.1	5.5	3.0
16	Hungary	51.7	13.0	4.9	1.5
17	Malta	49.3	14.2	5.8	3.7
18	Netherlands	70.1	37.3	12.0	6.2
19	Austria	61.0	22.3	9.3	5.9
20	Poland	45.8	19.1	9.4	5.0
21	Portugal	57.8	40.2	24.0	19.1
22	Romania	50.2	29.5	24.5	21.4
23	Slovenia	46.9	19.5	11.4	8.7
24	Slovakia	57.9	17.2	3.6	1.8
25	Finland	72.5	40.8	10.6	4.2
26	Sweden	80.7	61.0	15.4	6.9
27	United Kingdom	70.8	44.0	19.8	7.2
	Mean	60.7	30.4	11.2	6.1
	STDV	9.3	11.7	6.1	5.0
	N	27	27	27	27
	Min	45.8	13.0	3.6	1.3
	Max	80.7	61.0	24.5	21.4

Employment (MEN)		1.1 Employment rate 55-59	1.2 Employment rate 60-64	1.3 Employment rate 65-69	1.4 Employment rate 70-74
Nr.	**Country**	**LFS-2010**	**LFS-2010**	**LFS-2010**	**LFS-2010**
1	Belgium	63.3	26.2	5.7	2.8
2	Bulgaria	63.2	38.2	10.9	4.0
3	Czech Republic	78.9	36.6	12.4	5.3
4	Denmark	78.7	48.5	17.9	8.8
5	Germany	78.1	49.2	10.8	5.0
6	Estonia	59.0	44.1	21.2	13.0
7	Ireland	66.2	49.2	23.2	13.0
8	Greece	69.9	42.0	15.0	5.3
9	Spain	67.7	40.5	6.3	2.1
10	France	64.2	19.1	5.1	1.7
11	Italy	65.6	29.6	10.7	6.1
12	Cyprus	83.4	56.7	29.6	19.6
13	Latvia	60.9	31.0	13.9	8.6
14	Lithuania	61.9	40.2	12.2	3.9
15	Luxembourg	65.3	25.9	8.6	3.0
16	Hungary	57.4	16.9	6.7	2.1
17	Malta	74.6	23.7	9.9	7.6
18	Netherlands	81.2	47.7	16.5	9.6
19	Austria	71.1	30.3	12.1	7.4
20	Poland	59.4	26.7	13.4	7.5
21	Portugal	65.1	45.5	28.6	24.2
22	Romania	61.0	36.5	27.2	23.4
23	Slovenia	59.0	26.5	14.8	11.9
24	Slovakia	72.1	28.5	4.6	1.8
25	Finland	69.9	41.8	14.7	6.6
26	Sweden	82.8	66.2	20.6	10.5
27	United Kingdom	75.8	54.6	24.2	9.2
	Mean	68.73	37.85	14.70	8.30
	STDV	8.0	12.1	7.2	6.1
	N	27	27	27	27
	Min	57.4	16.9	4.6	1.7
	Max	83.4	66.2	29.6	24.2

Employment (WOMEN)		1.1 Employment rate 55-59	1.2 Employment rate 60-64	1.3 Employment rate 65-69	1.4 Employment rate 70-74
Nr.	**Country**	**LFS-2010**	**LFS-2010**	**LFS-2010**	**LFS-2010**
1	Belgium	43.1	14.4	2.7	1.0
2	Bulgaria	61.2	17.0	4.0	0.8
3	Czech Republic	55.9	15.0	7.1	2.4
4	Denmark	75.0	33.2	7.1	3.4
5	Germany	65.1	33.0	6.5	2.4
6	Estonia	66.4	41.9	16.2	11.7
7	Ireland	51.5	31.5	10.4	3.5
8	Greece	38.0	20.3	5.4	1.9
9	Spain	41.7	24.2	4.5	1.1
10	France	57.2	16.7	3.0	0.8
11	Italy	40.5	11.9	3.6	1.2
12	Cyprus	56.2	28.0	11.7	5.7
13	Latvia	67.1	28.2	12.1	5.7
14	Lithuania	60.5	29.3	9.7	3.9
15	Luxembourg	45.5	14.1	3.9	3.0
16	Hungary	46.9	9.8	3.7	1.1
17	Malta	22.5	5.5	1.7	0.0
18	Netherlands	59.0	26.7	7.7	3.1
19	Austria	51.3	14.7	6.8	4.6
20	Poland	33.6	12.7	6.4	3.3
21	Portugal	51.1	35.7	20.1	15.1
22	Romania	40.6	23.5	22.4	19.9
23	Slovenia	34.0	13.0	8.2	6.6
24	Slovakia	45.0	7.7	2.9	1.8
25	Finland	75.0	39.9	7.0	2.2
26	Sweden	78.5	55.9	10.3	3.5
27	United Kingdom	66.0	33.8	15.7	5.5
	Mean	52.9	23.6	8.2	4.3
	STDV	14.0	12.1	5.3	4.6
	N	27	27	27	27
	Min	22.5	5.5	1.7	0.0
	Max	78.5	55.9	22.4	19.9

Annex A.2: Information on chosen indicators for the 2nd domain: Participation in Society

2.1. Voluntary activities

Definition	Percentage of older population aged 55+ providing unpaid voluntary work through the organisations
Goal (rationale)	To capture non-market unpaid productive activities of older population offered in the form of organised voluntary activities.
Survey question	Please look carefully at the list of organisations and tell us, how often did you do unpaid voluntary work through the following organisations in the last 12 months? a. Community and social services (e.g. organisations helping the elderly, young people, disabled or other people in need). b. Educational, cultural, sports or professional associations Social movements (for example environmental, human rights)or charities (for example fundraising, campaigning) c. Other voluntary organisations
Source	EQLS
Year	2011
Notes	Voluntary work undertaken through the organisations is captured, thus missing out on informal voluntary activities often undertaken by older people. This definition may introduce systematic bias against some countries (e.g. Poland) where there are lower levels of organised volunteering activities.

