EXTENDING THE ACTIVE AGEING INDEX TO THE LOCAL LEVEL IN GERMANY

PILOT STUDY

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NOTE

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF GRAPHS AND MAPS

EXECUTIVE SUMMARY

KEY FINDINGS

It is possible to calculate a local Active Aging Index (AAI) based on German secondary data. However, using the nine data sources available during the project duration, the number of analysable territorial entities is between 20 and 30 (out of 403) and numbers of respondents are low in a few cases. Both problems could be solved with access to further data sources.

BACKGROUND

The Active Ageing Index quantitatively depicts active ageing outcomes. It was calculated for all 28 European Union (EU) member States (for the purpose of this report, the AAI for the 28 EU countries is called EU-AAI) and for a number of non-EU countries for several years (2008, 2010, 2012). The index consists of 22 indicators, categorised into four domains, three of them assessing achievements of active ageing and the fourth one reflecting conditions for active ageing. To national policymakers and stakeholders the index can provide valuable information on their country´s strengths and weaknesses concerning active ageing, which can encourage appropriate action. However, several aspects of active ageing are mainly affected by local rather than national circumstances. A calculation at the local level for local policymakers and stakeholders could therefore provide crucial insights.

PILOT STUDY

In the course of the pilot study 'Gerontology Study – Extending the Active Ageing Index to the local level in Germany' (carried out under the joint management project of the European Commission and the United Nations Economic Commission for Europe (UNECE)), a replication of the EU-Active Ageing Index at German NUTS[1] 3 level was conducted, based on secondary data analyses. The main goal of the pilot study was to ascertain the methodological feasibility of such calculations. The main advantage of an index calculated with secondary data is the low cost compared to primary data collection and therefore the high sustainability. Once established, a periodic re-calculation of the index would be possible with minimal effort.

METHODOLOGICAL PROCEEDINGS

TERRITORIAL ENTITIES ANALYSED: INITIAL SELECTION

The German NUTS 3 level consists of 295 counties (including 3 'Special regional associations') and 107 cities. Their mean size is about 35x35 kilometres (counties) or 12x12 kilometres (cities). Their population size is between 34,000 and 3.5 million, with a mean of about 200,000. Despite this mean size, only 87 out of the 403 territorial entities have more than 200,000 inhabitants. The 50 most populous counties and the 38 most populous cities entered the initial analysis.

USE OF SEVERAL SURVEYS PER INDICATOR

Due to the high number of NUTS 3 units and the left-skewed distribution of their population size, most of the 88 NUTS 3 units initially selected have a very low population size when compared to the national population size. Although sampling in large-n surveys is not clearly geographically representative so that not all NUTS 3 units are represented in country-wide surveys and so that some numbers of respondents are higher than their population size would suggest, the overall expectation was that numbers of respondents would be low in the selected territorial entities. This was further aggravated by the restriction to persons 55 years old or older. Therefore, in

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[1] *Nomenclature des unités territoriales statistiques* or *Nomenclature of units for territorial statistics.*

order to increase numbers of respondents, in contrast to EU-AAI it was decided that several surveys per indicator would be used when possible for this pilot study.

DATA SOURCES

The Active Ageing Index is based on six data sources. For only one of them (European Social Survey) data at the German NUTS 3 level is available. Therefore, for the local level AAI new data sources had to be found. Out of 26 surveys fulfilling the criteria of (a) being repeatedly conducted and (b) covering the whole of Germany, nine surveys had readily available data at the NUTS 3 level.

VARIABLES AND ANSWER CATEGORIES

In these surveys, questions corresponding to those used for EU-AAI were identified. The relevant dimension was the 'Goal (rationale)' of the indicators defined in the EU-AAI methodology.[2] In EU-AAI, respondents are categorised into two groups, those being 'active' and those not. 'Active' here refers to the share of the population who contribute to the economy and society via participation in the labour market, unpaid activities (volunteering and care provision), through living independent lives, and who at the same time are enabled to do so by the environment they are living in. For example, the survey question on physical exercise/sports contains four answer categories. In order to categorise respondents into two groups, only those selecting category 1 (every day or almost every day) were categorised into the 'active' group and all the others – into the 'inactive' group. The categorisation was implemented in a similar way at the local level.

WEIGHTING

The overall AAI results from the four domain scores are weighted according to theoretical considerations. The domain scores are calculated based on indicator values, which are also weighted according to theoretical considerations. In the local level AAI, as a result of using several variables from different data sources per indicator, another weighting step had to be added. This was done based on the inverted standard error of the surveys providing data for a given variable. This comes close to the square root of the number of respondents. Surveys with higher numbers of cases had a higher weight, yet with diminishing marginal increases.

DATA GAPS

Surveys covering the whole of Germany are not geographically representative at the NUTS 3 level. This implies that some territorial entities are not represented in some surveys. Resulting data gaps for single variables can distort indicator values and therefore domain scores and the overall AAI. For example, if for a given indicator for territorial entities A and B data are available for variables 1 and 2 and for territorial entity C just for variable 1, the indicator score would be distorted if the mean values between variables 1 and 2 differ. If the mean value for variable 1 is lower than for variable 2 (e.g. if variable 1 measures participation in political groups and variable 2 measures electoral participation), then the value for territorial entity C would be too high because only data for electoral participation would be available. In order to correct this, values were weighted so that mean values are similar.

TERRITORIAL ENTITIES ANALYSED: FINAL SELECTION

As expected, due to low numbers of respondents and data gaps, not all 88 territorial entities could be used for the final analysis. Error scores for each territorial entity were calculated in a way that territorial entities with high numbers of respondents in surveys with low standard errors had the lowest scores. This effectively resulted in low error scores for territorial entities

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[2] See www1.unece.org/stat/platform/display/AAI/Active+Ageing+Index+Home for details.

with high numbers of respondents, or in other words territorial entities with high population numbers. The 30 territorial entities with the lowest error scores were used in the final analysis.

COMPARABILITY BETWEEN EU-AAI AND THE LOCAL LEVEL AAI

Due to different variables used and different dichotomisation of respondents into the categories, in most cases mean values of the 30 territorial entities differed from the German value in EU-AAI. Exceptions are the four indicators of the domain 'Employment' (employed yes/no in four different age groups) and the indicator 'Independent living arrangements'.

FINDINGS ON THE 30 TERRITORIAL ENTITIES ANALYSED

Results for the overall AAI value and the four domains were correlated with disposable income per person and population density. For the latter, positive, yet very weak, correlations have been found, so that there is a weak and statistically insignificant relationship between AAI score and urbanity. Only in the case of domain 4 ('Capacity and enabling environment') the correlation is significant at the 10% level, but with 30 cases also this is sensible to outliers. In contrast, there is an (expected) positive and statistically significant (5% level, Pearson´s r at around 0.5) relationship between disposable income and AAI scores for the overall score and all domains but domain 2 ('Participation in society'), where no relationship between AAI score and wealth could be found. Therefore, the top of the Overall AAI table is populated by affluent Southern regions (Esslingen, Stuttgart, Rems-Murr, Rhein-Neckar and Frankfurt/Main if the latter can be categorised as 'southern') and the bottom – by regions in Eastern Germany (Halle, Mittelsachsen, Zwickau), still economically lagging behind Western Germany, and the Ruhr area (Dortmund, Duisburg) – a region bearing economic problems due to the decline of the steel and coal industry. This pattern prevails for the overall AAI score as well as three domains. However, the rank of regions is not without surprises. For example, in the overall AAI the cities of Dresden and Berlin rank above the affluent cities of Nürnberg and Düsseldorf. As the absence of any relationship to disposable income suggests, for domain 2 the ranking looks different, for example, with Eastern regions Chemnitz and Bautzen amongst the top 5 regions, and Frankfurt and Stuttgart below the middle of the table. It can be clearly concluded that there is the correlation with disposable income, which is expected given the construction of the index and the various components related to affluence, but disposable income does not clearly *determine* the scores. Affluent regions can have comparatively low scores and less affluent regions can have comparatively high scores.

Concerning the results and the ranking of the regions, it has to be mentioned that this results from a pilot study with (partly) low cases numbers. Further work on an improved data situation can lead to results with higher reliability.

CONCLUSION

It is possible to calculate a local active ageing index in Germany based on secondary data, yet this comes with various limitations. The most crucial limitation is the low case numbers for some indicators or territorial entities. The number of NUTS 3 areas for which index values can be calculated is somewhere between 20 and 30, depending on one's perspective concerning how many respondents are necessary for the calculation of a score for a territorial entity. Most, but not all, indicator values can be interpreted content-wise thanks to sufficient numbers of respondents, i.e. they can be interpreted as first findings on the active ageing situation in the territorial entities. The low number of respondents restricts intertemporal comparison, since, for example, changes in low-n indicators can result from different samples and not reflect real changes. One solution could be the accumulation of different survey rounds. This would imply a less frequent re-calculation, perhaps once every four years instead of once every two years.

1. INTRODUCTION: AIM OF THE PILOT STUDY

The aim of this pilot study is twofold, methodological and content-wise:

Firstly, the methodological aim is to check the possibility to calculate the Active Ageing Index (AAI) at the local level in Germany, based on secondary data analyses. As will be shown below, numerous data sources have been taken into account and checked for availability of data at the local level. One crucial self-imposed limitation was the restriction to the use of repeatedly conducted surveys, so that intertemporal comparisons will be possible. The methodological findings concerning available data sources and numbers of respondents are transferable to other topics and to other calculations of a local AAI. Based on knowledge gained from this study, questionnaires of available sources can be used to construct a different ageing-related index at a local level, possibly with a stronger focus on circumstances with local (political) leeway.

Secondly, content-wise, the local AAI could be useful since crucial preconditions of active ageing are located at the local level. Also, with increasing age (after roughly middle-agedness) the importance of the local area in the lives of individuals increases. Given sufficient data, the local AAI allows for several comparisons to be made: between urban and more rural areas (more rural than the urban areas, but all areas here are densely populated); between geographical areas which are similar in some respects (population size, population density, geographical location, wealth); intra-area comparisons (the ranking of one area in one domain/indicator compared to the ranking in another domain/indicator); and intertemporal comparisons. The index could be used to improve older people's active ageing outcomes and their capacity for active ageing in the respective areas, since it allows for the focus e.g. on weaknesses. The focus of the local AAI should not be placed on the possibility of a competitive ranking but on geographical areas' strengths and weaknesses, and possible developments due to local actions. Several examples in this document will show this. A competitive ranking is not sensible for two main reasons. Firstly the index is constructed in a way that a positive correlation to GDP or disposable income is predetermined, as many elements are related to wealth. This applies especially to the heavily weighted domain 1 (Employment), and also to some elements of the other three domains. Secondly, a competitive ranking is not sensible as higher values cannot be unambiguously interpreted as to being more desirable than lower values. Higher values depict higher 'activity' meaning here realising to a greater extent the potential of older people to contribute to the economy and society. As argued below, in some instances high activity can be a result of undesirable circumstances.

The geographical units analysed here are counties or large cities. Both are on NUTS 3 level. German NUTS 3 units' population ranges from 50,000 (the small rural county of Lüchow-Dannenberg) to 3,500,000 (the city of Berlin, which is also a NUTS 1 and NUTS 2 unit). The units analysed here range from 195,000 inhabitants (smallest city) or 270,000 inhabitants (smallest county) up to the size of Berlin.

The policymaking power of units differs. Leaving aside the special cases of Berlin and Hamburg, which are also NUTS 1 regions, and the city of Bremen, which constitutes the largest part of the NUTS 1 region Bremen, cities on NUTS 3 level have the policymaking power of cities or municipalities plus counties, whereas counties are politically comparatively weak, since power is located below them (in cities and municipalities) and above them (primarily Federal States).

2. DEMOGRAPHICS IN GERMANY

The birth cohorts 1961-1967 were the largest in Germany (Destatis 2016). Not remarkably distorted by migration or premature death, the 1964 birth cohort is – with 1,422,000 persons (in 2016) – the most populous cohort in Germany. Generally the group between age 45 and age 58 is very numerous (https://www.destatis.de/bevoelkerungspyramide/#!y=2015) allows for an interactive population prognosis and retrospection 1950-2060). The Active Ageing Index mainly refers to people aged 55 or older, and when certain topics are considered, to people aged 65 or older or 75 or older. The German population pyramid shows a significant hump around the age of 50-55. Therefore, in Germany the very populous cohort is currently entering the group depicted in AAI.

Nevertheless, the situation is different in large cities where populations are generally younger. To take one of the most extreme examples, in the city of Munich the age group between 25 and 35 is the most populous group. Also for the Federal States of Berlin, Hamburg and Bremen which consist of large cities, this group is at least as large as the 50-55 age group. This finding for urban areas is crucial since this report is focused on the 88 German territorial entities at NUTS 3 level which are mostly densely populated. The 30 units in the final analysis have a far higher degree of urbanisation (1592 inhabitants per square kilometre) than the national mean (232 inhabitants). Therefore, due to their urbanity the age distribution in these districts deviates from the national mean.

We research the 51 most populous counties and the 37 most populous cities not belonging to a county. Since the smallest county analysed here has 270,000 inhabitants and the smallest city has 195,000 inhabitants, this is not exactly the 88 most populous NUTS 3 areas (since this would necessitate dropping some smaller cities out and taking in some counties below the size of 270,000 inhabitants), but comes close to this.

3. ACTIVE AGEING AND ACTIVE AGEING INDEX

3.1 ACTIVE AGEING

Active ageing encompasses "(...) various combinations of quality of life essentials such as continuous labour market participation, active contribution to domestic labour (caring, housework), active participation in community life and active leisure" (Futurage 2011: 12).

Active ageing "is the process of optimising opportunities for health, participation and security in order to enhance quality of life as people age" (World Health Organisation 2002, cited in European Commission 2012: 19). The European Commission (2012: 19) points out that participation is crucial and also related to employment and education. UNECE (2012: 2) indicates that although the WHO definition "strongly associates with the well-being of individuals", society is also affected by high labour market participation and low health care expenditures, for example.

3.2 ACTIVE AGEING INDEX

In terms of content, the Active Ageing Index (AAI)

> "provides unique multi-faceted evidence on the contribution of older people across EU countries to their social and economic lives. It covers not only employment of older people but also their unpaid familial, social, and cultural contributions, and their independent, healthy and secure living. It also captures how the EU countries differ with respect to capacity and enabling environments for active and healthy ageing. As the ageing experiences of men and women are expected to be different, AAI also provide a breakdown by gender" (UNECE/European Commission 2014: 14).

And, as stated in the AAI 2014 Analytical Report (UNECE/EC 2015), AAI

> "score for individual countries shows the extent to which their older people's potential is used, and the extent to which older people are enabled and encouraged to participate in the economy and society and to live independently" (2015: 6).

In terms of utility, AAI

> "serves as a flexible tool to enable a range of stakeholders to develop evidence-based strategies to address the challenges of population ageing and its impact on society. It was developed in the course of the 2012 European Year for Active Ageing and Solidarity between Generations. It is also being used to monitor the implementation of national ageing-related policies in the context of the Madrid International Plan of Action on Ageing (MIPAA)" (UNECE/European Commission 2014: 14).

Further, its

> "added value... is that it encourages policymakers to look at active ageing in a comprehensive way. It offers the broader perspective of different dimensions of contribution and potential of older people... it helps policymakers and other stakeholders understand where they could do better compared to other countries and set themselves goals for a higher and more balanced form of active ageing" (2015: 5).

The Active Ageing Index consists of 22 indicators, grouped into four domains. The "first three domains measure achievements, while the fourth is a measure of starting conditions for achieving positive active ageing outcomes" (2015: 5, for the domains see graph 1). Yet, the fourth domain in general also reflects achievements in creating enabling environments (starting

conditions) for active ageing (primarily life expectancy, healthy life expectancy, mental well-being, and use of ICT).

For any composite measure, the total score provides more of an overall picture, whereas detailed information can be found in different parts of the index. The overall AAI figure of a particular territorial entity, or the total ranking, is most conspicuous, yet for policymakers and other stakeholders domain scores or value of specific indicators may be more crucial for action.

The Active Ageing Index has been calculated for countries and regions within some countries, yet not at the local level (see chapter 4). Within the context of the pilot study project 'Gerontology Study – Extending the Active Ageing Index to local level in Germany' (funded by the United Nations Economic Commission for Europe [UNECE], duration 18/12/2015–30/04/2016) our team undertook the calculation for German local areas.

The project's main work of reference is AAI calculated for 28 countries of the European Union (EU), hereafter in this report – EU-AAI. Its latest figures show that Germany ranks 9th out of 28 countries (Active Ageing Index 2014 Analytical Report, 2015: 18). This overall figure results from the heavily weighted domains of 'Employment' (rank 5) and 'Participation in society' (rank 24, both enter the index with 35%), and the less heavily weighted domains of 'Independent living' (rank 8, weight 10%) and 'Capacity for active ageing' (rank 13, weight 20%, cf. Active Ageing Index 2014 Analytical Report, 2015: 21). This indicates that Germany has considerable potential for improvements in some areas.

Graph 1: The domains and indicators of AAI

Active Ageing Index

The Active Ageing Index (AAI) is a tool to measure the untapped potential of older people for active and healthy ageing across countries. It measures the level to which older people live independent lives, participate in paid employment and social activities as well as their capacity to actively age.

Employment	Participation in Society	Independent, Healthy and Secure Living	Capacity and Enabling Environment for Active Ageing
Employment Rate 55-59	Voluntary activities	Physical exercise	Remaining life expectancy at age 55
Employment Rate 60-64	Care to children and grandchildren	Access to health services	Share of healthy life expectancy at age 55
Employment Rate 65-69	Care to older adults	Independent living	Mental well-being
Employment Rate 70-74	Political participation	Financial security (three indicators)	Use of ICT
		Physical safety	Social connectedness
		Lifelong learning	Educational attainment

Actual experiences of active ageing · · · Capacity to actively age

Source: http://www1.unece.org/stat/platform/display/AAI/Active+Ageing+Index+Home

4. ACTIVE AGEING INDEX AT LOCAL LEVEL

Due to federalism, the policymaking power and responsibilities of cities/municipalities are determined by the Bundesländer (Wehling/Kost 2010: 7). The German constitution (Grundgesetz, Art. 28, 3) mandates that municipalities should have the right and the financial capability to self-responsibly regulate local issues. Taxes are determined at the federal level, whereas the nation state (Bund) has to obtain agreement from the federal states (Bundesländer and Stadtstaaten, graph 1) in order to avoid one-sided decisions against the federal states' interests. The cities/municipalities are represented by the federal states, yet are officially without decisional power (Wehling/Kost 2010: 8). The Bund obliges the federal states to pass parts of their revenues to the lower administrative levels for some tasks (e.g. road building) and to minimise the differences in financial power between local areas. As Wehling and Kost (2010: 8) write, due to the Konnexitätsprinzip (concomitant financing) there should be a fit between tasks and financial capabilities. Therefore, as Wehling and Kost (2010: 8) state, "it becomes increasingly difficult to open up political room for manoeuvre, since due to unfortunate economic and political trends the (drastically) rising financial burdens force municipalities to confine themselves to the compulsory tasks laid on them from the higher level" (authors' translation). One consistently reported issue has been the financial problems of local territorial entities in some areas of Germany and their incapability to sustain services and infrastructure, leading to their neglect.