2.2. Care to children, grandchildren

Definition	Percentage of older population aged 55+ providing care to their children, grandchildren (<u>at least once a week</u>)
Goal (rationale)	To capture activity of older populations in the form of care provision to their own children or grandchildren.
Survey question	In general, how often are you involved in any of the following activities outside of work? a. Caring for your children, grandchildren 1. Every day; 2. Several days a week 3. Once or twice a week 4. Less often 5. Never
Source	EQLS
Year	2011
Notes	No restriction for resident or non-resident children in this definition of the indicator, and also no age restriction for children, grandchildren. The restriction applied is that the care provision should be at least once a week. The occasional care, provided less than once a week, is not included in the indicator.

2.3. Care to older adults

Definition	Percentage of older population aged 55+ providing care to elderly or disabled relatives (at least once a week)
Goal (rationale)	To capture valuable activities of older populations in the form of care provision to older adults.
Survey question	c. Caring for elderly or disabled relatives 1. Every day; 2. Several days a week 3. Once or twice a week 4. Less often 5. Never
Source	EQLS
Year	2011
Notes	It includes care provision for resident as well as non-resident adults and not just the elderly but also the disabled relatives. The occasional care, provided less than once a week, is not included in the indicator.

2.4. Political participation

Definition	Percentage of older population aged 55+ taking part in the activities of meeting of a trade union, a political party or political action group
Goal (rationale)	To capture the wider participation of older population in political and trade union activities and thus their abilities to influence decision making of these organisations.
Survey question	Over the last 12 months, have you …? a. Attended a meeting of a trade union, a political party or political action group; b. Attended a protest or demonstration; c. Contacted a politician or public official (other than routine contact arising from use of public services) 1 Yes 2 No
Source	EQLS
Year	2011
Notes	Participation recorded not just in political parties but also in trade union activities is included here.

Participation in society (TOTAL)		2.1 Voluntary activities	2.2 Care to children, grandchildren	2.3 Care to older adults	2.4 Political participation
Nr.	**Country**	**EQLS-2011**	**EQLS-2011**	**EQLS-2011**	**EQLS-2011**
1	Belgium	16.4	38.7	14.5	11.4
2	Bulgaria	3.3	27.4	11.8	8.3
3	Czech Republic	12.9	37.2	14.8	12.3
4	Denmark	26.8	26.8	6.3	24.0
5	Germany	18.3	17.9	8.5	16.7
6	Estonia	6.8	26.5	12.6	6.2
7	Ireland	29.3	39.4	16.5	15.2
8	Greece	3.6	34.1	11.3	6.7
9	Spain	9.6	36.1	15.7	10.6
10	France	23.2	35.5	13.0	19.2
11	Italy	14.9	53.7	16.9	9.2
12	Cyprus	7.6	44.5	9.0	15.0
13	Latvia	5.4	31.3	10.7	7.7
14	Lithuania	6.0	33.3	13.5	6.9
15	Luxembourg	24.8	31.6	11.8	24.7
16	Hungary	6.1	38.9	13.3	4.3
17	Malta	15.2	31.7	15.0	9.8
18	Netherlands	30.5	30.9	14.0	14.3
19	Austria	32.7	25.0	11.9	17.0
20	Poland	4.8	22.5	13.3	7.1
21	Portugal	7.6	27.9	14.6	5.1
22	Romania	4.4	28.7	11.3	6.3
23	Slovenia	10.1	41.2	10.6	3.5
24	Slovakia	5.0	31.2	11.5	6.0
25	Finland	25.5	31.0	17.1	15.6
26	Sweden	30.7	26.1	10.2	26.5
27	United Kingdom	21.4	26.7	16.1	15.8
	Mean	14.9	32.4	12.8	12.1
	STDV	9.9	7.4	2.7	6.4
	N	27	27	27	27
	Min	3.3	17.9	6.3	3.5
	Max	32.7	53.7	17.1	26.5

Participation in society (MEN)		2.1 Voluntary activities	2.2 Care to children, grandchildren	2.3 Care to older adults	2.4 Political participation
Nr.	Country	EQLS-2011	EQLS-2011	EQLS-2011	EQLS-2011
1	Belgium	18.4	40.3	14.3	13.6
2	Bulgaria	3.2	27.0	11.3	8.5
3	Czech Republic	13.0	38.2	17.6	15.8
4	Denmark	30.9	26.9	5.1	31.3
5	Germany	20.9	17.3	7.3	21.4
6	Estonia	5.2	21.0	13.5	9.7
7	Ireland	30.1	34.8	12.1	20.0
8	Greece	4.2	27.7	7.1	10.6
9	Spain	9.6	30.3	13.2	16.7
10	France	22.7	38.9	11.3	22.1
11	Italy	17.2	49.9	15.1	13.1
12	Cyprus	9.7	37.9	8.3	20.2
13	Latvia	3.8	22.9	6.9	6.2
14	Lithuania	2.5	33.5	16.8	8.2
15	Luxembourg	27.9	31.8	15.0	38.9
16	Hungary	8.5	36.6	13.4	7.8
17	Malta	17.2	31.4	12.5	15.1
18	Netherlands	31.0	32.5	14.0	19.7
19	Austria	39.4	22.1	10.8	23.5
20	Poland	5.5	17.4	11.0	9.0
21	Portugal	7.8	29.3	12.5	5.9
22	Romania	4.2	28.3	7.4	8.7
23	Slovenia	12.8	37.8	12.9	4.6
24	Slovakia	7.7	27.0	9.4	9.0
25	Finland	25.4	28.6	15.9	15.4
26	Sweden	32.2	26.9	10.6	26.1
27	United Kingdom	19.9	26.3	14.3	17.0
	Mean	16.0	30.5	11.8	15.5
	STDV	10.9	7.4	3.3	8.3
	N	27	27	27	27
	Min	2.5	17.3	5.1	4.6
	Max	39.4	49.9	17.6	38.9