Graph 2: Administrative levels
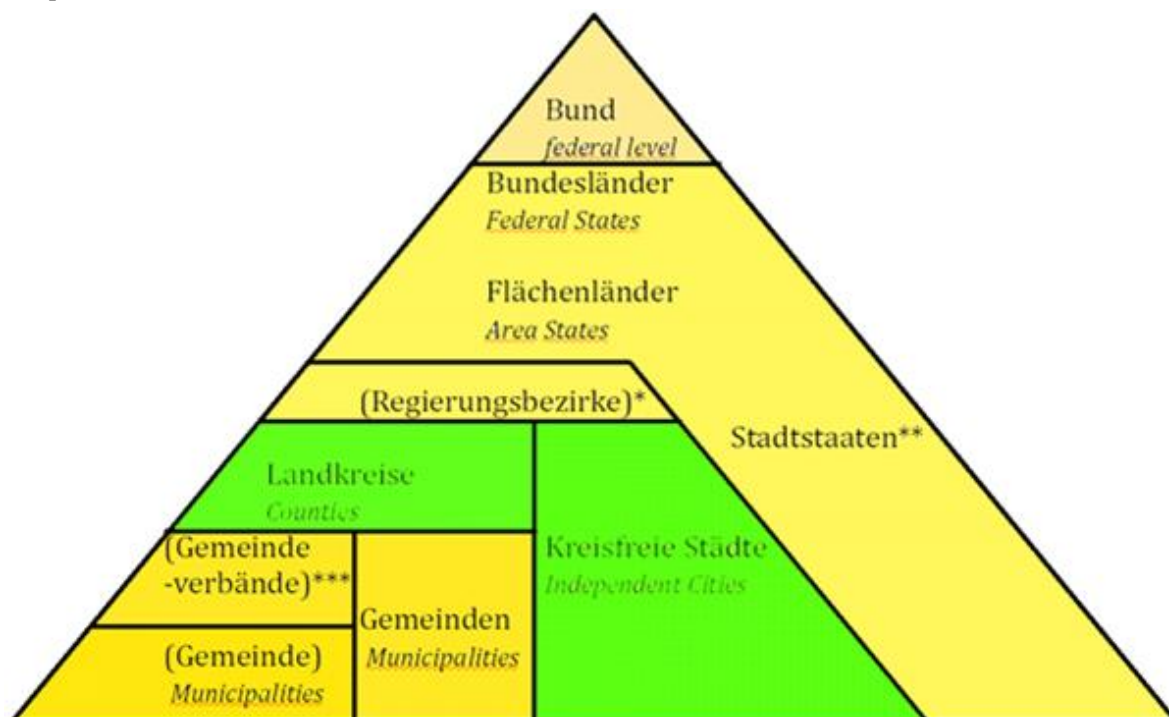
* administrative level in some Federal States
** Federal States (only one big city)
*** Associations of Administrations

The cities and rural districts/counties analysed in this pilot study belong to the green area.

One approach to calculating the power of municipalities within different policy levels could be a calculation of the share of municipalities' expenses within the total public budget. Based on Eurostat data (2014), the mean value in the EU-28 is 23.4%, that is, municipalities spend about a

quarter of the total government expenses. In Germany, this figure is only 17.8% – much lower than the high shares found in Denmark (64.3%), Sweden (49.0%), Finland (41.0%) and in non-EU Norway (33.8%). The lowest share can be found in Malta (1.4%, which is plausible given the geographical particularities), Cyprus (3.3%) and Greece (6.6%, all figures here – own calculations). Although this is intuitively plausible (given for example the known high power of municipalities in Denmark and the geographic specifics of Malta or Cyprus), budget size cannot be clearly equated with decisional power, especially in cases where municipalities' expenses result from decision at higher administrative levels. All the same, in this calculation Germany ranks below the EU-28 mean.

The following depiction of the state of research and possible research fields in Germany is sorted according to NUTS (Nomenclature des unités territoriales statistiques) levels. In Germany there are six NUTS levels. This pilot study is focused on the German NUTS 3 level.

1. NUTS 0: The Federal Republic of Germany
2. NUTS 1: Federal States (Bundesländer, e.g. Bavaria, Hesse, Saxony etc.)
3. NUTS 2: Administrative regions (Regierungsbezirke), e.g. Bavaria has 7 of such regions, Baden-Wuerttemberg – 4. In some Federal States this level does not exist.
4. NUTS 3: 'Counties' (Landkreise) or 'Cities not belonging to a county' (kreisfreie Städte) and 'Independent Cities' (Stadtkreise). For example, in table 4:
   o the green units are 'Counties' (Landkreise) or 'Kommunalverbände besondere Art' ('Special regional associations')
   o the blue units are 'Cities not belonging to a county' (kreisfreie Städte) or 'Independent cities' (Stadtkreise) as they are called in one Federal State.
5. LAU 1 (primarily NUTS 4): Local Administrative Units: Associations of Administrations (Verwaltungsgemeinschaften)
6. LAU 2 (primarily NUTS 5): Local Administrative Units: Municipalities (Gemeinden)

Previously, in Europe AAI has been calculated on various geographical levels:

NUTS 0

The Active Ageing Index has been calculated for 28 European Union countries (NUTS 0) and for some non-EU countries, including Canada, Iceland, Norway, Serbia, Switzerland, and Turkey.

NUTS 1

Currently no AAI calculation at this level is known. In Germany, the Federal States (Bundesländer) are at the NUTS 1 level, and since the variable 'Bundesland' is included in most data sets covering the whole country, the calculation of a NUTS 1 AAI for Germany would be methodologically simple. Further, due to the comparatively strong political power of the Bundesländer that results from Germany's strong federalism, the NUTS 1 level is politically important. One the other hand, it is possible that German Federal States are internally too heterogeneous for a sensible calculation of an AAI at this level.

NUTS 2

At this level AAI has been calculated for the 16 Polish Voivodeships (Breza/Perek-Białas 2014). For the Spanish NUTS 2 level Rodríguez-Rodríguez et al. (2014, see their presentation at http://www1.unece.org/stat/platform/display/AAI/International+Seminar) calculated AAI for the 17 autonomous communities or regions and the 2 self-governing cities (Ceuta and Melilla).

Mayoral et al. (2015) calculated AAI for the Basque Country. Based on statistical data from official sources (domain 1 and indicators 3.4 and 3.5) and a survey of living conditions for the elderly (all other indicators) they concluded that the Basque Country would be ranked 7th in Europe, most notably due to the second best score in domain 4.

In Italy, researchers from the Italian National Institute of Statistics calculated AAI for the 21 regions for the years 2007 and 2012 (Quattrociocchi et al. 2015). Generally again the data situation at the regional level is good when compared to lower levels. For some indicators the same data sources as for EU-AAI were possible to use, for example the European Union Statistics on Income and Living Conditions (EU-SILC) data could be used for Italian regions. However, in some cases different sources had to be used than those used for EU-AAI. This is true in particular for the domain 'Participation in society', the indicators of which are based on the data from the European Quality of Life Survey (EQLS). Other surveys had to be used for calculation of these indicators for Italian regions, namely Aspects of Daily Life (survey with a high case number (20,000 per year)) and Families and social subjects. Also variables 3.7 'Physical safety' and 4.5 'Social connectedness' were covered by data from the Aspects of daily life since Italy re-entered the European Social Survey (ESS) only in round 6 (2012). Substitute data for both came from.

In Germany NUTS 2 depicts 'Regierungsbezirke'. These are subunits below 'Bundesländer' (for example, Bavaria has 7 'Regierungsbezirke', Baden-Wuerttemberg 4, and so on. Yet not all 'Bundesländer' have various units at this level. For example, in the NUTS 1 entity of Brandenburg, there is only one NUTS 2 entity, which is Brandenburg. The same applies to Schleswig-Holstein, Mecklenburg-Hither Pomerania, Thuringia, and Saarland, and to the city states of Berlin, Hamburg and Bremen.

Methodologically the calculation at the NUTS 2 (Regierungsbezirke) level would be difficult since most data sets do not offer a breakdown at the NUTS 2 level. One exception is the European Quality of Life Survey (EQLS). Of course, results from NUTS 3 can be summarised into results for NUTS 2.

NUTS 3

One calculation at the NUTS 3 level has been conducted by Bacigalupe et al. (2015) for the Biscay province (or Vizcaya or Bizkaia) – a NUTS 3 area within the Spanish NUTS 2 area of the Basque Country. The authors primarily used data from the Office of Statistics of the Basque country. Missing variables have been filled in by a Computer-Assisted Telephone Interviewing (CATI) survey in late 2014 (n=1,362). Results put the Biscay province at rank 7 in Europe, similar to the Basque Country depicted in the NUTS 2 section above.

Again here it has to be stated that (similar to the Basque calculation) AAI was calculated for the respective level (here NUTS 3, above – NUTS 2), yet for only one territorial entity at this level. In this pilot study, AAI is calculated for various territorial entities at the NUTS 3 level. This aggravates methodological challenges. The calculation for one territorial entity allows for the use of data available only for this entity, which could be for example a survey conducted by a city. Statistical offices of large cities or rural districts might provide data, partly derived from their own surveys (for example the regularly conducted 'Bürgerumfrage' in Stuttgart covered 9,000 inhabitants in 2013), but this cannot be used for comparisons between NUTS 3 entities as long as no common core questionnaire is used.

In Germany at the NUTS 3 level are counties (Landkreise), kreisfreie Städte ('Cities not belonging to a county') or Stadtkreise (as 'kreisfreie Städte' are called in the Federal State of Baden-

Wuerttemberg). Our analysis aims to cover 88 German territorial entities: 51 counties and 37 kreisfreie Städte ('Cities not belonging to a county') or Stadtkreise ('Independent cities'). These were initially 39 cities, but became 37 as two of them (Aachen and Hannover) belong to 'special regional associations' ('Kommunalverbände besondere Art') between large cities and their surrounding area and therefore are considered to be counties.

Table 1: Territorial entities analysed in the pilot study

	Total DE	Analysed	Population	Further information
Counties ('Landkreise')	295	51 most populous	50 000 – 1 130 000 Analysed: 270 000 – 1 130 000	Including 3 'Kommunalverbände besondere Art' (Special regional associations): Aachen, Hannover and Saarbrücken, which are mergers of counties and 'Cities not belonging to a county'. Mean size: 35 × 35 km
'Cities not belonging to a county' (kreisfreie Städte) or 'Independent cities' (Stadtkreise)	107	37 most populous	34 000 – 3 500 000 Analysed: 195 000– 3 500 000	Mean size: 12 × 12 km

NUTS 3 areas are similar in their geographical expansiveness and probably in their closeness to older people's lives. One might argue that city districts (at least in large cities) are similar to what municipalities are in counties and that the local area affects people's lives. For example, the level of physical activities is affected by local circumstances (e.g. Reyer et al. 2014 show this for the German city of Stuttgart). Further, it is plausible that the degree of political participation as measured in EU-AAI (collective forms of participation) is affected by local structures and local possibilities. This also applies to social participation and volunteering. And, naturally, people's feeling of safety when being outside in the own local area after dark (indicator 3.7) is strongly affected by characteristics of their district, whereas for labour market participation the situation in at least the whole NUTS 3 area is important (as well as of neighbouring NUTS 3 areas). Other factors are determined at higher NUTS levels. For example, formal education touches one of the main responsibilities and powers of NUTS 1 regions. Against the background of a low share of people in Germany who are 55 years old or older that have moved to a different NUTS 1 region, the share of older people with a certain level of education largely depends on past NUTS 1 governments' education policies. Here, NUTS 3 units have comparatively weak political power, yet due to some geographical mobility between NUTS 3 units (e.g. within a NUTS 1 region, people with higher education or who will get higher education moving to large cities, which are in a different NUTS 3 unit) and other circumstances, differences in educational levels between NUTS 3 entities may exist.

Although this is obvious to the experienced reader, it should be noted that similar NUTS levels in different countries can constitute very different units. For example, there are about 400 NUTS 3 units in Germany and about 40 in Poland. Given that both countries are of a similar geographical size, it is clear that Polish NUTS 3 units are far bigger than German NUTS 3 units and, despite the lower total population of Poland, far more populous.

5. METHODOLOGY

5.1 SECONDARY DATA ANALYSES

The calculations for this pilot study are based on secondary data, that is, data not gathered with the explicit aim of constructing a local AAI. Tables 2 and 3 show the data sources used and those considered yet not used due to lack of access to data. In order to ensure comparability over time, only longitudinal studies were used, which significantly reduces the number of surveys suitable for this study.

5.1.1 ADVANTAGES

Sustainability

Firstly, an AAI based on secondary data are more sustainable as repeated calculations are possible to complete cheaply. In our case it would be sufficient to re-gather data from leading German surveys or the German part of repeatedly conducted surveys at European or international level. Certain tasks would not require repeating: the identification of suitable surveys and survey questions; contacting various responsible persons for the first time; clarifications of matters of data protection; selection of cities. In addition, surveys that have already been carried out more than once most likely have their methodologies fine-tuned and are more reliable.

Quality of data

Secondly, and related to the first point, considerable effort is invested to ensure that data sources of the highest standards are used. Items have been tested and used in several past waves. One of the main factors is data collection via computer assisted personal interviews (CAPI), coming with high costs. Therefore, primary data collection for the local AAI with the same methods as used in existing surveys would necessitate considerable funding, depending on the number of cases.

Ex-post adjustments, immediate intertemporal comparisons

Thirdly, secondary data analyses allow for later adjustments. The local AAI can be re-calculated with additional variables, possibly from additional surveys, if some aspects not yet included will be considered important later. Besides a later re-calculation of the local AAI reported here, also the calculation of the local AAI for previous years is possible. Although this implies that longitudinal comparisons (e.g. for the time span 2000-2015) are possible, this comparison is restricted by the low numbers of cases. Case numbers reported here imply caution in intertemporal comparisons since values can be affected by different compositions of samples. Weighting by survey organisations was conducted at the national level and not the lower geographical unit level, so to a certain degree differences in the samples between cities can exist. For example, weighting at the national level balances out the underrepresentation of some groups amongst respondents (for example, groups with low socio-economic status), but distortions on the local level may still appear. In order to reduce this source of error, a high number of cases per construct has been aimed at, using – if available – various surveys for each construct. Since answer categories have been dichotomised, the distorting effect of extreme answers has also been reduced.

5.1.2 DISADVANTAGES

Case numbers

The low number of respondents at the local level is one of the three major disadvantages of secondary analyses. As stated above, this restricts the possibility of intertemporal comparisons. Further, subdivisions (e.g. by gender or socio-economic status) are not possible in many cases since the number of respondents per variable and indicator would be too small.

Availability of variables

Another limitation concerns the availability of variables. Since only variables from surveys which allow for the calculation of the values for certain territorial entities and certain age groups can be used, a perfect replication of EU-AAI is not possible; reliability is restricted. Therefore values for territorial entities cannot be compared to the country value in EU-AAI, but can be compared to other cities reported here. Building the index for the whole country, though, could give an idea of the relationship between EU-AAI and the one computed for local areas on proxy surveys.

Information at the levels of districts (large cities), cities, and municipalities (counties)

District-specific analyses are not possible as the available data samples are insufficiently large for such disaggregation. Given the high number of districts per big city or cities/municipalities per county and a considerable number of cities and counties, analyses specific to districts or municipalities necessitate a comparatively high number of respondents with accordingly high costs in CAPI (and even CATI) primary data collection. This implies that cities do not obtain district-specific information, and counties do not have information at the level of municipalities. This inhibits micropolicymaking, which is an issue especially in very large cities where the immediate context for citizens is rather a district than the city, or likewise the town or smaller city in the counties.

Here the information is provided concerning strengths and weaknesses compared to other large cities or counties. This is not possible with surveys conducted by certain large cities or counties alone, and possibilities for comparisons are also rather restricted with surveys covering only a low number of large cities or counties.

Survey period

Lastly, in contrast to primary data collection secondary analyses based on several surveys have a rather long period of data collection. While the timing of primary data collection may be pinned down to several months in CAPI surveys (or even weeks or days in mail surveys, online surveys or telephone surveys), AAI presented here covers a time span over a few years since not all surveys were conducted in the same year. On the one hand, this might be considered a disadvantage since the specific event context of surveys is unclear, and comparisons between the AAI scores at different times may result in overlapping sources. On the other hand, variables in AAI are supposed to be stable and not subject to considerable short-term fluctuations. This can be a disadvantage when the various surveys are not conducted simultaneously or even if conducted in a different frequency from one another. Having to put together several sources at a pre-defined point in time may involve strong approximations if the various survey times varied strongly around that point; this may make trends fuzzy as, from one AAI calculation to the next, it is possible that while some of the surveys were updated, others were not, creating some inertia. Note that this problem also impacts AAI at EU level as in the case of the indicators based

on the EQLS data (EQLS implementation frequency is about four years, while for AAI it is two years). But, at a local scale and when aiming to use several existing surveys, this problem is amplified.

5.2 USING VARIOUS DATA SOURCES PER INDICATOR

Since we expected low numbers of respondents at the NUTS 3 level for most data sources, in contrast to EU-AAI (comparing 28 European countries), we have pooled together several data sources for most indicators to increase reliability. For example, while EU-AAI measures political participation (indicator 2.4) via the attendance of meetings or demonstrations or contacting of a politician or public official, our measure consists of three variables from different surveys, amongst them electoral participation. This method comes with various advantages:

1. The number of respondents increases due to the use of several sources.
2. Given a certain number of respondents, different respondents across items minimise error. For example, if one data source provides 20 cases, due to sampling or recruitment technique or interviewer effects some deviations in one direction can get caused (e.g. 10 out of 20 interviews are conducted by an interviewer provoking negative answers or preferring target persons of a certain area) more strongly than if these 20 respondents result from three surveys.
3. Constructs are based on different items, so distorting effects, for example due to the wording of questions or answer categories get minimized.
4. Multiple variables capture more accurately the construct underlying the indicator. For example, in EU-AAI political participation is not measured via electoral participation. Yet, the goal is "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*" (emphasis added). One might argue that in representative democracies, electoral participation remains the citizen's most important means to exert political influence. Since different electoral systems would hamper cross-country comparisons (compulsory voting, different importance of national elections, semi-presidential systems), a solution would have been to put electoral participation of those 55+ in relation to electoral participation of people aged below 55.
5. One disadvantage of the method is that the indicator values cannot be interpreted in terms of content. Using the same example again, in EU-AAI a country's figure for 'political participation' shows the percentage of respondents 55 or above who attended a meeting of a trade union or political party, participated in a demonstration or contacted a politician in the 12 months preceding the survey. Our indicator for political participation consists of several surveys and for example also includes electoral participation. Therefore, in several cases in the local AAI, indicator values are artificial, and only variable values can be clearly interpreted.

5.3 DECISION TO AIM AT HIGH NUMBERS OF DATA SOURCES AND TERRITORIAL ENTITIES

5.3.1 DATA SOURCES

As stated above, we suspected that in several cases the number of respondents per territorial entity were low. For example, a large territorial entity of 400,000 inhabitants represents only 0.5% of the German population of 80 million. Therefore, if respondents were geographically exactly representative of the whole population, a survey with 5,000 respondents would have 25

respondents in this territorial entity. Moreover, the focus on respondents aged 55 or older (or even higher age groups for some variables) further reduces the number of respondents. A further subdivision (e.g. into men and women) would lead to further decline in the number of respondents. Therefore, in order to increase the number of respondents and minimise data gaps we tried to access as many data sources as possible.

5.3.2 TERRITORIAL ENTITIES

Although we suspected that the population size of territorial entities and number of respondents (and therefore data availability) were positively correlated, before accessing the data we could not be sure how strong this correlation would be. For example, if the data permits an analysis of 30 territorial entities, it is not clear if this would also include territorial entities with smaller population sizes where there might be a weaker correlation between population size and number of respondents.

Especially for eastern German territorial entities one expects there to be some outliers with high numbers of respondents compared to their population size, since in some surveys the target population in eastern Germany is overrepresented in order to allow for eastern-specific analyses. For example, in ESS there are about 2,000 western Germans and about 1,000 eastern Germans in spite of the fact that the population of western Germany is more than four times greater than the eastern population. For analyses of the whole country weighting adjusts for this, but for local calculations the eastern overrepresentation should lead to some positive eastern outliers in terms of numbers of respondents.

Before accessing the data it was not possible to estimate the number of respondents at the NUTS 3 level, since at this level, due to sampling issues (e.g. stratified random sample) and fieldwork specificities (e.g. distortions from gross samples to realised interviews), the geographical allocation of respondents is not representative of the geographical allocation of residents. This means that a territorial entity representing for example 0.5% of the population does not necessarily represent 0.5% of respondents. As a result of this and also the lack of common opinion on the minimum number of respondents necessary for a valid calculation of percentage figures, the number of territorial entities with sufficient data to enter the final result table could not be estimated before accessing the data.

For these reasons, in order to be on the safe side, we began with a high number of NUTS 3 territorial entities. We started with 51 counties ('Landkreise') and 39 large cities ('Cities not belonging to a county' or 'Independent cities'). Since two large cities (Hannover and Aachen) are part of 'special regional associations' ('Kommunalverbände besondere Art') the number of cities declined to 37, so that 88 territorial entities were included at the beginning of the pilot study.

5.4 DATA ACCESS

5.4.1 IDENTIFICATION OF RELEVANT DATA SETS

Crucial criteria in the identification of relevant data sets were the longitudinal structure, sufficient sample size, coverage of the whole of Germany and suitability of variables.

Relevant data sets were identified firstly via the list of variables used in EU-AAI. Further, general knowledge about the German social survey landscape had been used. Additionally, crucial experts were asked for advice. A search of the data archive of GESIS / Leibniz-Institut für Sozialwissenschaften (GESIS – Leibniz-Institute for the Social Sciences) was conducted. For official statistical data a web search was conducted.

Finally, in some cases other surveys were suggested by people and organisations responsible for surveys. For example, the person responsible for the OECD Survey of Adult Skills (PIAAC) suggested adding data from the 'Competencies in Later Life' (CiLL) – a study related to PIAAC (while PIAAC is focused on those at age 16–65, CiLL is focused on those aged 66 to 80). Similarly, the people responsible for the German Ageing Survey (DEAS)/Freiwilligensurvey suggested using data from the Indicators and Maps for regional and urban development (INKAR) – a publicly open website with data aggregated at the NUTS 3 level (only some variables are focused on older people, so only these variables could be used). Tables 2 and 3 show the surveys used and those not used due to lack of data access.

Table 2: Surveys used for the pilot study

Name in German	Name in English
Deutscher Alterssurvey (DEAS)	German Ageing Survey (DEAS)
European Social Survey (ESS)	European Social Survey (ESS)
Freiwilligensurvey (FWS)	German Survey on Volunteering (FWS)
GLES (Vorwahl und Nachwahl)	German Longitudinal Election Study (before election and after election) (GLES)
INKAR (Indikatoren und Karten zur Raum- und Stadtentwicklung)	INKAR (Indicators and Maps for regional and urban development)
Mikrozensus	Microcensus
Regionalstatistik	Regional Database Germany
Survey of Health, Ageing and Retirement in Europe (SHARE)	Survey of Health, Ageing and Retirement in Europe (SHARE)
The German Socio-Economic Panel (SOEP)	The German Socio-Economic Panel (SOEP)

Table 3: Surveys not used for the pilot study

Name in German	Name in English
The German General Social Survey (ALLBUS)	The German General Social Survey (ALLBUS)
Arbeiten und Lernen im Wandel (ALWA)	Working and Learning in a Changing World (ALWA)
Bertelsmann Wegweiser Kommune	Bertelsmann Wegweiser Kommune ("commune signpost")
CiLL (Competencies in Later Life) Accompanying study to PIAAC	CiLL (Competencies in Later Life) Accompanying study to PIAAC
Eurobarometer	Eurobarometer
European Quality of Life Survey (EQLS)	European Quality of Life Survey (EQLS)
European Union Statistics on Income and Living Conditions (EU-SILC)	European Union Statistics on Income and Living Conditions (EU-SILC)
EU-Labour Force Survey	EU-Labour Force Survey
Eurostat Urban Audit	Eurostat Urban Audit
EVS European Values Study	EVS European Values Study
Generali Altersstudie	Generali Altersstudie
ISSP International Social Survey Programme	ISSP International Social Survey Programme

Name in German	Name in English
Panel Arbeitsmarkt und soziale Sicherung (PASS)	Panel Study Labour Market and Social Security (PASS)
OECD Survey of Adult Skills (PIAAC)	OECD Survey of Adult Skills (PIAAC)
Panel – Arbeitnehmerbefragung für das Projekt Berufliche Weiterbildung als Bestandteil Lebenslangen Lernens (WeLL)	Employee survey for the project Further Training as a Part of Lifelong Learning (WeLL)
Stichprobe der Integrierten Arbeitsmarktbiografien (SIAB)	The Sample of Integrated Labour Market Biographies Regionalfile 7510 (SIAB)
Zeitverwendungserhebung (time use survey)	Zeitverwendungserhebung (time use survey)

5.4.2 PROCEEDINGS OF DATA ACCESS

Leaving aside the singular case where direct data download was possible, in cases where data access was at all possible there were four different ways of accessing the data in cooperation with the institutes responsible for surveys:

(1) We provided our list of territorial entities and variables and then received the results.
(2) We provided our list of territorial entities and syntax for the statistical programme preferred by the institute and then received the results.
(3) We received data (CD or link to download) and conducted the analyses.
(4) Face-to-face contact with/at survey offices if necessary with later analyses sent to us.

5.4.3 PROBLEMS OF DATA ACCESS

We faced several difficulties accessing the data:

1. The lack of information about the NUTS 3 entity in which respondents live. In several cases this information was available neither in published data (which was to be expected) nor in sampling data sets resulting from face-to-face surveys. One reason could be that sampling files were deleted for data protection reasons as they are not supposed to be used after the surveys are completed. Another reason could be that it is no longer possible to match files, so that sample files exist but cannot be matched with the data file containing respondents' answers. Further, it is possible that companies conducting surveys do not provide sample files to those responsible for surveys. Lastly, if those responsible are not willing to provide data due to workload or data protection considerations, the easiest for them is to say that the information is not available.
2. Data protection considerations by one institute. The problem was the principle possibility to identify cities which were covered by a survey and then to use this information to identify respondents in the original microdata set. For example, if we publish data from a survey for the city of Dresden and not for the city of Leipzig, one could use the microdata set of this survey with the knowledge that all respondents in the Federal State of Saxony in cities with more than 500,000 inhabitants are from Dresden, since there are only two cities with >500,000 inhabitants of this size in Saxony. Yet in other instances it is also possible to identify the city. This applies to the city states of Berlin and Hamburg, and also for the Federal state of Bremen, which consists of two cities of different sizes, so based on the variables of city size respondents from Bremen can be identified. This applies to all other cities which are the only cities in a specific size group in their Federal state, for example Frankfurt in Hesse and Stuttgart in Baden-Wuerttemberg.
3. In one case, we were able to invalidate data protection arguments (given we needed only aggregated data) and the argument that merging data from different sources is methodologically problematic. However, the institute came up with basic methodological

22

considerations and refused to give us aggregate data for territorial units with less than 100 cases. We pointed out that we are responsible for conclusions drawn from smaller numbers of respondents by us and that no other institute considered this a crucial problem. Nevertheless, we did not get data from them.

Additionally, there were administrative problems. Answering queries like ours is outside of the remit of tasks of the institutes responsible for surveys. All work done for us can be considered extra work. We suspect that this is also related to the second administrative problem: it was not always clear who was responsible at the respective institute, resulting in delays, misunderstandings or the provision of incorrect information.

5.5 GEOGRAPHICAL UNITS COVERED BY THE ORIGINAL ANALYSIS

Table 4 shows the territorial entities on NUTS 3 level included in the original analyses. For these territorial entities the project team tried to access data.

Table 4: The 37 most populous Urban districts (Stadtkreise, blue) and Independent cities (kreisfreie Städte, blue) and the 51 most populous rural districts (Landkreise, green)

City/District	Region	Population
Berlin	Berlin	3 421 829
Hamburg	Hamburg	1 746 342
München/ Munich	Bavaria	1 407 836
Hannover (Region)	Lower Saxony	1 128 037
Köln/ Cologne	North Rhine-Westphalia	1 034 175
Frankfurt am/on the Main	Hesse	701 350
Recklinghausen (Region)	North Rhine-Westphalia	613 092
Stuttgart	Baden-Wuerttemberg	604 297
Düsseldorf/ Dusseldorf	North Rhine-Westphalia	598 686
Rhine-Sieg district	North Rhine-Westphalia	585 781
Dortmund	North Rhine-Westphalia	575 944
Essen	North Rhine-Westphalia	569 884
Bremen	Bremen	548 547
Aachen (Region)	North Rhine-Westphalia	547 661
Rhine-Neckar district	Baden-Wuerttemberg	534 729
Leipzig	Saxony	531 562
Dresden	Saxony	530 754
Ludwigsburg (Region)	Baden-Wuerttemberg	526 377
Esslingen (Region)	Baden-Wuerttemberg	516 779
Nürnberg/ Nuremberg	Bavaria	498 876
Duisburg	North Rhine-Westphalia	486 855
Mettmann (Region)	North Rhine-Westphalia	477 760
Rhine-Erft district	North Rhine-Westphalia	459 448
Wesel (Region)	North Rhine-Westphalia	457 244
Rhine district Neuss	North Rhine-Westphalia	442 522
Steinfurt (Region)	North Rhine-Westphalia	437 127
Karlsruhe (Region)	Baden-Wuerttemberg	431 315
Ortenau district	Baden-Wuerttemberg	415 639
Rems-Murr district	Baden-Wuerttemberg	414 016
Märkischer Kreis (Region)	North Rhine-Westphalia	413 820
Main-Kinzig district	Hesse	407 619
Unna (Region)	North Rhine-Westphalia	391 774
Böblingen (Region)	Baden-Wuerttemberg	374 279
Borken (Region)	North Rhine-Westphalia	365 191
Bochum	North Rhine-Westphalia	361 734
Gütersloh (Region)	North Rhine-Westphalia	354 463
Osnabrück (Region)	Lower Saxony	351 316

City/District	Region	Population
Erzgebirgskreis (Region)	Saxony	349 582
Lippe (Region)	North Rhine-Westphalia	345 127
Wuppertal	North Rhine-Westphalia	343 488
Offenbach (Region)	Hesse	341 669
Munich (Region)	Bavaria	332 800
Heilbronn	Baden-Wuerttemberg	329 250
Bielefeld	North Rhine-Westphalia	328 864
Saarbrücken (Regional association)	Saarland	325 604
Zwickau (Region)	Saxony	335 137
Ennepe-Ruhr district	North Rhine-Westphalia	322 916
Emsland (Region)	Lower Saxony	315 757
Mittelsachsen (Region)	Saxony	312 711
Bonn	North Rhine-Westphalia	311 287
Minden-Lübbecke (Region)	North Rhine-Westphalia	309 216
Ostalbkreis (Region)	Baden-Wuerttemberg	308 205
Bautzen (Region)	Saxony	306 570
Kleve (Region)	North Rhine-Westphalia	304 963
Pinneberg (Region)	Schleswig-Holstein	304 087
Münster	North Rhine-Westphalia	299 708
Karlsruhe	Baden-Wuerttemberg	299 103
Paderborn (Region)	North Rhine-Westphalia	299 071
Wetteraukreis (Region)	Hesse	297 369
Soest (Region)	North Rhine-Westphalia	296 742
Mannheim	Baden-Wuerttemberg	296 690
Viersen (Region)	North Rhine-Westphalia	295 067
Darmstadt-Dieburg (Region)	Hesse	287 966
Rheinisch-Bergischer-Kreis (Region)	North Rhine-Westphalia	279 497
Reutlingen (Region)	Baden-Wuerttemberg	278 031
Augsburg	Bavaria	276 542
Siegen-Wittgenstein (Region)	Baden-Wuerttemberg	278 031
Konstanz (Region)	Baden-Wuerttemberg	275 785
Ravensburg (Region)	Baden-Wuerttemberg	275 339
Hildesheim (Region)	Lower Saxony	274 554
Wiesbaden	Hesse	273 871
Warendorf (Region)	North Rhine-Westphalia	273 412
Oberbergischer Kreis (Region)	North Rhine-Westphalia	270 618
Gelsenkirchen	North Rhine-Westphalia	257 850
Mönchengladbach	North Rhine-Westphalia	255 430
Braunschweig	Lower Saxony	247 227
Augsburg (region)	Bavaria	242 697
Chemnitz	Saxony	242 022
Kiel	Schleswig-Holstein	241 533
Halle (Saale)	Saxony-Anhalt	231 565
Magdeburg	Saxony-Anhalt	231 021
Krefeld	North Rhine-Westphalia	222 058
Freiburg im Breisgau	Baden-Wuerttemberg	220 286
Lübeck	Schleswig-Holstein	212 958
Oberhausen	North Rhine-Westphalia	209 097
Erfurt	Thuringia	204 880
Mainz	Rheinland-Pfalz	204 268
Kassel	Hesse	194 087
Total= 47.7% of the German population		38.636.268
30 units in the final analysis = 25.1% of the German population		20.320.791

Population: Based on census

5.6 Calculating consistency scores

In order to determine the territorial entities with the most reliable values and therefore the territorial entities which can enter the final index, we calculated consistency scores. First we calculated variable scores: the score for a territorial entity results from the inverted standard error of the survey for this variable multiplied by the number of respondents of this territorial entity for this variable. This means that especially high number of respondents in surveys with low standard errors results in high consistency scores. The scores for variables resulted in indicator scores; these – weighted according to the AAI weights – in domain scores, which – weighted again – resulted in overall scores. As might be expected, due to the high importance of case numbers, which in turn are correlated to population figures, territorial entities with high population figures had the highest consistency scores, especially (of course) Berlin, Hamburg, Hannover and Munich, but also Bremen, which has not a very high population number. The table shows the rank, but also the value, so that it can be seen clearly to which degree differences exist between NUTS 3 entities.

We split the NUTS 3 entities into three groups: one with the highest consistency scores, one with medium consistency scores and one with low consistency scores. The respective group size results from the goal to create three groups with a roughly equal number of territorial entities. The final number of territorial entities whose values can clearly be interpreted content-wise – 10, 30, or 50 – etc. depends on the number of respondents one considers necessary for sensible interpretation. Since the effect of outliers is minimised due to dichotomisation we expect that a low number of respondents is sufficient. We will see if in all of the 30 territorial entities numbers of respondents are large enough so that against the backdrop of current data availability the calculation of a local AAI is feasible.

Table 5 shows the consistency scores. The green group (with the highest scores) enters further analyses.

Table 5: Consistency scores

Rank	City / Region	Value	Rank	City / Region	Value	Rank	City / Region	Value
1	Berlin	8891	31	Ludwigsburg (Region)	1164	61	Lippe (Region)	770
2	Hamburg	4847	32	Pinneberg (Region)	1154	62	Karlsruhe	765
3	Bremen	3200	33	Main-Kinzig administrative district	1148	63	Paderborn (Region)	760
4	Hannover (Region)	3180	34	Erfurt	1134	64	Rheinisch-Bergischer (Region)	757
5	München/ Munich	2346	35	Unna (Region)	1125	65	Bielefeld	755
6	Leipzig	2082	36	Steinfurt (Region)	1114	66	Augsburg (Region)	753
7	Köln/ Cologne	1797	37	Rhine administrative district Neuss	1113	67	Ostalb administrative district	750
8	Saarbrücken (Regional association)	1705	38	Märkischer Kreis (Region)	1067	68	Augsburg	738
9	Dresden	1638	39	Wesel (Region)	988	69	Borken (Region)	736
10	Rhein-Neckar	1626	40	Aachen (Region)	963	70	Mainz	734

Rank	City / Region	Value	Rank	City / Region	Value	Rank	City / Region	Value
	administrative district							
11	Halle (Saale)	1594	41	Wetterau administrative district	960	71	Münster (Westf.)	723
12	Rhein-Sieg administrative district	1570	42	Darmstadt-Dieburg (Region)	932	72	Mannheim	722
13	Recklinghausen (Region)	1561	43	Ortenau administrative district	928	73	Reutlingen (Region)	720
14	Erzgebirgs administrative district	1508	44	Böblingen (Region)	921	74	Krefeld	700
15	Bautzen (Region)	1475	45	Karlsruhe (Region)	917	75	Kleve (Region)	698
16	Nürnberg	1456	46	Bochum	916	76	Braunschweig	692
17	Magdeburg	1444	47	Offenbach (Region)	887	77	Heilbronn (Region)	692
18	Essen	1425	48	Gütersloh (Region)	880	78	Mönchengladbach	679
19	Zwickau (Region)	1406	49	Minden-Lübbecke (Region)	872	79	Viersen (Region)	674
20	Frankfurt am Main	1382	50	München/ Munich (Region)	854	80	Emsland (Region)	651
21	Dortmund	1343	51	Ennepe-Ruhr-Kreis administrative district	847	81	Ravensburg (Region)	640
22	Düsseldorf	1328	52	Wiesbaden	846	82	Freiburg im Breisgau	636
23	Mittelsachsen (Region)	1327	53	Hildesheim	844	83	Kassel	607
24	Rems-Murr administrative district	1294	54	Wuppertal	842	84	Gelsenkirchen	596
25	Erftkreis (Region)	1274	55	Kiel	837	85	Siegen (Region)	527
26	Stuttgart	1229	56	Osnabrück (Region)	819	86	Konstanz (Region)	521
27	Chemnitz	1220	57	Bonn	816	87	Warendorf (Region)	514
28	Esslingen (Region)	1181	58	Lübeck	785	88	Oberhausen	508
29	Mettmann (Region)	1178	59	Soest (Region)	780			
30	Duisburg	1168	60	Oberbergischer Kreis (Region)	777			

Results were calculated for the 30 territorial entities with the highest consistency scores. Given that we sued different data sources, in some cases, total values ('ALL') are not between values for men and women. For men and women, the same data sources were used. For some data sources, only values for men and women combined are available, and not separately.

5.7 VARIABLES

The basic task was to assess the possibility of replicating AAI at the local level. In cases where it was not possible to use the same variables as used in EU-AAI the task was to find suitable alternative variables coming close to what EU-AAI aims to measure.

Table 6 provides an overview of the data sources and the indicator values in the 30 territorial entities used for the final calculation of the overall AAI. The table in appendix 1 provides a more comprehensive overview, including variables not used due to lack of data access. Mean values in the local AAI are low due to weighting to the mean of the data source with the lowest mean value (see below chapter 5.9.1.1 and table 7). This weighting was conducted in order to avoid distortions caused by data gaps, and the lowest value has been chosen as target value for other data sources in order to avoid values exceeding 100.

Table 6: Data sources used in EU-AAI and in the local AAI

		2014 EU-AAI		Local AAI	
Domain 1 'Employment'					
	Indicator	Source	Value DE	Source(s)	Value 30 areas
1.1	Employment 55-59	EU-LFS	74.9	DEAS 2014 ESS FWS 2014 GLES 2013 Microcensus 2015 SHARE 2013 SOEP 2014	64.47
1.2	Employment 60-64	EU-LFS	46.5		28.61
1.3	Employment 65-69	EU-LFS	11.1		6.97
1.4	Employment 70-74	EU-LFS	5.1		0.58
Domain 2 'Participation in Society'					
	Indicator	Source	Value DE	Source(s)	Value 30 areas
2.1	Voluntary activities	EQLS	10.0	DEAS 2014 FWS 2014 GLES (after elect.) 2013 SHARE 2013	22.86
	Note: The GLES survey covers activities/memberships in clubs (active and passive). Additionally the DEAS survey does not cover the frequency of voluntary activities (yes/no only). That may increase the number of people indicating that they do/provide voluntary activities.				
2.2	Care to children, grandchildren	EQLS	17.9	DEAS 2014 FWS 2014 SHARE 2013	15.62
2.3	Care to older adults	EQLS	8.5	DEAS 2014 ESS 2014 FWS 2014 SHARE 2013	15.88
	Note: The surveys used provide a more general measurement about given help, not focusing on given help to older adults only. ESS includes family members, friends or neighbours without referring to their age. Additionally most of the surveys used do not cover the frequency of caring for older adults (ESS and SHARE) as EU-AAI does (at least once a week). We assume that people 55+ living in the same household as their parents take care of them in some form, since their parents are old and living together in the same household suggests a very close relationship.				
2.4	Political participation	EQLS	20.6	DEAS 2014 ESS 2012 FWS 2014 GLES (after elect.) 2013	12.9
	Note: The original AAI uses four forms of political participation though excludes electoral participation (federal elections). The surveys DEAS, ESS, FWS and GLES survey cover this. This leads to differences between this study and the original AAI measurement.				