Participation in society (WOMEN)		2.1 Voluntary activities	2.2 Care to children, grandchildren	2.3 Care to older adults	2.4 Political participation
Nr.	Country	EQLS-2011	EQLS-2011	EQLS-2011	EQLS-2011
1	Belgium	14.7	37.3	14.7	9.7
2	Bulgaria	3.3	27.8	12.2	8.1
3	Czech Republic	12.8	36.4	12.7	9.6
4	Denmark	23.1	26.8	7.4	17.5
5	Germany	16.1	18.3	9.4	12.7
6	Estonia	7.8	29.9	12.1	3.9
7	Ireland	28.5	43.7	20.1	10.6
8	Greece	3.2	39.7	15.0	3.1
9	Spain	9.5	41.0	17.8	5.5
10	France	23.5	32.9	14.4	17.0
11	Italy	13.0	56.8	18.3	6.0
12	Cyprus	5.8	50.1	9.5	10.6
13	Latvia	6.3	36.2	12.8	8.7
14	Lithuania	8.1	33.1	11.7	6.2
15	Luxembourg	22.0	31.5	8.9	12.0
16	Hungary	4.4	40.6	13.1	1.8
17	Malta	13.6	31.9	17.0	5.4
18	Netherlands	30.0	29.4	14.1	9.4
19	Austria	27.3	27.3	12.8	11.8
20	Poland	4.4	26.2	14.8	5.8
21	Portugal	7.5	26.8	16.1	4.5
22	Romania	4.6	29.1	14.0	4.5
23	Slovenia	8.0	43.9	8.9	2.6
24	Slovakia	2.9	34.3	13.2	3.8
25	Finland	25.5	32.9	18.1	15.8
26	Sweden	29.4	25.4	9.8	26.9
27	United Kingdom	22.7	27.1	17.6	14.7
	Mean	14.0	33.9	13.6	9.2
	STDV	9.3	8.3	3.3	5.7
	N	27	27	27	27
	Min	2.9	18.3	7.4	1.8
	Max	30.0	56.8	20.1	26.9

Annex A.3: Information on chosen indicators for the 3rd domain: Independent, healthy and secure living

3.1 Physical exercise

Definition	Percentage of people aged 55 years and older undertaking physical exercise or sport at least 5 times a week.
Goal (rationale)	This indicator is part of the domain on independent and autonomous living. While the benefits of moderate physical activity in old-age have been widely recognized by research (see Warburton et al, 2006 for a review and WHO's Global Strategy on Diet, Physical Activity and Health[12]), performing moderate physical activity can also be seen as an indication of maintaining the necessary balance and mobility to allow people to remain active in their communities and able to function independently.
Survey question	The Eurobarometer (European Commission, 2010b) survey contains two questions on the weekly frequency of physical activity: 1. How often do you exercise or play sport? 2. And how often do you engage in a physical activity outside sport such as cycling or walking from a place to another, dancing, gardening…? Those replying "5 times a week or more" to any of the above questions have been considered as being physically active for the purpose of this indicator.
Source	Special Eurobarometer 334 (European Commission, 2010b).
Year	October 2009 (Fieldwork)
Notes	While strenuous physical exercise can be harmful in some circumstances, given the questions on which the indicator is based however, it is likely that this refers not to more demanding or physically intense activities, but to those which involve only moderate exercise.

[12] See http://www.who.int/dietphysicalactivity/factsheet_olderadults/en/index.html.

3.2 Access to health and dental care

Definition	Percentage of people aged 55 years and older who report no unmet need for medical and dental examination or treatment during the last 12 months preceding the survey.
Goal (rationale)	The indicator aims to capture the importance of enablement through access to health care. For older people to lead an active, healthy and independent life and to be able to actively participate in society it is essential that they can easily access health care services. This is especially important to older age groups as they are more likely to have a need of medical services.
Survey question	The indicator refers to respondents who say that there was no occasion when the person really needed medical or dental examination or treatment but was not able to receive it.
Source	EU-SILC
Year	2010
Notes	The indicator is aimed at assessing access in general to examinations by medical doctors including GPs as well as specialists. Focus is placed on the actual treatment and not just the formal coverage.
Caveats	Access is conceptualised as a subjective concept of unmet need, that is, responses are based on the person's own assessment (i.e. what constitutes a ´real need´ of medical or dental examination), which means that it can be influenced by personal or cultural biases.

3.3 Independent living arrangements

Definition	Percentage of people aged 75 years and older who live in a single household alone or in a couple household.
Goal (rationale)	The indicator aims to capture decisional autonomy regarding one's own life in old age.
Survey question	
Source	EU-SILC
Year	2010
Notes	This indicator has been selected at the recommendation of the Expert Group as a measure for independent living.
Caveats	Living with other members of the household is not necessarily loss of independence, and multi-generational households can also be seen as independent living.

3.4 Relative median income

Definition	The relative median income ratio is defined as the ratio of the median equivalised disposable income of people aged above 65 to the median equivalised disposable income of those aged below 65.
Goal (rationale)	Independent and autonomous living also incorporates the concept of financial security which is captured by three indicators. The relative median income ratio is one of these. Comparing the median income of the elderly with the rest of the population the indicator aims to measure the adequacy of retirement incomes for older people to maintain their living standard after retirement and to ensure financial security in old age. The indicator becomes particularly important for estimating relative poverty, because the distribution of economic resources (i.e. pension systems can play an important role in addressing poverty amongst the elderly) may have a direct bearing on the extent and depth of poverty.
Survey question	Household disposable income is established by summing up all monetary incomes received from any source by each member of the household (including income from work, investment and social benefits) – plus income received at the household level – and deducting taxes and social contributions paid. In order to reflect differences in household size and composition, this total is divided by the number of 'equivalent adults' using a standard (equivalence) scale, the so-called 'modified OECD' scale, which attributes a weight of 1 to the first adult in the household, a weight of 0.5 to each subsequent member of the household aged 14 and over, and a weight of 0.3 to household members aged less than 14. The resulting figure is called equivalised disposable income and is attributed to each member of the household.
Source	EU-SILC
Year	2010 (Survey year) 2009 (income year)
Notes	It was agreed at the Expert Group meeting that the maximum upper value of 100 will be enforced for this indicator (e.g. for Luxembourg, where the relative median income is higher for 65+, the value for this indicator is fixed at 100) .