	2014 EU-AAI		Local AAI	
Domain 3 'Independent, healthy and secure living'				
Indicator	**Source**	**Value DE**	**Source(s)**	**Value 30 areas**
3.1 Physical exercise	EQLS	12.4	DEAS 2014 ESS 2014 SHARE 2013	29.4
Note: DEAS and SHARE cover physical exercise either 'several times a week' or 'at least more than once a week'. That is still less than what EU-AAI covers ("every day or almost every day"). Additionally, at local level ESS measures activities of 30 minutes or more as well as includes a category "walking quickly". This may explain the higher value of this indicator.				
3.2 Access to health and dental care	EU-SILC	92.5	DEAS 2014 ESS 2014 SHARE 2013	30.9
Note: In Germany there are non-financial reasons for not being able to see a doctor that are more common (e.g. no appointment in the near future). Values in ESS and DEAS are over 90, yet SHARE has low mean values and a high number of respondents – high coverage reduces figures here.				
3.3 Independent living arrangements	EU-SILC	96.8	DEAS 2014 GLES (bef. elect.) 2013 Microcensus 2015 Regionalstatistik 2013	43.1
3.4 Relative median income	EU-SILC	87.9	DEAS 2014 FWS 2014 GLES (bef. elect.) 2013 GLES (after elect.) 2013 INKAR 2012 Microcensus 2015 SOEP 2014	12.7
Note: Respondents counted into '1' category if their income is above the median income; partly figures are low since the median category is wide, so that a comparatively high income is necessary for a value above median.				
3.5 No poverty risk	EU-SILC	91.6	DEAS 2014 GLES (bef. elect.) 2013 GLES (after elect.) 2013 INKAR 2012 Microcensus 2015	61.9
3.6 No severe material deprivation	EU-SILC	97.2	DEAS 2014 ESS 2014 FWS 2013	56.0
Note: Questions in ESS and FWS refer to respondents´ own general economic situation, so these questions do not refer to specific things which are affordable or not. Further, in order to increase variance in DEAS we categorised those in the central answer category into the '0' ('not active') group.				
3.7 Physical safety	EU-SILC	74.6	DEAS 2014 ESS 2014 SHARE 2013	71.0
3.8 Lifelong learning	EU-LFS	2.0	DEAS 2014 ESS 2014 SHARE 2013	14.1
Note: The difference occurs due to the fact that the surveys used ask either if a person received education or training in the last 12 months (ESS and SHARE) or generally about visiting courses or lectures at least once a month, without referring to any time period. The EU-AAI covers the last 4 weeks only.				

		2014 EU-AAI		Local AAI	
Domain 4 'Capacity for active ageing'					
	Indicator	**Source**	**Value DE**	**Source(s)**	**Value 30 areas**
4.1	Remaining life expectancy achievement of 50 years at age 55	EHLEIS	55.8	INKAR 2012	47.1
	The value in the EU-AAI refers to 55-year-olds, whereas the value of the local AAI refers to 60-year-olds. This partly explains the lower value in the local AAI				
4.2	Share of healthy life years in the remaining life expectancy at age 55	EHLEIS	41.7	DEAS 2014 ESS 2014 FWS 2014 Microcensus 2015 SHARE 2013	52.6
	Note: Due to lack of NUTS 3 data on healthy life expectancy, we measure health status as reported by respondents instead. This proxy measurement via subjective health status deviates from objective measurement, yet subjective health status affects the capacity for active ageing, since activity is also dependent on how one feels and not merely on how the health status is evaluated by physicians.				
4.3	Mental well-being	EQLS	74.6	DEAS 2014 ESS 2014 FWS 2014	69.4
4.4	Use of ICT	Eurostat ICT Survey	52.0	DEAS 2014 GLES (bef. elect) 2013 GLES (after elect) 2013	39.4
4.5	Social connectedness	ESS	46.6	DEAS 2014 ESS 2014 FWS 2014 SHARE 2013	40.0
	Note: Social Connectedness in AAI implies meeting by choice. SHARE covers contact with others which does not need to be a personal meeting. The contact can be also "by phone, mail, email or any other electronic means". FWS refers to the possibility to turn to for example relatives, neighbours or friends. This does not indicate that they meet frequently. By comparison EU-AAI covers the share of people that meet socially with friends, relatives or colleagues at least once a week. Nevertheless, values in SHARE are not particularly high.				
4.6	Educational attainment of older persons	EU-LFS	81.3	DEAS 2014 ESS 2014 FWS 2014 GLES (after elect.) 2013 Microcensus 2015 SOEP 2014	13.4
	Note: Possibly the figures in EU-AAI are too high, since those who are currently aged above 55 in Germany achieved their formal education in times when the share of pupils receiving at least ISCED 3 level ([upper] secondary) education was lower.				

5.8 DICHOTOMISATION

The EU-AAI

> "…is constructed in such a way that scores can range from 0 to 100. The intention was to ensure that any conceivable community… can fit into this range, but it also implies that actual AAI will not get close to the minimum or maximum values. For target setting, the theoretical maximum of 100 is of little practical value. Hence, other more realistic benchmarks are needed, showing what potential could be realistically mobilized over a reasonable time horizon" (AAI 2014 Analytical Report 2015: 6).

In order to achieve this, EU-AAI dichotomises answer categories. The local AAI follows this. This implies a loss of information in questions with more than two answer categories. For example, in the case of the care for elderly or disabled relatives the differentiation between daily and

once/twice a week is lost. This also applies to the differentiation between levels of sports or physical exercise: AAI merges together in the '0' category those doing sports once a week and one to three times a month with those never doing this. Similarly, the measurement of employment merges together in the '1' category those working 1 hour per week with those working 50 hours per week, without counting the number of working hours.

For the local AAI one advantage is that distortions due to small numbers of extreme answers, which are possible with low case numbers, are less probable.

5.8.1 PROCEEDINGS

In the few cases where the same variables are used as in EU-AAI, dichotomisation for the local level is similar.

In some other cases the categorisation of answers to the '0' or '1' category was predetermined by EU-AAI or by the data available. For example, in Domain 3 ('Independent Living'), Indicator 3.5 ('No poverty risk') based on Regionalstatistik (Regional Database Germany) the share of people not receiving Grundsicherung (means-tested welfare benefits) was used, albeit variance is low (all geographical units at 95 or above).

In other cases, dichotomisation is conducted in the following manner: the German value from EU-AAI is used as the target mark. The distribution of answers for the whole country guides the categorisation of answers at the local level. For example, if in the variable 2.2 (Care to children, grandchildren) the German value in EU-AAI is 20% (resulting from the share of respondents marking 'every day', 'several days a week' or 'once or twice a week') and the distribution of answer categories in the proxy variable is as follows:

'very often':   8%
'often':   10%
'occasionally':   12%
'almost never':   45%
'never':   25%

respondents stating 'very often' or 'often' are placed into the '1' category (i.e. caring to children, grandchildren to a considerable degree) and the other three answer options – into '0' category (i.e. not caring to children, grandchildren to a considerable degree). In this case the '1' category would include 18% of respondents. Using this calculation option would lead to the closest result to the EU-AAI value of 20%. Placing into the '1' category a reply 'very often' only would result in a value of 8%, while placing into this category replies 'very often', 'often' and 'occasionally' would result in a value of 30% (8% + 10% + 12%). Clearly, the distribution of answers in the 88 territorial entities analysed here can deviate from the national distribution.

Another aim of dichotomisation was to avoid low variance and low potential for degradations or improvements. That is, dichotomisations resulting in a high share of territorial entities with similar values (e.g. between 0 and 10 or between 90 and 100) were to be avoided if possible. Firstly, small differences between territorial entities provide only weak contributions to differences in the scores for indicators, domains or the total score. Secondly, a very high share of territorial entities with values either close to 0 or 100 leaves no considerable potential for degradations or improvements.

5.9 WEIGHTING

5.9.1 WEIGHTING WITHIN INDICATORS

For indicators based on several data sources, data from these sources had to be weighted. This necessitated weighting between these variables. Three options were available:

(1) weighting according to theoretical considerations. For example, if political participation consists of three variables and electoral participation is one of them, the latter could be given a higher or lower weight than attendance of meetings
(2) equal weighting of all variables
(3) weighting according to the numbers of respondents / according to standard errors. Considering the low case numbers (which is the main reason for the use of several variables per indicators) one could consider data from surveys with higher case numbers or lower standard errors as being more reliable.

We decided to weight according to standard errors. The lower the standard error, the higher the weight of the data source within the indicator. This comes close to weighting according to the square root of the numbers of respondents.

5.9.1.1 Weighting and data gaps

Data gaps for specific territorial entities and specific variables were not filled via multiple imputation. Values of variables and indicators are of higher practical use for policymakers, since they depict specific topics where specific solutions can be implemented. The total index value summarises the different values, indicators and domains. To increase the 'active ageing' score, different aspects of active ageing can be improved (reflected in individual indicators and domain scores), resulting in a higher overall index value. Therefore multiple imputation would only improve the total value, which is of very low practical use, and would possibly lead to confusion concerning the scores for variables and indicators, since values would be shown which do not result directly from respondents' answers but from multiple imputation. These values can be wrong.

In cases of data gaps the first solution was to adjust the weights accordingly, so that the total weight is still 1 (see territorial entity C in table 7). Yet as shown by table 7, this leads to figures that are too high for territorial entities with gaps in variables with low values. For example, if the indicator 'political participation' consisted of two variables – attendance of meetings and electoral participation – and the mean value of the former was 20 and of the latter was 80, then territorial entities with data gaps in attendance of meetings would be pushed towards higher values than entities without gaps. In order to adjust for this, we introduced an artificial figure for the calculation of the index score. For example, in order to reach a similar mean value (brown figures in table 7), we would divide the figures for electoral participation by four, so that the mean value here is at 20 too. The example in Table 7 shows this. The bold total figures in red show that a territorial entity C has a higher score for political participation only due to a lack of data for the attendance of meetings (red figures in bold), while the value of the only variable available for C (voting) is lower than those of A and B. If the mean values of both variables are put into relation (20 and 80), the blue figure (factor) is 0.25. Now for each territorial entity a new (artificial) figure for voting can be calculated by multiplying the respective voting score by 0.25. This results in the new indicator scores (green figures in bold). Now B has the highest total score, which is correct since it has the highest score in both, attendance of meetings and voting; A still has a higher score than C, since in the only variable where it can be compared to C (voting), its value is higher.

Table 7: Weighting and data gaps

Indicator 2.4 'Political Participation'								
Territorial entity	Attending meeting		Voting		**Total indicator value**	Voting		**Total indicator value**
	Value	Weight	Value	Weight		Value × Factor	Weight	
A	15	0.4	80	0.6	**54**	20	0.6	**18**
B	25	0.4	90	0.6	**64**	22.5	0.6	**23.5**
C	–	–	70	1.0	**70**	17.5	1.0	**17.5**
Mean	**20**		80			**20**		
Factor	0.25 (20 / 80)							

5.9.2 WEIGHTING BETWEEN INDICATORS AND DOMAINS TOWARD THE OVERALL AAI

Weighting has been conducted in similar way to EU-AAI; the Excel file allows users to weight data according to preferences. The first step of weighting (after the weighting to avoid errors due to data gaps as depicted in the preceding chapter) was to calculate indicator scores based on one survey (survey score = indicator score) or several surveys (according to standard errors); steps 2 and 3 were similar to EU-AAI:

1. One or more surveys → Indicator values,
2. Indicator scores → Four domain scores,
3. Four domain scores → Overall AAI.

6. RESULTS

6.1 DISCUSSION: METHODS

6.1.1 FEASIBILITY (GERMANY)

The index should be able to be completely re-calculated in a couple of years as for each survey used here new data will be available. Alternatively, it can be constantly re-calculated each time new data are available, although changes would likely be very small.

Due to low case numbers, intertemporal differences should be cautiously interpreted. Furthermore, intertemporal changes can result from a different composition of the sample (e.g. a different over- or underrepresentation of different groups) cohort effects and are not necessarily caused by improved local circumstances.

The tables 8, 9 and 10 show the numbers of respondents in the 30 territorial entities reported below. As can be seen in Table 8, with exception of Duisburg and Mettmann in the indicator 1.4 (employment 70-74), numbers are at least in the medium double digits. For these domains clearly a valid calculation is possible, with the limitation mentioned. In tables 8-10 values <20 are marked red. It is not clear which numbers of respondents are necessary for a valid interpretation of results. Dichotomisation reduces the error caused by low numbers. Nevertheless, solutions should be found, whether these comprise improved data access or the use of several survey waves (preferably non-panel surveys due to error problems) per indicator.

Table 8: Number of respondents for 30 territorial entities: Domains 1 and 2

	Indicator							
	1.1	**1.2**	**1.3**	**1.4**	**2.1**	**2.2**	**2.3**	**2.4**
Hamburg	918	891	933	168	812	797	794	1442
Bremen	381	381	430	103	586	575	575	1094
Hannover (Region)	661	669	607	41	223	221	221	318
Düsseldorf	349	309	311	16	81	77	78	121
Duisburg	367	257	238	7	67	65	65	97
Essen	407	329	380	20	70	67	67	108
Mettmann (Region)	326	279	287	4	51	43	43	89
Köln/ Cologne	509	478	465	26	135	131	132	201
Erftkreis (Region)	270	281	272	24	116	112	114	142
Rhein-Sieg administrative district	338	339	343	33	155	145	145	198
Recklinghausen (Region)	419	401	353	19	94	82	82	132
Dortmund	308	334	312	17	76	64	69	120
Frankfurt am Main	339	343	327	364	88	83	61	135
Stuttgart	321	296	278	307	75	75	75	113
Esslingen (Region)	285	247	266	340	75	73	74	111
Rems-Murr administrative district	259	253	236	297	124	122	122	159
Rhein-Neckar administrative district	377	296	332	354	209	211	211	241
München/ Munich	757	684	752	798	181	171	170	279
Nürnberg	328	253	310	380	98	97	98	147
Saarbrücken (Regional association)	262	230	220	264	189	183	183	348
Berlin	1973	1965	2004	2310	1016	964	969	1736
Chemnitz	143	193	193	240	120	117	118	181
Erzgebirgs administrative district	328	333	244	327	129	110	110	183
Mittelsachsen (Region)	243	239	211	289	140	130	130	194
Zwickau (Region)	304	310	242	327	108	100	100	172
Dresden	301	302	319	411	200	181	182	292
Bautzen (Region)	264	240	218	278	170	156	157	221

	Indicator							
	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4
Leipzig	293	302	325	405	226	226	226	320
Halle (Saale)	176	187	208	230	185	176	176	303
Magdeburg	167	164	176	235	158	155	155	243

Table 9 shows the number of respondents for Domain 3. Here, some lower numbers can be seen. Numbers in the single digits (3.2, 3.7 and 3.8) are most prominently found in territorial entities with high consistency scores and, as a cause of this, lower population figures. Indicators 3.7 and 3.8 are covered by three surveys each. Coverage and numbers of respondents could be raised by using several waves of these surveys.

Table 9: Number of respondents for 30 territorial entities: Domain 3

	Indicator							
	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
Hamburg	199	61	159730	2735	2625	660	113	94
Bremen	62	45	56905	1185	996	424	40	33
Hannover (Region)	185	65	116745	1920	2058	264	95	82
Düsseldorf	66	29	58576	916	993	80	24	22
Duisburg	48	14	53184	840	893	69	29	24
Essen	56	28	63692	1027	1108	91	25	18
Mettmann (Region)	10	9	54988	803	875	28	1	0
Köln/ Cologne	41	32	87666	1302	1421	145	47	45
Erftkreis (Region)	45	17	44544	674	731	129	68	60
Rhein-Sieg administrative district	31	21	56119	903	991	151	73	74
Recklinghausen (Region)	75	25	67891	1004	1057	86	34	33
Dortmund	42	19	59862	963	1035	73	17	15
Frankfurt am Main	35	11	53092	957	1028	75	32	29
Stuttgart	46	12	55159	821	901	82	25	24
Esslingen (Region)	50	13	49947	835	906	73	26	28
Rems-Murr administrative district	97	10	41512	735	798	136	71	60
Rhein-Neckar administrative district	179	19	52500	931	1019	218	136	135
München/ Munich	106	42	114758	2078	2335	175	45	48
Nürnberg	78	32	50618	935	1081	121	38	32
Saarbrücken (Regional association)	21	3	36887	681	740	108	11	15
Berlin	370	144	297447	5780	5909	813	188	154
Chemnitz	56	0	31962	628	694	110	48	37
Erzgebirgs administrative district	68	12	46729	902	983	82	46	41
Mittelsachsen (Region)	77	0	42332	787	851	122	60	57
Zwickau (Region)	36	0	44908	838	939	75	32	29
Dresden	117	29	57371	1126	1158	181	67	57
Bautzen (Region)	106	0	40392	793	851	133	75	75
Leipzig	150	20	57554	1086	1109	207	107	92
Halle (Saale)	80	25	25746	579	604	159	41	39
Magdeburg	77	8	26652	586	632	143	54	51

Indicator 4.1 in Table 10 is based solely on INKAR, where exact numbers of respondents could not be established. Given that it is a large-n data source we can be sure that numbers of respondents are high for 4.1 (remaining life expectancy at age 60). For the other indicators numbers are also sufficiently high for sensible interpretation – only 4.4 (use of ICT) shows low numbers in the (usual) areas with low numbers of respondents.

Table 10: Number of respondents for 30 territorial entities: Domain 4

	Indicator					
	4.1	**4.2**	**4.3**	**4.4**	**4.5**	**4.6**
Hamburg	INKAR	5909	792	108	790	3494
Bremen	INKAR	2715	572	46	571	1513
Hannover (Region)	INKAR	3737	221	89	221	2455
Düsseldorf	INKAR	1852	77	27	78	1209
Duisburg	INKAR	1646	65	28	65	1047
Essen	INKAR	1982	67	26	66	1365
Mettmann (Region)	INKAR	1636	43	8	42	1114
Köln/ Cologne	INKAR	2743	127	49	130	1832
Erftkreis (Region)	INKAR	1516	113	67	112	997
Rhein-Sieg administrative district	INKAR	1917	141	82	146	1279
Recklinghausen (Region)	INKAR	2092	81	45	82	1394
Dortmund	INKAR	1820	69	21	69	1210
Frankfurt am Main	INKAR	1853	83	32	84	1249
Stuttgart	INKAR	1657	72	27	73	1096
Esslingen (Region)	INKAR	1578	74	29	72	1035
Rems-Murr administrative district	INKAR	1511	119	60	122	943
Rhein-Neckar administrative district	INKAR	1928	202	137	211	1195
München/ Munich	INKAR	3983	170	62	171	2733
Nürnberg	INKAR	1800	94	32	98	1149
Saarbrücken (Regional association)	INKAR	1472	183	22	180	911
Berlin	INKAR	11447	963	196	962	7486
Chemnitz	INKAR	1144	117	45	117	685
Erzgebirgs administrative district	INKAR	1703	110	57	110	1104
Mittelsachsen (Region)	INKAR	1434	128	66	131	865
Zwickau (Region)	INKAR	1598	97	44	100	1061
Dresden	INKAR	1941	181	69	181	1188
Bautzen (Region)	INKAR	1495	153	93	157	896
Leipzig	INKAR	1972	221	108	226	1146
Halle (Saale)	INKAR	1200	174	50	175	717
Magdeburg	INKAR	1144	154	56	154	655

6.1.2 FEASIBILITY (OTHER COUNTRIES)

It is possible that the number of surveys is lower in other countries. This could negatively affect the possibilities to calculate a local AAI based on secondary data. On the other hand, the example calculation below shows that the possible number of respondents per local territorial unit is higher in countries with a lower total population. This could also apply to local territorial entities with lower population figures than those analysed in our pilot study.

Table 11: Example calculation of expected numbers of respondents in other countries

West Germany		West German City		Smaller country		Smaller country City 1		Smaller country City 2	
Pop.	Sample size	Pop.	N	Pop.	Sample size	Pop.	N	Pop.	N
65 m	2 000	650 000	20	10 m	2 000	650 000	130	200 000	40

6.2 DISCUSSION: CONTENT

As stated by Zaidi et al. (2013: 12) with the example of elderly care, higher values may be 'better' from the "perspective of valuing informal care in terms of contributions made to the family and society" but neglect the possibility that elderly (or grandchild) care "can also be a constraint impinging on the quality of life of informal carers". Therefore, higher values in AAI depict

a higher level of activity (in terms of contributing and being capable of contributing to the economy and society) without any evaluation concerning the desirability of high values.

Map 1 shows the 30 territorial entities in the final analysis and their values, from very high (dark green), to high (green), to medium (yellow), to low (orange), to very low (red).

Map 1: Overall AAI in the 30 territorial entities

Legend	
Score	Color
31,55-30.21	
29,96-28,79	
28,72-27.58	
27,46-26.81	
26,77-26,18	
25,50-24,26	
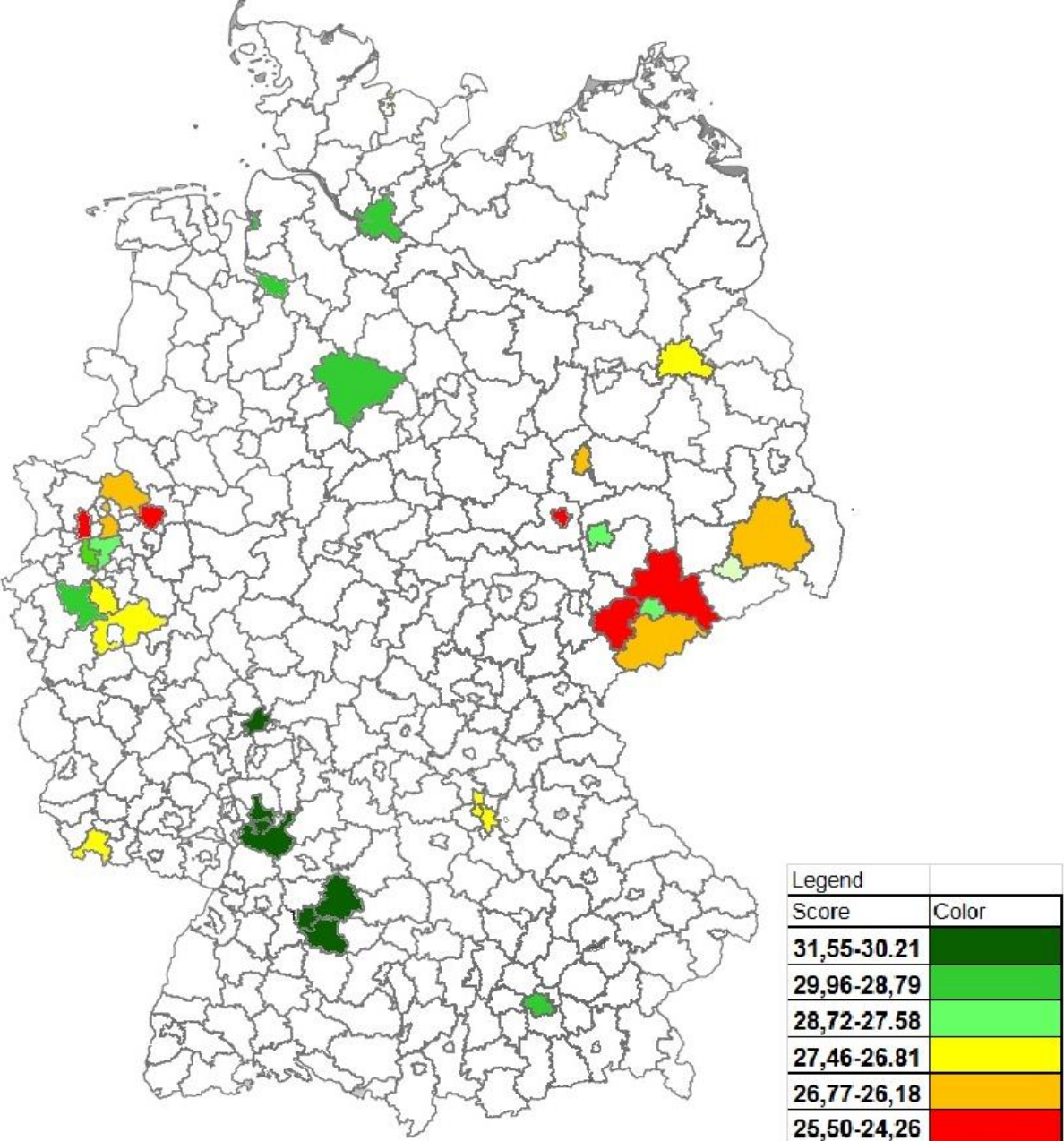
6.2.1 OVERALL AAI

Since some data sources were available only for 'ALL' and not for men and women separately, values for 'ALL' are not between values for men and women as is usually the case. For example, table 12 shows that the score for 'ALL' is mostly higher than the value for men or the value for women. This could result from the use of data sets which provided figures only for men and women combined, and also ostensibly in this data sets employment rates were higher. Although, there is no data set only for men or only for women, in all data sets where values for men were

contained, also values for women were contained and vice versa. This allowed for the comparison of the values for men and women. The last column shows the gender gap. Negative values imply a higher score for men; positive values – a higher score for women.

At the top of the table are mainly southern German territorial entities, such as Esslingen, Stuttgart, Rems-Murr and Rhein-Neckar. The eastern German territorial entities are in the middle (Dresden, Chemitz, Leipzig) of the table or below (Bautzen, Magdeburg, Ergebirge, Halle, Mittelsachsen, Zwickau). The large cities of the Ruhr area (Essen, Dortmund, Duisburg) as well as the county of Recklinhausen (also this region) are near the bottom.

Table 12: Overall AAI

	NUTS 3 entity	ALL	MEN	WOMEN	Gender Gap
1	Esslingen (Region)	31,55	37,9	38,3	0,4
2	Stuttgart	30,81	37,4	34,2	-3,2
3	Rems-Murr administrative district	30,45	36,0	32,4	-3,6
4	Rhein-Neckar administrative district	30,33	40,7	35,4	-5,3
5	Frankfurt am Main	30,21	38,5	32,9	-5,6
6	Hamburg	29,96	35,4	33,0	-2,5
7	München/ Munich	29,19	42,4	33,8	-8,6
8	Hannover (Region)	29,14	38,4	32,2	-6,2
9	Erftkreis (Region)	29,00	33,9	33,1	-0,9
10	Bremen	28,79	35,8	30,9	-4,9
11	Köln/ Cologne	28,72	36,2	33,0	-3,3
12	Dresden	28,00	34,8	32,4	-2,5
13	Mettmann (Region)	27,97	34,5	31,0	-3,5
14	Chemnitz	27,72	34,3	33,2	-1,1
15	Leipzig	27,58	34,0	31,5	-2,6
16	Saarbrücken (Regional association)	27,47	31,9	31,9	-0,1
17	Berlin	27,18	37,8	30,7	-7,1
18	Nürnberg	27,13	35,7	30,3	-5,5
19	Düsseldorf	27,11	38,6	32,4	-6,2
20	Rhein-Sieg administrative district	26,81	34,5	31,4	-3,1
21	Bautzen (Region)	26,77	33,5	31,3	-2,2
22	Magdeburg	26,66	37,8	31,3	-6,5
23	Recklinghausen (Region)	26,50	35,9	32,6	-3,3
24	Essen	26,23	31,3	30,6	-0,7
25	Erzgebirgs administrative district	26,18	34,8	29,6	-5,2
26	Halle (Saale)	25,50	34,3	32,8	-1,5
27	Mittelsachsen (Region)	25,42	32,1	30,4	-1,7
28	Dortmund	25,19	30,3	29,3	-1,0
29	Duisburg	24,72	32,2	28,0	-4,2
30	Zwickau (Region)	24,26	31,9	27,2	-4,7

6.2.2 EMPLOYMENT

The score for employment shows the expected pattern of four southern German territorial entities amongst the five at the top, and territorial entities in Ruhr area at the bottom (Essen, Dortmund, Duisburg, Recklinghausen). Also here, eastern German territorial entities are rather at the lower side of the table.

Table 13: Employment domain score

	NUTS 3 entity	ALL	MEN	WOMEN	Gender Gap
1	Esslingen (Region)	27,8	44,6	49,9	5,3
2	Stuttgart	27,5	44,4	39,1	-5,4
3	Erftkreis (Region)	27,4	37,7	32,1	-5,6
4	Rems-Murr administrative district	27,1	43,0	36,6	-6,5

	NUTS 3 entity	ALL	MEN	WOMEN	Gender Gap
5	München/ Munich	26,9	56,2	38,6	-17,6
6	Hamburg	26,6	42,7	36,8	-5,9
7	Mettmann (Region)	26,1	40,4	35,1	-5,2
8	Hannover (Region)	26,1	41,1	34,7	-6,4
9	Frankfurt am Main	25,9	46,2	35,6	-10,6
10	Rhein-Neckar administrative district	25,9	44,9	42,5	-2,3
11	Rhein-Sieg administrative district	25,9	42,7	33,9	-8,8
12	Dresden	25,8	41,8	38,8	-3,0
13	Köln/ Cologne	25,8	39,8	31,7	-8,1
14	Saarbrücken (Regional association)	25,8	33,7	31,0	-2,7
15	Düsseldorf	25,5	52,3	35,0	-17,3
16	Leipzig	25,2	39,4	35,1	-4,3
17	Chemnitz	24,8	38,1	35,5	-2,6
18	Bautzen (Region)	24,7	38,7	31,7	-6,9
19	Bremen	24,6	39,7	35,3	-4,4
20	Berlin	24,6	48,1	32,7	-15,5
21	Mittelsachsen (Region)	24,3	35,2	32,6	-2,6
22	Erzgebirgs administrative district	24,2	45,4	35,0	-10,4
23	Nürnberg	23,6	38,3	31,0	-7,3
24	Essen	23,4	32,6	33,7	1,1
25	Zwickau (Region)	23,4	37,2	30,9	-6,3
26	Magdeburg	23,3	47,6	34,0	-13,6
27	Halle (Saale)	23,0	41,0	38,6	-2,4
28	Dortmund	23,0	31,0	28,6	-2,5
29	Duisburg	22,7	36,0	28,0	-7,9
30	Recklinghausen (Region)	20,7	39,5	37,6	-1,9

6.2.3 PARTICIPATION IN SOCIETY

Here the pattern of southern territorial entities being at the top cannot be clearly detected. Amongst the ten territorial entities at the top of the table, only Esslingen and Munich are in southern Germany. Lower values for the Ruhr cities – Dortmund, Essen and Duisburg – persist, yet with the outlier Recklinghausen (ranking 8).

Table 14: Participation in society domain score

	NUTS 3 entity	ALL	MEN	WOMEN	Gender Gap
1	Hannover (Region)	18,3	28,7	19,6	-9,1
2	Chemnitz	18,2	23,0	22,7	-0,3
3	Köln/ Cologne	17,7	24,2	23,8	-0,3
4	Bautzen (Region)	17,1	20,7	23,4	2,6
5	Esslingen (Region)	16,6	22,5	21,2	-1,3
6	München/ Munich	16,5	23,8	20,6	-3,3
7	Hamburg	16,5	20,1	20,4	0,3
8	Recklinghausen (Region)	16,5	24,7	21,0	-3,7
9	Leipzig	16,5	21,2	19,6	-1,6
10	Dresden	16,4	21,1	18,0	-3,1
11	Rems-Murr administrative district	16,4	21,1	19,9	-1,2
12	Magdeburg	16,3	22,7	19,7	-2,9
13	Nürnberg	16,3	23,3	20,0	-3,3
14	Rhein-Neckar administrative district	16,1	32,5	21,1	-11,4
15	Berlin	15,9	21,1	18,4	-2,7
16	Bremen	15,6	23,8	16,2	-7,7
17	Erftkreis (Region)	15,5	19,4	25,0	5,6
18	Frankfurt am Main	15,5	23,5	20,6	-3,0
19	Saarbrücken (Regional association)	15,4	20,0	23,7	3,7
20	Düsseldorf	15,3	17,8	20,7	2,9

	NUTS 3 entity	ALL	MEN	WOMEN	Gender Gap
21	Erzgebirgs administrative district	15,2	19,0	16,3	-2,7
22	Stuttgart	15,2	23,8	20,7	-3,1
23	Halle (Saale)	15,1	20,7	20,2	-0,5
24	Dortmund	14,7	16,2	21,1	4,9
25	Essen	14,5	19,4	15,5	-3,8
26	Mettmann (Region)	14,5	21,3	20,2	-1,1
27	Mittelsachsen (Region)	13,7	19,8	18,5	-1,3
28	Duisburg	13,3	18,7	16,1	-2,6
29	Rhein-Sieg administrative district	12,4	16,7	19,6	-6,1
30	Zwickau (Region)	11,6	18,0	14,0	13,8

6.2.4 INDEPENDENT, HEALTHY AND SECURE LIVING

Here, the pattern with southern cities being at the top re-emerges, with five or six (including Frankfurt) southern cities amongst the ten territorial entities at the top. At the bottom numerous territorial entities in the Ruhr area and in eastern Germany can be found, but also Düsseldorf and Cologne.

Table 15: Independent, healthy and secure living domain score

	NUTS 3 entity	ALL	MEN	WOMEN	Gender Gap
1	Frankfurt am Main	58,6	49,5	43,6	-5,8
2	Stuttgart	57,8	48,9	37,9	-11,0
3	Esslingen (Region)	56,8	47,6	45,3	-2,3
4	Rhein-Neckar administrative district	56,7	47,1	43,4	-3,7
5	Rems-Murr administrative district	54,1	47,6	40,7	-6,9
6	Bremen	51,5	48,4	42,0	-6,4
7	Hamburg	47,7	45,4	41,1	-4,3
8	Erftkreis (Region)	38,7	49,0	41,0	-8,0
9	München/ Munich	37,2	49,3	42,2	-7,1
10	Mettmann (Region)	36,9	46,2	28,9	-17,2
11	Recklinghausen (Region)	36,7	46,0	37,5	-8,4
12	Rhein-Sieg administrative district	36,3	48,2	41,5	-6,8
13	Hannover (Region)	36,1	47,0	40,8	-6,2
14	Leipzig	35,5	43,9	37,7	-6,2
15	Saarbrücken (Regional association)	35,1	41,6	41,9	0,3
16	Dresden	34,8	44,4	37,6	-6,7
17	Erzgebirgs administrative district	34,7	41,4	37,0	-4,4
18	Nürnberg	33,7	47,9	38,1	-9,8
19	Berlin	33,6	46,2	40,7	-5,5
20	Magdeburg	32,7	42,7	39,1	-3,6
21	Essen	32,5	43,5	42,5	-1,0
22	Düsseldorf	32,3	49,7	40,3	-9,4
23	Köln/ Cologne	32,1	47,4	41,0	-6,4
24	Chemnitz	31,8	45,1	39,7	-5,4
25	Bautzen (Region)	31,1	42,3	38,1	-4,2
26	Dortmund	30,4	47,6	40,0	-7,5
27	Zwickau (Region)	29,6	45,0	35,9	-9,1
28	Mittelsachsen (Region)	29,5	43,8	38,4	-5,4
29	Duisburg	28,9	45,2	41,3	-3,9
30	Halle (Saale)	28,2	40,7	37,0	-3,7

6.2.5 CAPACITY AND ENABLING ENVIRONMENT FOR ACTIVE AGEING

Here the pattern of eastern German territorial entities being at the bottom is very clear, with eight out of the ten regions at the bottom.

Table 16: Capacity and enabling environment for active ageing domain score

|	NUTS 3 entity	ALL	MEN	WOMEN	Gender Gap
1	Esslingen (Region)	51,7	48,4	44,6	-3,8
2	Köln/ Cologne	51,5	45,4	47,1	1,7
3	München/ Munich	51,4	47,2	44,2	-3,0
4	Hamburg	50,6	44,6	44,3	-0,3
5	Erftkreis (Region)	50,5	45,2	44,9	-0,3
6	Stuttgart	50,5	43,1	47,6	4,5
7	Mettmann (Region)	50,3	41,5	43,8	2,3
8	Hannover (Region)	49,9	46,4	45,4	-1,0
9	Rhein-Neckar administrative district	49,9	44,6	44,0	-0,6
10	Frankfurt am Main	49,3	45,7	44,6	-1,2
11	Rems-Murr administrative district	49,2	44,1	42,8	-1,3
12	Recklinghausen (Region)	49,1	44,4	41,9	-2,4
13	Nürnberg	49,0	46,9	43,0	-3,9
14	Rhein-Sieg administrative district	48,9	44,6	42,7	-1,8
15	Dresden	48,8	41,8	43,5	1,7
16	Essen	48,4	43,6	45,5	1,9
17	Berlin	48,3	44,8	43,8	-1,0
18	Düsseldorf	48,0	45,4	44,3	-1,1
19	Bremen	47,9	43,8	43,6	-0,1
20	Saarbrücken (Regional association)	47,7	44,8	42,6	-2,2
21	Magdeburg	47,5	44,5	42,9	-1,6
22	Chemnitz	47,4	42,0	44,1	2,1
23	Leipzig	47,2	42,1	42,8	0,6
24	Halle (Saale)	46,8	43,4	42,7	-0,7
25	Duisburg	46,1	42,7	42,2	-0,5
26	Mittelsachsen (Region)	45,8	42,1	43,1	1,0
27	Zwickau (Region)	45,2	40,4	39,3	-1,1
28	Bautzen (Region)	45,0	42,6	41,2	-1,4
29	Dortmund	44,9	45,1	39,5	-5,6
30	Erzgebirgs administrative district	44,6	40,4	39,5	-0,9

6.2.6 CORRELATION BETWEEN THE OVERALL AAI, ITS DOMAIN SCORES AND DISPOSABLE INCOME, AND POPULATION DENSITY

The EU-AAI is positively correlated to countries' GDP per capita. While trying to replicate this finding at a local level it turned out that GDP per capita could be a misleading figure. Variance between territorial entities is extremely high. High values are to be found especially in territorial entities with low population numbers and main sites of huge companies, such as Wolfsburg (Volkswagen) or Ingolstadt (Audi). Also differences between large cities and their surrounding areas are very high, for example between Frankfurt with its high results and the neighbouring county of Hochtaunuskreis. The latter has low GDP per capita despite an affluent population since many companies are located in Frankfurt. Therefore, we used disposable income instead of GDP per capita (Graphs 3-7). Further, we analysed if the overall AAI value is related to the degree of urbanity (Graphs 8-12).