3.5 No poverty risk

Definition	Percentage of people aged 65 years and older who are not at risk of poverty (people at risk of poverty are defined as those with an equivalised disposable income after social transfers below the at-risk-of-poverty threshold, which is set at 50% of the national median equivalised disposable income after social transfers).
Goal (rationale)	The indicator is one of the three indicators that aim to measure financial security. Low income is known to have a significant impact on people's health and well-being for it may limit access to basic goods and services, and the possibility to live independently. Poverty risk using the 50% poverty threshold is assumed to capture the extreme poverty risk for older people. Initially, the 40% poverty threshold was used, but it captured a very small share of population in many countries, and there have also been income mis-measurement issues.
Survey question	See notes for indicator 3.4
Source	EU-SILC
Year	2010 (Survey year), 2009 (income year)
Notes	For the purpose of poverty indicators, the equivalised disposable income is calculated from the total disposable income of each household divided by the equivalised household size; consequently, each person in the household is considered to have the same equivalised income.
Caveats	Poverty is defined in relative rather than absolute terms and is measured in reference to the standard of living in the country in which the individual lives. This, however, may differ significantly across countries depending on their general level of prosperity which should be kept in mind when interpreting the results. Income is defined in monetary terms and excludes transfers such as publicly provided goods and services which might be particularly relevant for older people.

3.6 No severe material deprivation

Definition	Percentage 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 (rather than the choice not to do so) to afford at least four out of the following nine items: 1. to pay their rent, mortgage or utility bills; 2. to keep their home adequately warm; 3. to face unexpected expenses; 4. to eat meat or proteins regularly; 5. to go on holiday; 6. a television set; 7. a washing machine; 8. a car; 9. a telephone.
Goal (rationale)	It is one of the three indicators that aim to measure financial security. The indicator shows the proportion of individuals and households who cannot afford certain goods considered by most people to be necessary. It measures exclusion by directly capturing people's actual standard of living in the country where they live. Moreover, whereas indicators based on current income (i.e. at-risk-of-poverty rate) are affected by transitory shocks, indicators on material deprivation can compensate for such limitations because they tend to be more stable over time and reflect the underlying circumstances of individuals and households.
Survey question	Data on the material items mentioned above is collected using a direct question at the household level.
Source	EU-SILC
Year	2010 (Survey year)
Notes	The indicator is one of the eight headline indicators of the Europe 2020 Strategy. However, it has the limitation that it considers various items of material deprivation with equal weighting (e.g. lacking a TV set is considered equivalent to inability to keep home warm).

3.7 Physical safety

Definition	Percentage of people aged 55 years and older who are not worried about becoming a victim of violent crime.
Goal (rationale)	The objective is to assess whether the responding older person feels 'crime, violence or vandalism' has be a problem for his/her household.
Survey question	'Do you have any of the following problems related to the place where you live? - Crime, violence and vandalism in the local area?' 1 Yes 2 No
Source	ESS 2010
Year	2010 (2008 for Latvia and Romania, 2006 for Austria)
Notes	A reference to the area (situated close to the place where the respondent live) is clearly indicated; A clear definition is provided for defining 'Crime'; also the translation of the word 'crime' is carefully checked as it has a different meaning in different languages. The age group of 55+ is chosen so as to be consistent with the same age group chosen to measure the activities of older population in the 1st domain (employment) and the 2nd domain (Participation in society). An option was also explored to replace this indicator with an indicator that focuses on the aspect of feeling safe when walking in the neighbourhood area after dark for those aged 65 or older, but such data was not available for all EU countries.
Caveats	The variable is a subjective response and thus affected by different levels of awareness and sensitivity towards area crimes for older people.

3.8 Lifelong learning

Definition	Percentage of people aged 55 to 74 who stated that they received education or training in the four weeks preceding the survey.
Goal (rationale)	The indicator measures all education or training, not only those which are work-related. Therefore, it captures the way individuals acquire key competences in the shape of knowledge, skills and attitudes, which are fundamental for each individual in a knowledge-based society. These competences provide added value for the labour market, social cohesion and active citizenship by offering flexibility and adaptability, satisfaction and motivation.
Survey question	Did you attend any courses, seminars, conferences or received private lessons or instructions within or outside the regular education system within the last 4 weeks 1 Yes 2 No
Source	EU-LFS
Year	2011
Notes	The information collected relates to all education or training *whether or not relevant to* the respondent's current or possible future *job*. It includes formal and non-formal education and training that means in general activities in the school/university systems but also courses, seminars workshops, etc. outside the formal education. Data from surveys of vocational training was not considered since the goal of this indicator is older people's engagement in all types of training and not those linked with employment or vocation.