In the case of disposable income, all correlations are positive and significant at the 5% level except between disposable income and Domain 2 (Participation in Society). In this case, the correlation is insignificant and very weakly negative.

In the case of population density correlations are weakly positive and statistically insignificant. The only exception is Domain 4 (Capacity and enabling environment for active ageing), where the correlation is a little stronger and statistically insignificant at the 10% level.

Graph 3: Correlation between the overall AAI and disposable income (whole population)

Overall AAI vs. Disposable Income (€) (Federal Office of Statistics); r = 0.47; s = .009
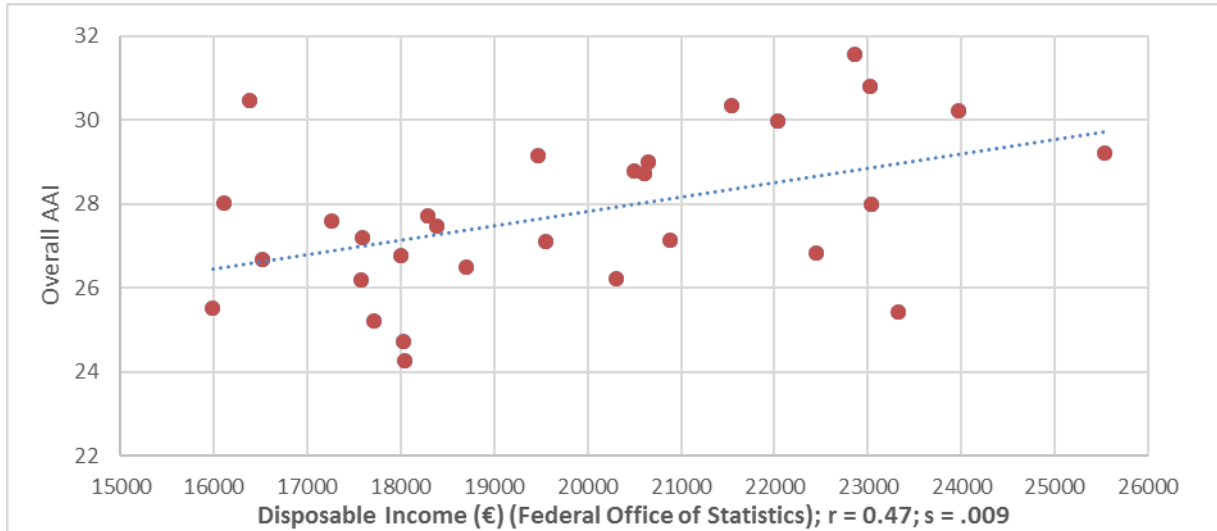
Graph 4: Correlation between Domain 1 score and disposable income (whole population)

Employment domain score vs. Disposable Income (€) (Federal Office of Statistics); r = 0.48; s = .008
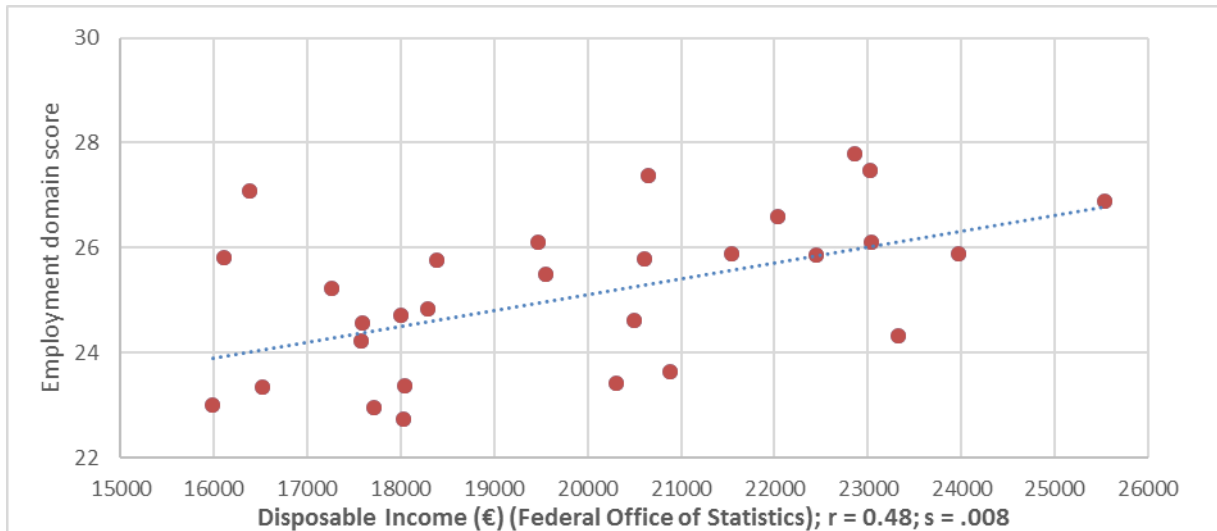
Graph 5: Correlation between Domain 2 score and disposable income (whole population)

Participation in society domain score vs. Disposable Income (€) (Federal Office of Statistics); r = -0.07; s = .709
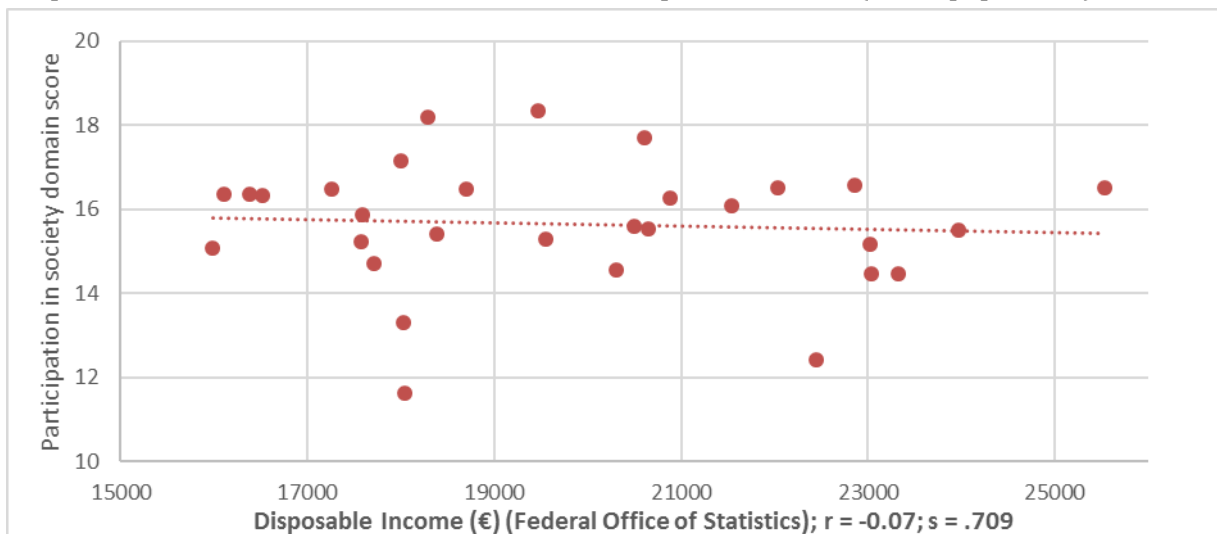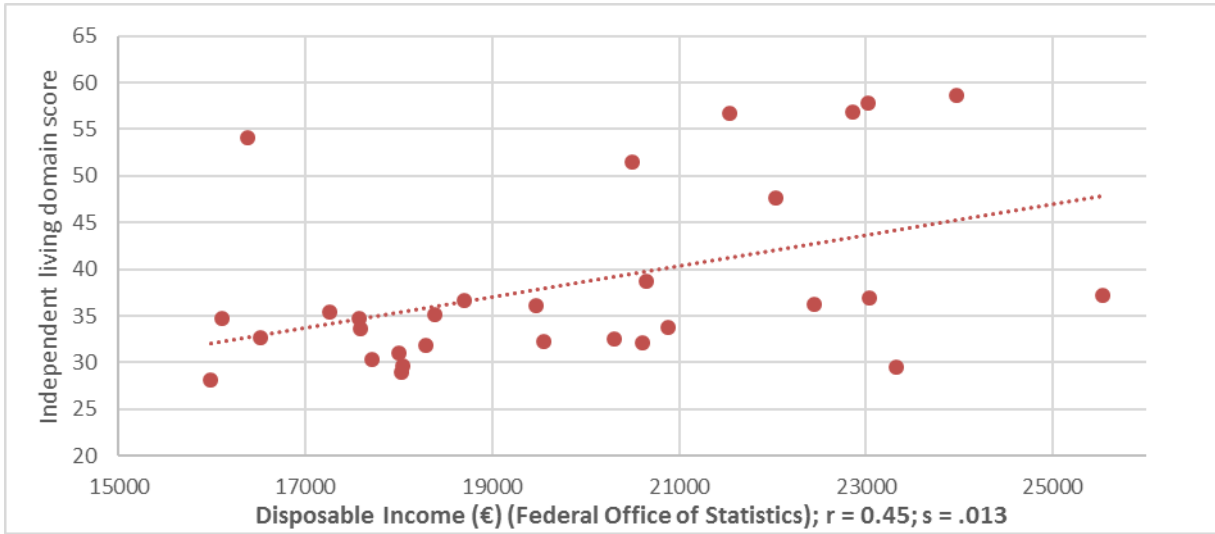
Graph 6: Correlation between Domain 3 score and disposable income (whole population)

Graph 7: Correlation between Domain 4 score and disposable income (whole population)
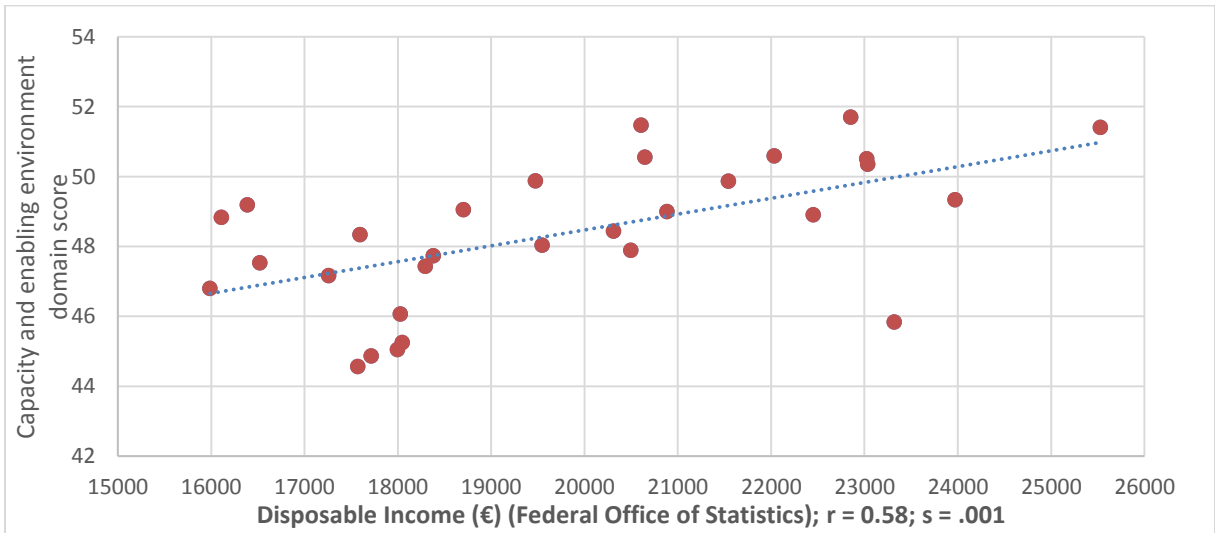
Graph 8: Correlation between the overall AAI and population per square kilometre
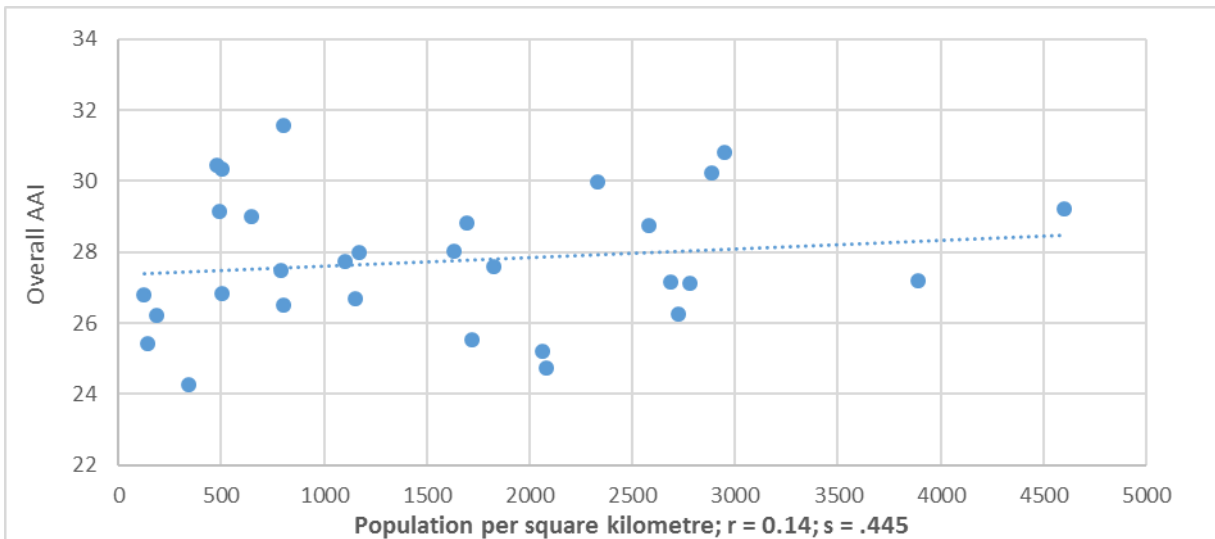
Graph 9: Correlation between Domain 1 score and population per square kilometre
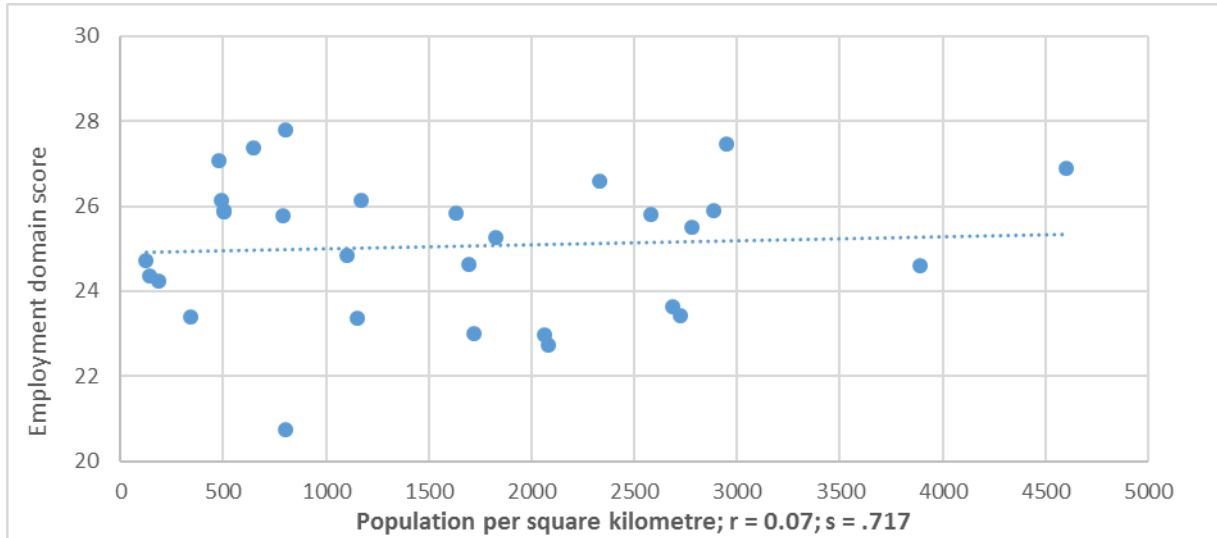
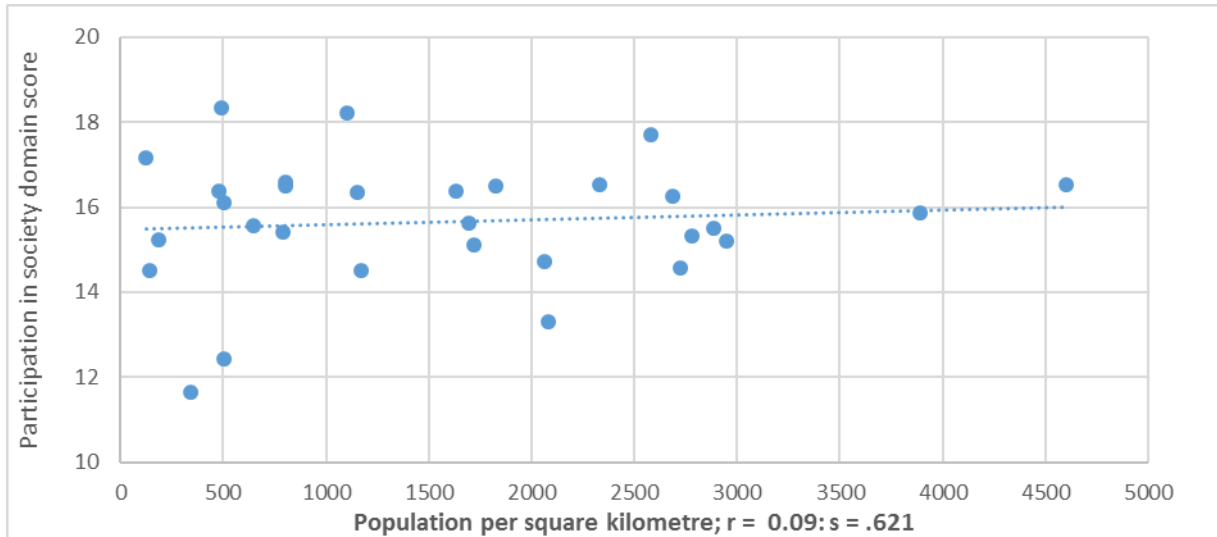**Graph 10: Correlation between Domain 2 score and population per square kilometre**