Independent, healthy and secure living (TOTAL)		3.1 Physical exercise	3.2 No unmet needs of health and dental care	3.3 Independent living arrangements	3.4 Relative median income	3.5 No poverty risk	3.6 No material deprivation	3.7 Physical safety	3.8 Lifelong learning
Nr.	Country	EB-2010	SILC-2010	SILC-2010	SILC-2010	SILC-2010	SILC-2010	ESS-2010	LFS-2011
1	Belgium	17.5	97.5	88.2	75.0	92.2	97.2	78.2	2.9
2	Bulgaria	1.3	85.0	72.6	74.0	77.9	55.7	62.7	
3	Czech Republic	5.4	94.8	86.2	82.0	98.7	95.7	89.8	4.2
4	Denmark	18.5	97.1	99.1	71.0	94.5	99.1	92.1	22.3
5	Germany	9.2	93.2	95.8	89.0	93.0	97.9	89.0	1.9
6	Estonia	7.2	91.4	83.1	73.0	96.3	93.4	77.4	3.6
7	Ireland	24.4	96.2	89.8	86.0	93.1	97.3	81.6	2.5
8	Greece	2.2	89.3	77.6	84.0	90.4	87.6	54.2	0.3
9	Spain	10.0	90.8	70.9	83.0	89.2	98.0	64.7	4.6
10	France	13.6	92.3	94.4	99.0	95.4	96.6	65.9	1.8
11	Italy	1.6	89.8	84.0	92.0	92.3	93.7		1.8
12	Cyprus	15.9	88.1	89.8	64.0	76.8	92.6	83.3	3.1
13	Latvia	6.8	76.9	71.9	77.0	93.5	72.5	83.5	1.3
14	Lithuania	18.4	94.0	81.8	92.0	96.0	76.3		1.5
15	Luxembourg	9.7	96.2	84.7	100.0	96.9	99.9		4.4
16	Hungary	4.1	91.9	79.5	100.0	98.6	85.9	87.4	0.3
17	Malta	18.1	93.6	77.9	81.0	90.6	95.3		2.8
18	Netherlands	6.0	98.6	97.3	87.0	97.9	99.7	88.2	6.7
19	Austria	2.9	94.0	83.4	91.0	94.4	98.0	83.9	5.2
20	Poland	6.3	81.6	70.0	93.0	93.2	83.5	95.1	0.6
21	Portugal	8.1	85.6	80.2	82.0	89.9	90.4	62.0	3.4
22	Romania	6.8	77.4	72.2	97.0	90.8	67.6	69.5	
23	Slovenia	7.0	99.0	84.1	87.0	88.6	93.7	95.0	6.0
24	Slovakia	12.8	93.1	72.2	83.0	97.8	88.9	56.2	0.9
25	Finland	19.7	93.6	94.7	78.0	95.3	98.3	86.5	11.5
26	Sweden	28.9	92.4	99.3	79.0	95.4	99.3	85.2	15.5
27	United Kingdom	14.4	96.2	94.7	81.0	87.9	98.7	85.5	8.0
	Mean	11.0	91.5	84.3	84.4	92.5	90.8	79.0	4.7
	STDV	7.2	5.8	9.3	9.2	5.3	11.0	12.5	5.1
	N	27	27	27	27	27	27	23	25
	Min	1.3	76.9	70.0	64.0	76.8	55.7	54.2	0.3
	Max	28.9	99.0	99.3	100.0	98.7	99.9	95.1	22.3

Independent, healthy and secure living (MEN)		3.1 Physical exercise	3.2 No unmet needs of health and dental care	3.3 Independent living arrangements	3.4 Relative median income	3.5 No poverty risk	3.6 No material deprivation	3.7 Physical safety	3.8 Lifelong learning
Nr.	Country	EB-2010	SILC-2010	SILC-2010	SILC-2010	SILC-2010	SILC-2010	ESS-2010	LFS-2011
1	Belgium	19.1	97.3	88.4	77.0	91.8	97.1	83.6	2.8
2	Bulgaria	1.9	86.1	74.5	80.0	85.1	59.6	70.3	
3	Czech Republic	4.9	94.5	87.9	83.0	99.3	96.3	92.8	4.3
4	Denmark	18.8	96.9	98.8	74.0	95.0	98.6	94.4	15.1
5	Germany	6.4	93.6	97.1	90.0	93.5	98.4	91.7	1.9
6	Estonia	5.7	89.7	83.9	79.0	98.2	96.3	82.8	2.8
7	Ireland	20.6	97.1	91.8	86.0	92.9	97.3	84.7	1.9
8	Greece	3.4	90.7	75.7	88.0	92.6	90.2	58.2	0.3
9	Spain	11.0	90.3	70.6	84.0	90.1	98.5	66.5	3.4
10	France	13.5	93.5	95.3	100.0	95.9	96.9	69.9	1.5
11	Italy	2.4	90.4	80.1	94.0	94.1	94.7		1.5
12	Cyprus	13.9	88.1	88.9	67.0	80.1	94.2	91.8	2.2
13	Latvia	7.9	78.6	73.2	82.0	93.9	77.6	89.9	0.9
14	Lithuania	16.8	95.0	82.8	100.0	95.8	79.3		2.1
15	Luxembourg	12.7	96.8	87.8	100.0	97.0	100.0		4.8
16	Hungary	3.4	91.3	84.8	100.0	99.1	89.9	92.1	0.3
17	Malta	16.2	93.6	76.4	81.0	89.4	95.5		2.6
18	Netherlands	3.8	98.8	97.1	89.0	98.5	99.8	86.8	6.3
19	Austria	3.8	94.9	82.4	96.0	95.5	98.7	87.9	4.3
20	Poland	5.2	83.2	66.9	100.0	95.4	87.1	95.9	0.6
21	Portugal	9.0	86.1	79.7	88.0	92.7	92.1	62.3	2.9
22	Romania	8.6	78.8	74.3	100.0	94.7	70.1	74.3	
23	Slovenia	5.2	99.4	82.8	96.0	94.8	94.6	96.9	4.7
24	Slovakia	13.1	93.0	70.6	86.0	99.4	90.7	68.8	0.9
25	Finland	18.4	95.0	94.4	84.0	97.5	98.8	90.5	8.4
26	Sweden	26.8	93.3	99.2	87.0	97.7	99.2	88.4	9.9
27	United Kingdom	15.0	96.2	93.7	85.0	90.4	98.8	85.6	6.4
	Mean	10.7	91.9	84.4	88.0	94.1	92.2	82.9	3.7
	STDV	6.7	5.5	9.5	9.0	4.4	9.8	11.5	3.4
	N	27	27	27	27	27	27	23	25
	Min	1.9	78.6	66.9	67.0	80.1	59.6	58.2	0.3
	Max	26.8	99.4	99.2	100.0	99.4	100.0	96.9	15.1

Independent, healthy and secure living (WOMEN)		3.1 Physical exercise	3.2 No unmet needs of health and dental care	3.3 Independent living arrangements	3.4 Relative median income	3.5 No poverty risk	3.6 No material deprivation	3.7 Physical safety	3.8 Lifelong learning
Nr.	Country	EB-2010	SILC-2010	SILC-2010	SILC-2010	SILC-2010	SILC-2010	ESS-2010	LFS-2011
1	Belgium	16.2	97.6	88.1	74.0	92.5	97.2	72.9	3.0
2	Bulgaria	0.9	84.2	71.5	70.0	73.0	53.0	57.1	
3	Czech Republic	5.9	95.1	85.2	80.0	98.2	95.2	86.6	4.0
4	Denmark	18.2	97.3	99.4	71.0	94.2	99.4	89.7	29.2
5	Germany	11.2	92.8	94.4	88.0	92.6	97.5	86.0	2.0
6	Estonia	8.0	92.5	82.7	69.0	95.4	92.0	74.6	4.1
7	Ireland	27.7	95.4	88.5	87.0	93.3	97.2	78.8	3.1
8	Greece	1.1	88.1	79.0	83.0	88.7	85.6	50.4	0.2
9	Spain	9.1	91.3	71.2	82.0	88.5	97.6	63.1	5.6
10	France	13.6	91.3	93.8	95.0	95.0	96.3	61.9	2.1
11	Italy	0.9	89.3	86.3	90.0	91.0	93.0		2.0
12	Cyprus	17.6	88.0	90.5	64.0	73.9	91.3	76.8	4.0
13	Latvia	6.0	75.9	71.4	74.0	93.2	70.1	80.6	1.6
14	Lithuania	19.3	93.4	81.3	89.0	96.1	74.7		1.9
15	Luxembourg	7.4	95.6	82.5	100.0	96.9	99.8		4.0
16	Hungary	4.6	92.2	77.0	99.0	98.3	83.6	84.0	0.3
17	Malta	19.6	93.6	78.9	81.0	91.6	95.0		3.0
18	Netherlands	8.1	98.5	97.4	86.0	97.4	99.6	89.8	7.2
19	Austria	2.1	93.2	83.9	88.0	93.7	97.5	80.1	6.1
20	Poland	7.1	80.4	71.5	88.0	91.9	81.4	94.5	0.6
21	Portugal	7.5	85.2	80.6	78.0	88.0	89.2	61.7	3.8
22	Romania	5.2	76.3	70.9	92.0	88.1	65.9	65.2	
23	Slovenia	8.3	98.7	84.8	81.0	84.6	93.1	93.5	7.3
24	Slovakia	12.6	93.2	73.2	82.0	96.7	87.7	48.6	0.9
25	Finland	20.8	92.4	94.9	74.0	93.8	97.9	83.1	14.3
26	Sweden	30.8	91.6	99.3	73.0	93.6	99.4	82.2	21.0
27	United Kingdom	14.0	96.1	95.4	79.0	85.8	98.6	85.4	9.4
	Mean	11.3	91.1	84.2	82.1	91.3	90.0	75.9	5.6
	STDV	7.9	6.1	9.3	9.2	6.3	11.8	13.5	6.8
	N	27	27	27	27	27	27	23	25
	Min	1.3	76.9	70.0	64.0	76.8	55.7	54.2	0.3
	Max	28.9	99.0	99.3	100.0	98.7	99.9	95.1	22.3

Annex A.4: Information on chosen indicators for the 4th domain: Capacity and enabling environment for active ageing

4.1 Remaining life expectancy achievement of 50 years at age 55

Definition	RLE at 55 divided by 50 to calculate the proportion of life expectancy achievement in the target of 105 years of life expectancy
Goal (rationale)	To capture the life expectancy aspect in determining the capacity for active ageing across EU countries.
Source	European Health and Life Expectancy Information System (EHLEIS)
Year	2009/2010
Notes	For details, see http://www.eurohex.eu/index.php?option=ehleisproject

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

Definition	Healthy Life Years (HLY) a measure of disability-free life expectancy that combines information on quality and quantity of life. HLY measures the remaining number of years spent free of activity limitation.
Goal (rationale)	Capture the proportion of years spent in good health in the remaining life expectancy at 55 as an indicator of the capacity for active ageing.
Source	European Health and Life Expectancy Information System (EHLEIS)
Year	2009/2010
Notes	For details, see http://www.eurohex.eu/index.php?option=ehleisproject

4.3 Mental well-being

Definition	Mental well-being (using EQLS 2011 and WHO's ICD-10 measurement model)
Goal (rationale)	To capture mental well-being of older population aged 55+, so to complement the measure of physical health captured via the healthy life expectancy measure, with the help of an index that measures self-reported feelings of positive happy moods and spirits.
Survey question	Q45a: I have felt cheerful and in good spirits Q45b: I have felt calm and relaxed Q45c: I have felt active and vigorous Q45d: I woke up feeling fresh and rested Q45e: My daily life has been filled with things that interest me Response categories are: 1. All of the time 2. Most of the time 3. More than half of the time 4. Less than half of the time 5. Some of the time 6. At no time The raw score is calculated by reversing the value order of the variable, and then totalling the figures of the five answers. The raw score converted so as to range from 0 to 25, 0 representing worst possible and 25 representing best possible quality of life. As recommended by WHO, the Major Depression (ICD-10) Inventory is defined if the raw score is below 13 (see http://www.who-5.org/ for more details).
Source	EQLS
Year	2011
Notes	Variable is derived using WHO's ICD-10 measurement
Caveats	The WHO-5 index has the limitation of being based on subjective response variable and thus it may be restricted in its international comparability.