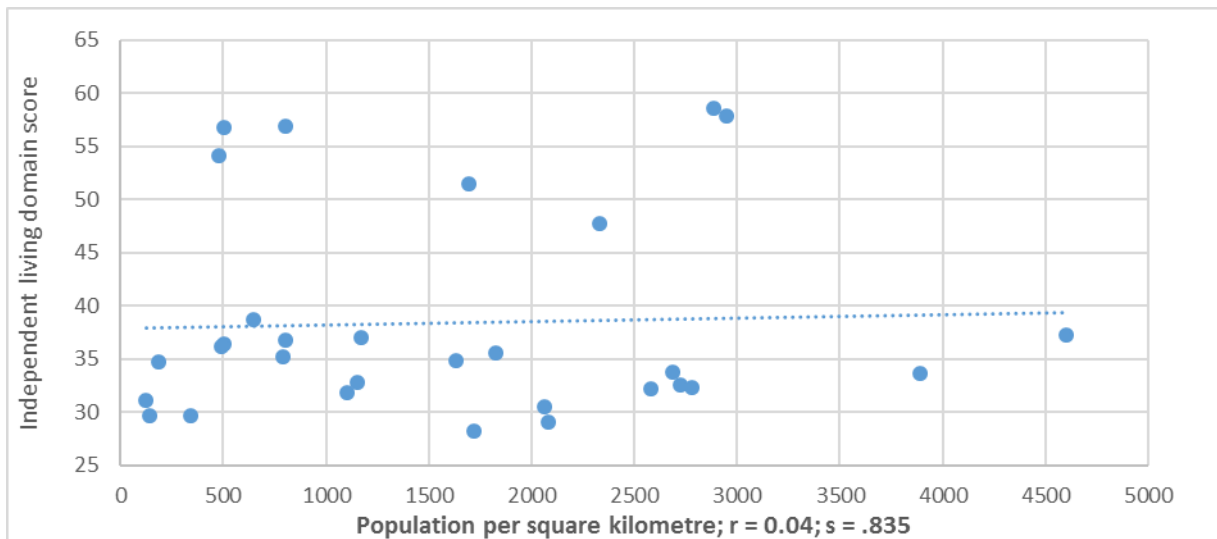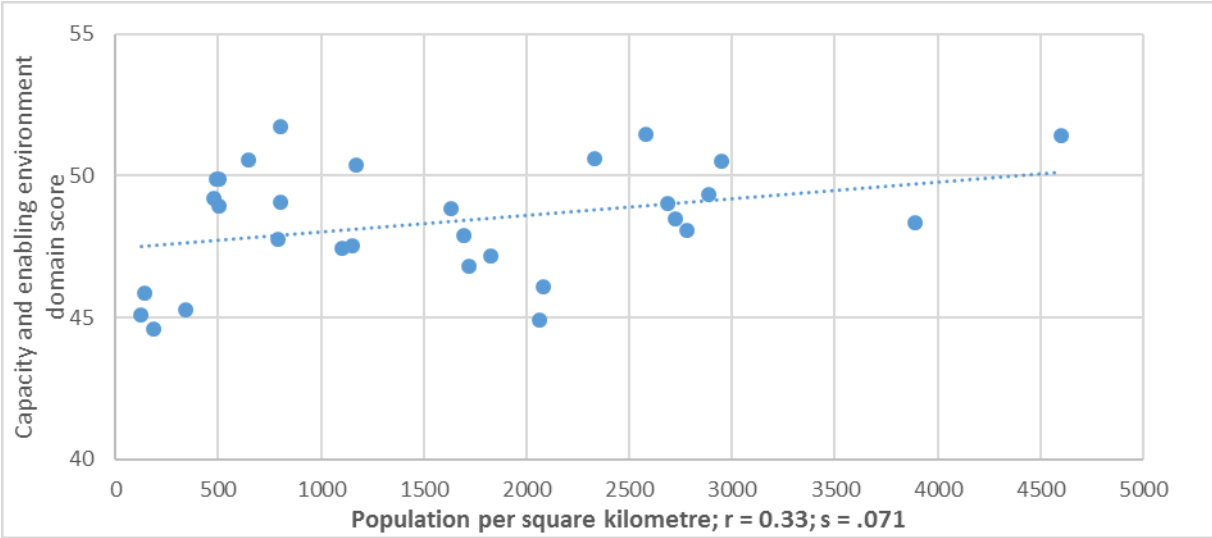**Graph 11: Correlation between Domain 3 score and population per square kilometre**

Graph 12: Correlation between Domain 4 score and population per square kilometre

6.3 THE GENDER PERSPECTIVE

Results are shown for men and women separately, since "by looking separately at men and women, it also indicates what progress could be achieved simply by closing gender gaps" (AAI 2014 Analytical Report 2015: 5). Similar to the 'Active Ageing Index at the regional level' (Karpinska/Dykstra 2015: 14), there was also a lack of data at the German NUTS 3 level. While data problems inhibited the separate calculation of AAI for men and women in the Polish analyses, in this pilot study we attempted separate calculations, albeit with low case numbers. However, due to the lack of separate data for men and women from all data sources and low numbers of respondents we could not perform a separate analysis of results for men and women.

It might be possible that differences in AAI between men and women are smaller when compared to different socioeconomic groups. Differentiating according to socioeconomic status, however, would imply arbitrary distinction between two (upper and lower half) or three (low, medium and high status) groups, or a greater number of groups, which would further reduce case numbers. Provided there is a sufficient number of cases, further analyses could go beyond differentiations between men and women and be complemented with a deeper look at socioeconomic status.

The German gender gap is at a medium level when compared to other countries in EU; Germany ranks 18th out of 28 countries in gender equality (UNECE/EC 2014: 8). Gender differences are less pronounced in 'Employment' (rank 14) and 'Capacity and enabling environment for active ageing' (rank 13), and stronger in 'Social participation' (rank 22) and 'Independent, healthy and secure living' (rank 18).

In their analysis of Spanish regions, Rodríguez-Rodríguez (undated) found that men scored higher and that gender differences are stronger in regions with lower AAI values. In an Italian regional analysis from 2012, the AAI value was higher for men than for women in every Italian region.

7. CONCLUSION AND OUTLOOK

Our methodological approach has proven to be successful and has shown that it is possible to calculate a local AAI based on secondary data in Germany. However, we expect that a great number of data sources could be made available providing that there are supportive background circumstances. Further, our focus on a large number of territorial entities allowed us to show the limitations of our method against the background of current data availability. For 22-25 territorial entities, the numbers of respondents are currently likely to be large enough to allow for an evidence-based discussion of the results; for some other territorial entities wider gaps and smaller numbers of respondents appear. Lastly, re-defining our target group of NUTS 3 entities from cities only to counties and cities has proven to be sensible.

The potential that has been shown in Germany does not necessarily mean that replications in other countries are easily feasible. For the German case, to create access to other surveys currently not accessible would be beneficial (e.g. ALLBUS, Eurobarometer, EQLS, EU-SILC, EU-Labour Force Survey, Generali Altersstudie, PIAAC, Zeitverwendungserhebung etc.). Data access was restricted mainly due to technical problems and data protection issues. It must be said that the data protection explanations behind restricting access to data are not always reasonable and it is important in the future to raise motivation among those responsible for surveys to overcome various barriers to data access.

The goal of the pilot study was to examine the feasibility of a replication of EU-AAI at the German local level. In order to adjust the local AAI to topics relevant for local policymakers outside of EU-AAI we recommend examining questionnaires of surveys available at NUTS 3 level for relevant questions.

The number of geographical units that can be covered depends on two methodological considerations:

1. To what extent are deviations in terms of used variables from EU-AAI acceptable (as long as the goal [rationale] is still reached)?

In most cases due to the non-availability of identical data at the NUTS 3 level it is not possible to exactly replicate EU-AAI. In some cases indicators which are nearly identical in question phrasing and answer categories are available. However, this is not always possible. Alternative variables can deviate from the original variables, as long as the goal/rationale (what is to be measured) is still reached.

2. What number of respondents is necessary for the interpretation of results?

Currently intra-indicator weighting can lower the influence of surveys with low numbers of cases. Further, dichotomisation implies a loss of information, but reduces strong effects by small groups of outliers accidentally overrepresented amongst respondents.

If indicators are only available from surveys with low case numbers, a reasonable interpretation of results (and particularly intertemporal changes) is not possible. What's more, weighting between indicators does not take into account the number of cases but follows the example of EU-AAI instead. This also applies to the four domains determining the overall AAI. Our weighting approach to adjust for gaps in data coverage can be considered a valid solution. Yet for variables for which gaps occur, even if this does not distort the respective indicator, domain and the overall AAI, no interpretation is possible.

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APPENDIX 1: LIST OF VARIABLES

DOMAIN 1 'EMPLOYMENT'

INDICATORS 1.1–1.4

VARIABLES USED IN EU-AAI

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.
Source	EU Labour Force Survey (EU-LFS)
Year	2008,2010, 2012
Survey question	*Did you do any paid work in the 7 days ending Sunday the [date], either as an employee or as self-employed?*
	Yes: 1
	No: 2
	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)?
	Yes: 1
	No: 2
	Waiting to *take up a new job/business already obtained:* 3

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 101(BP): Sind Sie derzeit erwerbstätig, arbeitslos, oder aus anderen Gründen nicht erwerbstätig? Was von dieser Liste trifft zu? (Are you currently employed, unemployed, or not working for reasons other than unemployment? Which item(s) in this list apply to you?)*
	Nicht erwerbstätig (Currently not employed): 01:A – 09:J
	Erwerbstätig (Currently employed): 10:K - 11:L
	Verweigert (Declined): 97
	Weiß nicht (Don't know): 98
	Question 102(BP): Man kann ja auch als Rentner/in oder Pensionär/in noch einer Erwerbstätigkeit nachgehen. Wie ist das bei Ihnen: Sind sie derzeit erwerbstätig? (Sometimes pensioners and retirees keep working after retirement. What about you: are you working at the moment?)
	Ja (Yes): 1
	Nein (No): 2
	Verweigert (Declined): 7
	Weiß nicht (Don't know): 8
Source	European Social Survey (ESS)
Year	2014
Survey question	*Question F17C: Was davon trifft am besten auf Ihre Situation (in den letzten sieben Tagen) zu? (And which of these descriptions best describes your situation (in the last seven days)?)*
	Nicht Erwerbstätig (unemployed): EDCTN-HSWRK
	Erwerbstätig (employed): PDWRK
	Sonstiges (Others): DNGOTH
	Antwort verweigert (Declined): DNGREF
	Weiß nicht (Don't know): DNGDK

Source	Freiwilligensurvey (FWS)
Year	2014
Survey question	*Question D-5 (2004: D007): Üben Sie zum Geldverdienen gelegentlich oder regelmäßig eine bezahlte Tätigkeit aus? (Are you involved occasionally or regularly in a paid activity to earn money?)*
	Nicht Erwerbstätig (Currently not employed): 3
	Erwerbstätig (Currently employed): 1-2
	Keine Angabe (No answer): 4
Source	German Longitudinal Election Study (GLES)
Year	2013
Survey question	*Question T06.6: Nun weiter mit der Erwerbstätigkeit und Ihrem Beruf. Was von dieser Liste trifft auf Sie zu? (And now let's continue with employment and your occupation. Which of the categories on the card applies to you?)*
	Nicht Erwerbstätig (Unemployed): 3-7, 10-12,
	Erwerbstätig (Employed): 1-2, 8-9
	weiß nicht (Don't know): 98
	keine Angabe (No answer): 99
	Question pre104: Sind Sie zur Zeit erwerbstätig? Damit meine ich eine bezahlte Tätigkeit, egal welchen zeitlichen Umfang sie hat. Sind Sie zur Zeit Vollzeit erwerbstätig, Teilzeit erwerbstätig, in Ausbildung bzw. Studium oder nicht erwerbstätig? (Are you currently in gainful employment? By this I mean paid full-time or part-time work. Are you currently in full-time paid work, part-time paid work, in vocational training or are you unemployed?)
	Nicht Erwerbstätig (unemployed):3-4
	Erwerbstätig (employed): 1-2
	trifft nicht zu (Not applicable): 97
	weiß nicht (Don't know): 98
	keine Angabe (No answer): 99
Source	Microcensus
Year	2015
Survey question	*Question 18: Wenn Sie Ihre aktuelle Situation betrachten: Was trifft am ehesten auf Sie zu? (If you look at your current situation: Which of the categories applies to you?)*
	Nicht Erwerbstätig (Unemployed): 4-5, 7-12
	Erwerbstätig (Employed): 1-3, 15
	Sonstige/-r (Others): 13
	Question 21: Zu welcher Gruppe gehören sie (Which of the categories applies to you?)
	Nicht Erwerbstätige (Unemployed)
	Erwerbstätige, Personen mit Nebenjob (Employed, People with side job)
Source	The German Socio-Economic Panel (SOEP)
Year	2014
Survey question	*Question 6: Haben Sie während der letzten 7 Tage irgendeine bezahlte Arbeit ausgeübt, auch wenn die nur für eine Stunde oder wenige Stunden war? (Did you do any paid work in the last 7 days even if it was just for one or some few hours?*
	Ja (Yes)
	Nein (No)
	Question 12: Üben Sie derzeit eine Erwerbstätigkeit aus? Was trifft für Sie zu? (Are you currently in gainful employment? Which category applies to you?)
	Nicht erwerbstätig (Unemployed)
	Erwerbstätig: in Teilzeitbeschäftigung, geringfügig oder unregelmäßig erwerbstätig, voll erwerbstätig etc. (Employed, in part-time employment, hired irregularly or in minor employment, full-time employed etc.)
Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question EP005_CurrentJobSit: Bitte sehen Sie sich Karte 19 an. Ganz allgemein, was beschreibt Ihre derzeitige Erbwerbssituation am besten? (Please look at card*

19. In general, which of the following best describes your current employment situation?)
Nicht Erwerbstätig (unemployed): 1, 3-5
Erwerbstätig (employed): 2
Anderes (other): 97

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	The German General Social Survey (ALLBUS)
Year	2014
Survey question	*Question F026: Nun weiter mit der Erwerbstätigkeit und Ihrem Beruf. Was von dieser Liste trifft auf Sie zu? (And now let's continue with employment and your occupation. Which of the categories on the card applies to you?)*
	Nicht Erwerbstätig (not working): D
	Erwerbstätig (employed): A-C
	Keine Angabe (no answer)
Source	Eurobarometer
Year	2010-14
Survey question	*Question 15a: What is your current occupation?*
	Non Active: 1-4
	Employed: 5-18
Source	European Quality of Life Survey (EQLS)
Year	2012
Survey question	*Question HH2d: Liste D vorlegen: Was auf dieser Liste beschreibt am besten Ihre derzeitige Situation? (Which of these best describes your current situation?)*
	Nicht Erwerbstätig (Unemployed): 4-10
	Erwerbstätig (Employed): 1-3
	Sonstiges (Others): 11

DOMAIN 2 'PARTICIPATION IN SOCIETY'

INDICATOR 2.1

VARIABLES USED IN EU-AAI

Definition	Percentage of older population aged 55+ providing unpaid voluntary activity through the organisations (at least once a week)
Source	European Quality of Life Survey (EQLS)
Year	2011-12
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
	c. Social movements (for example environmental, human rights) or charities (for example fundraising, campaigning)
	d. Political parties, trade unions
	e. Other voluntary organisations
	Every week: 1
	Every month: 2
	Less often/occasionally: 3
	Not at all: 4

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 404: Es gibt viele Gruppen, die sich besonders an ältere Menschen im Ruhestand oder im Übergang in den Ruhestand richten. Machen Sie in einer oder mehreren solcher Gruppen, wie sie auf der Liste stehen, mit? (There are many groups that address older retirees or people in early retirement. Do you participate in activities of any of the groups listed here?)*

Ja (Yes): 1
Nein (No): 2
Verweigert (Declined): 3
Weiß nicht (Don't know): 4

Question 410: Im Folgenden geht es ganz allgemein um Gruppen und Organisationen, in denen man Mitglied sein kann. Bitte schauen Sie einmal auf die Liste 410. Sind Sie in einer oder mehrerer solcher Gruppen Mitglied? (The following focuses on groups and organisations in general that one can join. Please take a look at the list 410. Are you a member of any of the following groups?)
Ja (Yes): 1
Nein (No): 2
Verweigert (Declined): 3
Weiß nicht (Don't know): 4

Question 415a: Sind Sie noch in einer weiteren Gruppe oder Organisation Mitglied? (Are you a member of another group or organisation?)
Ja (Yes): 1
Nein (No): 2
Verweigert (Declined): 3
Weiß nicht (Don't know): 4

Source	Freiwilligensurvey (FWS)
Year	2014
Survey question	*Question F201: Es gibt vielfältige Möglichkeiten, außerhalb von Beruf und Familie irgendwo mitzumachen, beispielsweise in einem Verein, einer Initiative, einem Projekt oder einer Selbsthilfegruppe. Ich nenne Ihnen verschiedene Bereiche, die dafür in Frage kommen. Wenn Sie an die letzten 12 Monate denken: Haben Sie sich in einem oder mehreren dieser Bereiche aktiv beteiligt… Sind Sie oder waren Sie irgendwo aktiv (There are a range of ways, of getting involved somewhere outside of work and family, for example in a club, an initiative, a project or a self-help group. I will name a few different areas that are possible. Please tell me if you are actively involved in one or more of these areas. Are you involved in…)*

Liste (List): 1-13

Question F203: Uns interessiert nun, ob Sie in den Bereichen, in denen Sie aktiv sind, auch ehrenamtliche Tätigkeiten ausüben oder in Vereinen, Initiativen, Projekten oder Selbsthilfegruppen engagiert sind. Es geht um freiwillig übernommene Aufgaben und Arbeiten, die man unbezahlt oder gegen geringe Aufwandsentschädigung ausübt (We are interested now in whether you also do voluntary activities in the areas in which you are involved or if you volunteer in associations, initiatives, projects or self-help groups. We are looking at duties and work taken on voluntarily basis for little or no remuneration.)
Anzahl der Tätigkeiten (Number of Activities)

Question F407: Wenn Sie an die letzten 12 Monate denken: Wie häufig haben Sie Ihr ehrenamtliches oder freiwilliges Engagement durchschnittlich ausgeübt? (When you think of the last 12 months: How often did you carry out your voluntary activity on average?)
Täglich (Daily): 1
Mehrmals in der Woche (Several times a week): 2
Einmal in der Woche (Once a week): 3
Mehrmals im Monat (Several times a month): 4
Einmal im Monat (Once a month): 5
Seltener (More rarely): 6
Ganz unregelmäßig (unregular): 9996
Verweigert (not applicable): 9997
Weiß nicht (Don't know): 9998

Source	German Longitudinal Election Study (GLES: Nachwahl)
Year	2013

Survey question	*Question T19.2: Schauen Sie sich bitte einmal diese Liste an. Sind Sie persönlich in einer dieser Organisationen Mitglied? Gehen Sie bitte diese Liste durch und sagen Sie mir, wo Sie Mitglied sind. Sagen Sie mir jeweils dazu, ob Sie nur passives Mitglied sind, ob Sie sich an den Aktivitäten des Vereins bzw. der Organisation beteiligen und ob Sie ein Amt ausüben? (Question T19.2: Please have a look at this list. Are you a member of one of these organisations? Please go through this list and tell me of which organisation you are a member. Tell me further whether you are just a passive member, whether you participate in the activities of the association or organisation and whether you hold an office.)*

Items:
Gewerkschaft (Trade union): A
Unternehmer-/Arbeitgeberverband (Entrepreneurs' / employer association): B
Berufsvereinigung/-verband (Professional association): C
Bauern-bzw. Landwirtschaftsverband (Farmers' or agriculture association): D
Religiöse/kirchliche Gruppen (Religious group / church group): E
Sport-/Hobbyverein (Sports or hobby club): F
Umweltschutzgruppen (Ecological group): G
Scale:
Ja, bin Mitglied und übe ein Amt, eine Funktion aus (Yes, I am member and hold an office): 1
Ja, bin Mitglied, übe kein Amt aus, beteilige mich aber aktiv (Yes, I am member, don't hold an office but participate actively): 2
Ja, bin passives Mitglied (Yes, I am a passive member): 3
Nein, bin nicht Mitglied (No, I am not a member): 4
Weiß nicht (Don't know): 98
Keine Angabe (No answer): 99

Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question AC035: Bitte sehen Sie sich Karte 32 an: Welche der dort aufgeführten Aktivitäten haben Sie – falls überhaupt – in den letzten 12 Monaten ausgeübt? (Please look at card 32: which of the activities listed on this card – if any – have you done in the past twelve months?)*

Ehrenamtliche Tätigkeit (Done voluntary or charity work): 1
Teilnahme an Aktivitäten von Vereinen (z. B. Sport – oder Heimatverein) (Participation a sport, social or other kind of club): 5

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	The German General Social Survey (ALLBUS)
Year	2014
Survey question	*Question F008: Sind Sie derzeit Mitglied einer Organisation oder eines Vereins? Gehen Sie bitte diese Liste durch und sagen Sie mir, wo Sie Mitglied sind. (Are you currently a member of an organisation or club? Please go through this list and tell me what you are a member of. Tell me in each case)*

Kein Mitglied (Not a member): 1
Passives Mitglied (Passive member): 2
Aktives Mitglied (Active member): 3
Ehrenamt (Voluntary position): 4
Keine Angabe (No answer): 0
Mehrfachnennung möglich

Question F009: Abgesehen von Organisationen und Vereinen, von denen wir gerade gesprochen haben, gehören Sie einer Gruppe an, die sich regelmäßig trifft oder regelmäßigen Kontakt hat und nicht als Verein organisiert ist? (Apart from the organisations and clubs we have just talked about, do you belong to any group which meets or has contact on a regular basis but which is not organised along club or association lines?)
Ja (Yes): 1
Nein (No): 2
Keine Angabe (No answer): 3

INDICATOR 2.2

VARIABLES USED IN EU-AAI

Definition	Percentage of older population aged 55+ providing care to their children, grandchildren (at least once a week)
Source	European Quality of Life Survey (EQLS)
Year	2011-12
Survey question	*In general, how often are you involved in any of the following activities outside of work?*

a. Caring for your children, grandchildren
Every day: 1
Several days a week: 2
Once or twice a week: 3
Less often: 4
Never: 5

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 423: Im Folgenden möchte ich jetzt etwas über Ihre sonstigen Tätigkeiten und Aktivitäten wissen. Betreuen oder beaufsichtigen Sie privat Kinder, die nicht Ihrer Eigenen sind z.B. Ihre Enkel oder Kinder von Geschwistern, Nachbarn, Freunden oder Bekannten? (I'd now like to go on to learn more about your activities and pastimes. Do you look after or supervise other people's children privately, e.g., your grandchildren or the children of siblings, neighbours, friends, or acquaintances?)*

Enkelkinder (Grandchildren): A
Andere (Others): B-E
Nein (No): F
genannt (Mentioned): 1
nicht genannt (Not Mentioned): 0
verweigert (Declined): 7
weiß nicht (Don't know): 8

Source	Freiwilligensurvey (FWS)
Year	2014
Survey question	*Question 710: Gibt es Personen, die auf Grund ihres Gesundheitszustandes von Ihnen privat und unentgeltlich gepflegt beziehungsweise betreut werden? (Are there any people, who are cared for or looked after by you privately on an unpaid basis due to their poor state of health?)*

Question 718: Gibt es darüber hinaus Personen außerhalb Ihres Haushalts, denen Sie selbst privat und unentgeltlich helfen, zum Beispiel bei Besorgungen oder kleineren Arbeiten. Bitte denken Sie dabei an die vergangenen 12 Monate (Are there other people outside your household, who you help regularly or occasionally privately on an unpaid basis, e. g. with errands or smaller jobs. Please think of the last 12 months.)