4.4 Use of ICT

Definition	Share of people aged 55-74 using the internet at least once a week.
Goal (rationale)	This indicator aims to measure the degree to which older people's environments enable them to connect with others with the help of information and communication technologies, thus reflecting one aspect of their capacity for active ageing.
Survey question	*(Specific response category selected for this indicator in bold)* 'How often on average have you used a computer in the last 3 months?'(tick one) - **Every day or almost every day** - **At least once a week (but not every day)** - At least once a month (but not every week) - Less than once a month The question refers to internet use at least once a week (i.e. every day or almost every day or at least once a week but not every day) on average within the last 3 months before the survey. Use includes all locations and methods of access and any purpose (private or work/business related). [Indicator name: i_iuse]
Source	Eurostat, ICT Survey
Year	2010
Notes	A higher number of older people using the internet points to a larger ability to communicate with others, and engage actively in society. While excessive use of the internet can be detrimental to one's health, such phenomena have been observed mainly for younger people thus far. It is therefore reasonable to associate the use of internet among older people positively with their capacity for active ageing (no cap necessary).

4.5 Social connectedness

Definition	The indicator measures the share of people aged 55 or more that meet socially with friends, relatives or colleagues several times a week or every day. "Meet socially" implies meet by choice, rather than for reasons of either work or pure duty. The indicator measures contacts outside the household.
Goal (rationale)	Social contacts are a key element of an active and fulfilling life, and also vital to human health, both mentally and physically. The specific measure focuses on social meetings by choice, thus duty or work related meetings are excluded.
Survey question	*(Specific response category selected for this indicator in bold)* 'How often socially meet with friends, relatives or colleagues?' Answers: 1 never, 2 less than once a month, 3 once a month, 4 several times a month, **5 once a week**, **6 several times a week, 7 every day.**
Source	European Social Survey (core questionnaire)
Year	2010 / 2008 (for LV and RO) / 2006 (for AT) / 2004 (for LU) / 2002 (for IT)
Notes	The indicator measures contacts outside the household, thus in case the household size is large (multiple generations living together) the bulk of social contacts may take place within the household, rather than outside. Alternative data: We examined the potential use of EU-SILC 2006 Special module on social participation, but rejected it due to the lack of replicability. EU-SILC questions differ from those in the ESS and the answer categories have a reverse order (the latter is expected to have an influence on responses): 'Frequency of getting together with relatives' and 'Frequency of getting together with friends' Answers: 1 Daily, 2 Every week, 3 Several times a month, 4 Once a month, 5 At least once a year, 6 Never. Robustness check: We compared the outcomes of the ESS and EU-SILC 2006 surveys. In order to control for the potential framing effect related to the reverse order of answer categories, we have created country groupings (quartiles) showing the ranking of particular countries. The comparison of these country groups presents a relatively stable picture across countries. The countries with a low level of social contacts according to the EU-SILC data set also rank in the bottom or 2nd quartile according to the ESS survey. Similarly, it is the case at the top end.
Caveats	EU countries missing: LT, MT The indicator measures only the intensity of contacts, not their quality.

4.6 Educational attainment of older persons

Definition	Percentage of older persons aged 55-74 with upper secondary or tertiary educational attainment.
Goal (rationale)	The indicator measures relatively high levels of education, but it is not restricted to tertiary education only, given the generally lower prevalence of tertiary education among the older people. Relatively high educational attainment reflects the acquisition of key competences in the shape of knowledge, skills and attitudes. These competences provide added value for social cohesion and active citizenship by offering flexibility and adaptability, satisfaction and motivation.
Survey question	*(Specific response category selected for this indicator in bold)* Highest ISCED level attained? Answers: 0 pre-primary, 1 primary, 2 lower secondary, **3 (upper) secondary, 4 post-secondary non tertiary, 5 tertiary**
Source	EU-Labour Force Survey
Year	2010
Notes	Education attainment level is defined as the percentage of people of a given age class (excluding the ones that did not answer to the question 'highest level of education or training attained') having attained a given education level: ISCED 3 (Lower/ upper) secondary education. This level of education typically begins at the end of full time compulsory education if such a system is applied. More specialisation may be observed at this level than at ISCED level 2 and often teachers need to be more qualified or specialised. The entrance age to this level is typically 15 to 16 years. The educational programmes included at this level typically require the completion of 9 years of full-time education (since the beginning of level 1) or a combination of education and vocational or technical experience for admission.

Capacity and enabling environment for active ageing (TOTAL)		4.1 RLE achievement of 50 years at age 55	4.2 Share of healthy life years in the RLE at age 55	4.3 Mental well-being	4.4 Use of ICT	4.5 Social connectedness	4.6 Educational attainment
		EHLEIS 2009/10	EHLEIS 2009/10	EQLS 2011	ICT Survey 2010	ESS 2010	LFS 2010
1	Belgium	55.6	59.5	73.4	54.0	64.1	53.2
2	Bulgaria	45.6	68.5	52.6	18.0	47.8	62.8
3	Czech Republic	50.6	57.6	61.0	31.0	47.5	83.4
4	Denmark	53.2	68.7	87.2	71.0	72.7	60.3
5	Germany	55.4	43.1	74.0	49.0	47.8	85.7
6	Estonia	49.4	42.4	52.4	37.0	31.1	80.4
7	Ireland	56.6	62.2	77.1	39.0	59.5	
8	Greece	56.0	55.6	48.6	11.0	27.3	39.3
9	Spain	58.6	52.6	67.7	26.0	70.9	28.0
10	France	59.2	52.8	67.4	51.0	58.3	50.4
11	Italy	58.0	48.2	67.6	22.0	54.7	32.3
12	Cyprus	57.0	56.1	56.6	17.0	38.1	
13	Latvia	46.4	42.0	50.3	28.0	38.3	72.4
14	Lithuania	46.6	51.5	48.0	23.0		67.1
15	Luxembourg	56.0	62.9	77.0	67.0	57.0	50.3
16	Hungary	46.8	43.8	61.1	34.0	22.9	68.8
17	Malta	57.0	68.1	61.2	37.0		15.7
18	Netherlands	56.0	54.5	73.5	73.0	68.8	59.2
19	Austria	56.2	46.6	75.2	43.0	58.2	70.4
20	Poland	50.0	49.8	49.6	22.0	30.8	69.2
21	Portugal	54.8	41.0	64.1	19.0	75.6	14.2
22	Romania	46.0	53.0	42.8	9.0	24.0	50.1
23	Slovenia	54.4	41.4	51.7	25.0	45.1	71.0
24	Slovakia	47.6	29.2	54.6	30.0	51.1	79.9
25	Finland	55.8	50.6	81.7	64.0	62.1	61.8
26	Sweden	56.8	77.1	82.9	75.0	65.5	75.3
27	United Kingdom	56.2	61.9	66.8	58.0	67.6	63.0
	Mean	53.4	53.4	63.9	38.3	51.5	58.6
	Std. dev.	4.4	10.7	12.3	19.8	15.9	19.8
	N	27	27	27	27	25	25
	Min	45.6	29.2	42.8	9.0	22.9	14.2
	Max	59.2	77.1	87.2	75.0	75.6	85.7

Capacity and enabling environment for active ageing (MEN)		4.1 RLE achievement of 50 years at age 55	4.2 Share of healthy life years in the RLE at age 55	4.3 Mental well-being	4.4 Use of ICT	4.5 Social connectedness	4.6 Educational attainment
		EHLEIS 2009/10	EHLEIS 2009/10	EQLS 2011	ICT Survey 2010	ESS 2010	LFS 2010
1	Belgium	51.0	64.9	74.7	62.0	64.1	56.8
2	Bulgaria	40.4	71.3	60.0	19.0	46.4	63.2
3	Czech Republic	45.4	61.4	60.6	36.0	45.3	92.4
4	Denmark	49.8	71.5	90.2	76.0	70.7	65.2
5	Germany	51.4	45.0	76.2	58.0	45.4	93.0
6	Estonia	41.4	46.3	50.7	35.0	22.3	79.3
7	Ireland	52.8	65.0	82.3	39.0	64.2	
8	Greece	53.0	58.2	55.2	14.0	30.3	44.9
9	Spain	53.2	58.8	72.1	32.0	70.6	32.5
10	France	53.2	56.4	69.6	57.0	56.3	56.8
11	Italy	53.4	54.2	72.8	29.0	56.3	36.7
12	Cyprus	53.4	61.0	67.0	22.0	40.2	
13	Latvia	38.8	46.8	53.9	30.0	42.0	68.8
14	Lithuania	38.6	57.2	52.2	24.0		65.3
15	Luxembourg	51.0	64.9	83.4	76.0	55.9	62.5
16	Hungary	40.4	47.1	66.0	36.0	24.4	78.4
17	Malta	53.6	71.8	62.1	42.0		20.6
18	Netherlands	52.0	58.9	77.3	79.0	65.7	69.6
19	Austria	51.4	50.4	80.6	54.0	55.9	80.6
20	Poland	43.6	53.0	51.1	26.0	31.0	74.8
21	Portugal	50.0	48.7	67.7	24.0	77.9	15.4
22	Romania	40.8	58.3	49.1	10.0	24.0	64.1
23	Slovenia	48.6	44.5	49.1	31.0	46.1	78.1
24	Slovakia	41.6	33.8	56.4	34.0	51.1	87.2
25	Finland	50.4	54.7	82.3	66.0	54.5	61.8
26	Sweden	53.4	80.2	89.3	77.0	63.2	73.0
27	United Kingdom	52.5	64.7	73.6	61.0	65.5	67.2
	Mean	48.3	57.4	67.6	42.6	50.8	63.5
	Std. dev.	5.4	10.3	12.7	20.8	15.7	20.2
	N	27	27	27	27	25	25
	Min	45.6	29.2	42.8	9.0	22.9	14.2
	Max	59.2	77.1	87.2	75.0	75.6	85.7

Capacity and enabling environment for active ageing (WOMEN)		4.1 RLE achievement of 50 years at age 55	4.2 Share of healthy life years in the RLE at age 55	4.3 Mental well-being	4.4 Use of ICT	4.5 Social connectedness	4.6 Educational attainment
		EHLEIS 2009/10	EHLEIS 2009/10	EQLS 2011	ICT Survey 2010	ESS 2010	LFS 2010
1	Belgium	59.8	55.2	72.3	46.0	64.1	49.9
2	Bulgaria	50.6	66.2	46.6	17.0	48.9	62.5
3	Czech Republic	55.2	55.1	61.4	26.0	49.9	75.7
4	Denmark	56.4	66.5	84.4	67.0	74.8	55.5
5	Germany	59.4	41.4	72.1	41.0	50.3	79.4
6	Estonia	55.6	40.3	53.5	38.0	35.6	81.1
7	Ireland	59.8	60.4	72.2	40.0	55.5	
8	Greece	58.8	53.3	42.7	8.0	24.4	34.0
9	Spain	63.6	47.7	64.0	20.0	71.2	23.6
10	France	64.4	50.4	65.7	47.0	60.3	44.4
11	Italy	62.2	43.4	63.4	15.0	53.4	28.3
12	Cyprus	60.4	52.0	47.7	12.0	36.5	
13	Latvia	52.4	39.2	48.1	27.0	36.6	74.7
14	Lithuania	53.2	48.0	45.5	23.0		68.3
15	Luxembourg	60.6	61.8	71.3	59.0	58.2	38.8
16	Hungary	52.2	41.8	57.6	31.0	21.7	61.5
17	Malta	60.0	65.3	60.5	32.0		11.0
18	Netherlands	59.4	51.1	70.0	67.0	72.3	49.1
19	Austria	60.4	43.9	70.9	33.0	60.3	61.0
20	Poland	55.6	47.7	48.5	20.0	30.7	64.9
21	Portugal	59.2	34.9	61.2	14.0	74.2	13.0
22	Romania	50.8	49.0	38.1	8.0	23.9	38.4
23	Slovenia	59.6	39.3	53.7	19.0	44.3	64.6
24	Slovakia	52.8	26.1	53.2	27.0	51.2	74.6
25	Finland	60.6	47.7	81.2	61.0	68.6	61.9
26	Sweden	60.0	74.6	77.1	73.0	67.6	77.4
27	United Kingdom	58.9	60.3	61.1	56.0	69.5	59.2