Ja, eine Person (Yes, one person): 1
Ja, mehrere Personen (Yes, several persons): 2
Nein (No): 3

Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question SP014: Während der letzten zwölf Monate – haben Sie in Abwesenheit der Eltern regelmäßig oder gelegentlich auf [Ihr Enkelkind/Ihre Enkelkinder] aufgepasst? (During the last twelve months, have you regularly or occasionally looked after [your grandchild/your grandchildren] without the presence of the parents?)*

Ja (Yes): 1
Nein (No): 5

Source	Eurobarometer
Year	2010-14
Survey question	*Question 40b: Could you tell me how many children less than 10 years old live in your household?*
	count
	Question 40c: Could you tell me how many children aged 10 to 14 years old live in your household?
	count
Source	European Quality of Life Survey (EQLS)
Year	2011/12
Survey question	*Question Q36: Wie oft sind Sie mit folgenden Aktivitäten beschäftigt? (In general, how often are you involved in any of the following activities outside of work?)*
	Question Q36a: Betreuung und Erziehung von (Enkel)Kindern (Caring for your children, grandchildren)
	Täglich (Every day):1
	Mehrmals in der Woche (Several days a week): 2
	1- bis 2- mal in der Woche (Once or twice a week): 3
	Seltener (Less often): 4
	Niemals (Never): 5
	Weiß nicht (Don't know): 6
	Keine Angabe/Verweigerung (Refusal): 7

INDICATOR 2.3

Definition	Percentage of older population aged 55+ providing care to elderly or disabled relatives (at least once a week)
Source	European Quality of Life Survey (EQLS)
Year	2011-12
Survey question	*c. Caring for elderly or disabled relatives*
	Every day: 1
	Several days a week: 2
	Once or twice a week: 3
	Less often: 4
	Never: 5

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 539 (BP): Gibt es Personen, die aufgrund ihres schlechten Gesundheitszustandes von Ihnen privat oder ehrenamtlich betreut bzw. gepflegt werden oder denen Sie regelmäßig Hilfe leisten? (Are there people you look after or care for regularly due to their poor state of health, either on a private or volunteer basis?)*
	Ja (Yes): 1
	Nein (No): 2
	verweigert (Declined): 7
	weiß nicht (Don't know): 8
	Question 540 (BP): Welche Person oder Personen unterstützen Sie in diesem Sinne? (Who do you assist in this way?)
	Person(en) (Person):1-3
	Mehr als 3 Personen genannt (More than three people named): 1
	verweigert (Declined): 997
	weiß nicht (Don't know): 998
	Question 553: Wie viel Zeit wenden Sie pro Woche auf, um der von Ihnen unterstützen Person/en zu helfen? Bitte geben Sie die wöchentlich im Durschnitt anfallende Zahl der Stunden an. (How much time do you spend per week helping the person you care for. Please give a weekly average number of hours.)

Ungefähr_ _ _ Stunden (About _ _ _ hours)
verweigert (Declined): 997
weiß nicht (Don't know): 998

Source   European Social Survey (ESS)
Year   2014
Survey question *Question E17: Verbringen Sie Zeit damit, Familienmitgleider, Freunde, Nachbarn oder andere Menschen zu betreuen oder ihnen zu helfen – und zwar aus irgendeinem Grund, der auf dieser Karte steht? Zählen Sie bitte nicht mit, was Sie als Teil einer bezahlten Tätigkeit tun. (Do you spend any time looking after or giving help to family members, friends, neighbours or others because of any of the reasons on this card? Do not count anything you do as part of your paid employment.)*
Ja (Yes): 1
Nein (No): 2
weiß nicht (Don't know): 8

Source   Freiwilligensurvey (FWS)
Year   2014
Survey question *Question F710: Gibt es Personen, die auf Grund ihres Gesundheitszustandes von Ihnen privat und unentgeltlich gepflegt beziehungsweise betreut werden? (Are there any people, who are cared for or looked after by you privately on an unpaid basis due to their poor state of health?*

Question F718: Gibt es darüber hinaus Personen außerhalb Ihres Haushalts, denen Sie selbst privat und unentgeltlich helfen, zum Beispiel bei Besorgungen oder kleineren Arbeiten. Bitte denken Sie dabei an die vergangenen 12 Monate. (Are there other people outside your household, who you help regularly or occasionally, privately on an unpaid basis, e. g. with errands or smaller jobs. Please think of the last 12 months.)
Ja, eine Person (Yes, one person): 1
Ja, mehrere Personen (Yes, several persons): 2
Nein (No): 3

Question F720: Wenn ja, wie häufig? (If yes, how often)
Täglich (Daily): 1
Mehrmals in der Woche (Several times a week): 2
Einmal in der Woche (Once a week): 3
Mehrmals im Monat (Several times a month): 4
Einmal im Monat (Once a month): 5
Seltener (More rarely): 6

Source   Survey of Health, Ageing and Retirement in Europe (SHARE)
Year   2013
Survey question *Question SP008: Haben Sie selbst in den letzten 12 Monaten einem Familienmitglied, das außerhalb Ihres Haushaltes lebt, einem Freund oder einem Nachbarn bei der persönlichen Pflege oder bei der praktischen Arbeit im Haushalt geholfen? (Now I would like to ask you about the help you have given to others. In the last 12 months, have you personally helped a family member living outside your household, friend or neighbour with personal care or helped any of them around the house?)*
Ja (Yes): 1
Nein (No): 5

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source   European Quality of Life Survey (EQLS)
Year   2012
Survey question *Question Q37c: Wie viele Stunden pro Woche beschäftigen Sie die folgenden Aufgaben neben Ihrer eigentlichen, bezahlten Arbeit im Durchschnitt? Pflege von älteren oder behinderten Verwandten. (On average, how many hours per week are you involved in any of the following activities outside of paid work? Caring for elderly or disabled relatives.)*
_____ Stunden (Hours)

Source	Panel Study "Labour Market and Social Security" (PASS)
Year	2014
Survey question	*Question P89: Und jetzt ein paar Fragen zur Pflege anderer Personen, die schwer krank sind oder aus Altersgründen versorgt werden müssen. Pflegen Sie persönlich regelmäßig pflegebedürftige Verwandte oder Freunde in Ihrem Haushalt oder außerhalb Ihres Haushalts? Pflegetätigkeiten die Sie als Beruf ausüben, sind damit aber nicht gemeint. (And now we have a couple of questions regarding the care of other persons who are severely ill or have to be cared for due to reasons of age. Do you provide care, personally and on a regular basis, for relatives or friends in or outside your household? We are not referring to providing nursing care as an occupation.)* Ja (Yes): 1 Nein (No): 2 WN (DK): 8 KA (REF): 9 *Question P92: A: Wie viele Stunden pro Woche wenden Sie für diese Pflege im Durchschnitt auf? Bitte zählen Sie die Stunden für alle betreuten Personen zusammen. (On average, how many hours per week do you spend on this nursing care?)* _____ Stunden (Hours)
Source	Berufliche Weiterbildung als Bestandteil lebenslangen Lernens (WeLL)
Year	2010
Survey question	*Question 809: Betreuen Sie persönlich regelmäßig hilfe- oder pflegebedürftige Angehörige? (Are there relatives you look after or care for regularly due to their poor state of health?)* Ja (Yes): 1 Nein (No): 2 Verweigert (Declined): 7 weiß nicht (Don't know): 8

INDICATOR 2.4

VARIABLES USED IN EU-AAI

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
Source	European Quality of Life Survey (EQLS)
Year	2011-12

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. Signed a petition, including an e-mail or on-line petition
	 d. Contacted a politician or public official (other than routine contact arising from use of public services)
	    Yes
	    No

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 425: Wenn Sie nun einmal an die letzten 12 Monate denken: Wie häufig gehen Sie folgender Tätigkeiten nach? (If you think back over the past 12 months: How often on an average do you engage in the following activities?).* *Besuch politischer Veranstaltungen, z.B. von Parteien, Gewerkschaften oder Bürgerinitiativen (How often do you go to political meetings, i.e., held by parties, unions, or citizens' initiatives?):* täglich (Daily): 1 mehrmals die Woche (Several times a week): 2 einmal in der Woche (Once a week): 3 1-3mal im Monat (1–3 times a month): 4

weniger häufig (Less often): 5
Niemals (Never): 6
Verweigert (Declined): 7

Source	European Social Survey (ESS)
Year	2014
Survey question	*Question B9: Haben Sie bei der letzten Bundestagswahl im September 2013 gewählt?*

(Did you vote in the last (country) national election in 2013)
Ja (Yes): 1
Nein (No): 2-3
Weiß nicht (Don't know): 8

Question B11 (CONTPLT): Haben Sie Kontakt zu einem Politiker oder einer Amtsperson auf Bundes-, Landes- oder Kommunalebene aufgenommen? (Have you contacted a politician, government or local government official?)
Question B12 (WRKPRTY): Haben Sie in einer politischen Partei oder Gruppierung mitgearbeitet? (Have you worked in a political party or action group?)
Ja (Yes): 1
Nein (No): 2
Weiß nicht (Don't know): 8

Source	Freiwilligensurvey (FWS)
Year	2014
Survey question	*Question E25: Es gibt verschieden Möglichkeiten, politisch aktiv zu sein. Welche der folgenden Dinge haben Sie bereits getan? (There are various ways of being politically active. Which of the following activities have you engaged in?)*

ein politisches Amt oder anderweitig politische Verantwortung übernommen? (held a political office or taken another political responsibility)
bei Unterschriftensammlungen für politische Ziele unterschrieben? (signed petitions for political goals, including online petitions)
sich an einer Demonstration beteiligt? (taken part in a demonstration)
sich an einer Bürgerinitiative beteiligt? (been involved in a citizens' initiative)
an einer Bürgerversammlung in ihrem Ort oder in Ihrem Ortsteil teilgenommen? (taken part in a public meeting in your town or district)
Ja (Yes) 1
Nein (No): 2
eine Angabe (No answer): 3

Question F161: Haben Sie an der Bundestagswahl 2013 teilgenommen? (Did you take part in the general election (Bundestagswahl) 2013?).
Ja (Yes): 1
Nein (No): 2
Nicht wahlberechtigt (Not entitled to vote):3

Source	German Longitudinal Election Study (GLES)
Year	2013
Survey question	*Question Nw098: Wenn Sie einmal an die letzten 12 Monate zurückdenken, haben Sie die folgenden Dinge getan, um politischen Einfluss zu nehmen und um Ihren Standpunkt zur Geltung zu bringen? (Considering the last 12 months, have you done any of the following to exert political influence and to assert your point of view?)*

A: an einer Bürgerinitiative mitgearbeitet (A: Assisted in a local initiative)
B: an einer Demonstration teilgenommen (B: Took part in a demonstration)
C: eine Partei im Wahlkampf unterstützt (C: Supported a party in its campaign)
Ja: 1
Nein: 2
weiß nicht: 98
keine Angabe: 99

Question Nw305: Haben Sie (bei der Bundestagswahl 2013) gewählt oder haben Sie nicht gewählt? (Did you take part in the general election (Bundestagswahl) 2013?).

Question Nw523: Haben Sie (bei der Bundestagswahl 2009) gewählt oder haben Sie nicht gewählt? (Did you take part in the general election (Bundestagswahl) 2009?).
Ja, habe gewählt (Yes): 1
Nein, habe nicht gewählt (No): 2
trifft nicht zu: 97
weiß nicht (Don't know): 98
keine Angabe (No answer): 99

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	European Quality of Life Survey (EQLS)
Year	2012
Survey question	*Question Q23a: Haben Sie in den letzten 12 Monaten an einer Versammlung einer Gewerkschaft, einer Partei oder einer politischen Gruppierung teilgenommen? (Over the last 12 months, have you Attended a meeting of a trade union, a political party or political action group?)*

Question Q23b: Haben Sie in den letzten 12 Monaten an einer Demonstration oder an einem Protestmarsch teilgenommen? (Over the last 12 months, have you Attended a protest or demonstration?)
Question Q23c: Haben Sie in den letzten 12 Monaten einer Petition/Unterschriftensammlung unterschrieben, inklusive E-Mail oder Online-Petition? (Over the last 12 months, have you Signed a petition, including an e-mail or on-line petition?)
Question Q23d: Haben Sie in den letzten 12 Monaten Kontakt mit einem Politiker oder einem anderen öffentlichen Amtsträger gehabt (der über normale Behördenkontakte hinausgeht)? (Over the last 12 months, have you Contacted a politician or public official (other than routine contact arising from use of public services?))
Ja (Yes): 1
Nein (No): 2
Weiß nicht (Don't know): 3
Keine Angabe (Refusal): 4

DOMAIN 3 'INDEPENDENT, HEALTHY AND SECURE LIVING'

INDICATOR 3.1

VARIABLES USED IN EU-AAI

Definition	Percentage of people aged 55 years and older undertaking physical exercise or sport almost every day.
Source	European Quality of Life Survey (EQLS)
Year	2011-12
Survey question	*The EQLS 2012 survey contains a question on the frequency of physical activity: Take part in sports or physical exercise / How frequently do you do each of the following?*

Every day or almost every day: 1
At least once a week: 2
One to three times a month: 3
Less often. 4
Those replying "Every day or almost every day" to the above question have been considered as being physically active for the purpose of this indicator.

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 427 (BP): Wie oft treiben sie Sport, z.B. Wandern, Fußball, Gymnastik oder Schwimmen? (How often do you do sports such as hiking, soccer, gymnastics, or swimming?)*

	Täglich (Daily): 1
	Mehrmals in der Woche (Several times a week): 2
	Einmal in der Woche (Once a week): 3
	1- bis 3-mal im Monat (1-3 times a month): 4
	Seltener (Less often): 5
	Nie (Never): 6
	Verweigert (Declined): 7
	Weiß nicht (Don't know): 8
Source	European Social Survey (ESS)
Year	2014
Survey question	*Question E3: An wie vielen der letzten 7 Tage sind Sie 30 Minuten oder länger entweder schnell zu Fuß gegangen oder haben sich sportlich oder auf eine andere Artkörperlich betätigt? (On how many of the last 7 days did you walk quickly, do sports or other physical activity for 30 minutes or longer?)*
	Anzahl der Tage eingeben (Indicate the number of days): ___
	Weiß nicht (Don't know): 88
Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question BR015: Wir würden gerne wissen, auf welche Art und wie häufig Sie sich im Alltag körperlich betätigen.Wie oft üben Sie im Alltag eine anstrengende körperliche Tätigkeit aus, zu Beispiel beim Sport, bei schweren Arbeiten im Haus oder im Beruf? (We would like to know about the type and amount of physical activity you do in your daily life. How often do you engage in vigorous physical activity, such as sports, heavy housework, or a job that involves physical labour?)*
	Mehr als einmal wöchentlich (More than once a week): 1
	Einmal wöchentlich (Once a week): 2
	Ein- bis dreimal pro Monat (One to three times a month): 3
	So gut wie nie oder nie (Hardly ever, or never): 4

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	The German General Social Survey (ALLBUS)
Year	2014
Survey question	*Question F006b: Und wie ist es mit diesen Tätigkeiten? Geben Sie mir auch hier bitte wieder an, wie oft Sie das in Ihrer Freizeit machen. (Aktive sportliche Betätigung) (And what about these activities? Please tell me here too, how often you do the following in your leisure time.*
	Basteln / Reparaturen am Haus, in der Wohnung, am Auto; Gartenarbeit (Do arts and crafts/do repairs around the house, car; gardening): G
	Aktive sportliche Betätigung (Do Sports): H
	täglich (every day)
	mindestens einmal jede Woche (at least once a week)
	mindestens einmal im Monat (at least once a month)
	seltener oder nie (less often or never)
	Keine Angabe (no answer)
Source	European Quality of Life Survey (EQLS)
Year	2012
Survey question	*Question Q21c: Wie häufig gehen Sie jeweils folgenden Beschäftigungen nach? Sportliche bzw. körperliche Betätigung (How frequently do you do each of the following? Take part in sports or physical exercise)*
	Jeden Tag bzw. fast jeden Tag (Every day or almost every day): 1
	Mindestens einmal pro Woche (At least once a week): 2
	Ein bis dreimal im Monat (One to three times a month): 3
	Weniger oft (Less often): 4
	Nie (Never): 5
	6: Weiß nicht (Don't know)
	7: Keine Angabe (Refusal)
Source	Panel Study "Labour Market and Social Security" (PASS)
Year	2014

Survey question	*Question P65: Wie häufig treiben Sie aktiv Sport, Fitness oder Gymnastik? (How often are you actively doing sports, fitness training or gymnastics?)*
	jeden Tag (Every day): 1
	mehrmals die Woche (Several times a week): 2
	einmal in der Woche (Once a week): 3
	seltener (Less frequently): 4
	nie (Never): 5
	WN (DK): 8
	KA (REF): 9

INDICATOR 3.2

VARIABLES USED IN EU-AAI

Definition	Access to health and dental care: Percentage of people aged 55 years and older who report no unmet need for medical and dental examination or treatment during the 12 months preceding the survey.
Source	European Union Statistics on Income and Living Conditions (EU-SILC)
Year	2008; 2010; 2012
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.*

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 6 (drop-down list): Haben Sie in den vergangenen 12 Monaten erlebt, dass Sie wegen Ihres Alters durch andere benachteiligt oder gegenüber anderen Menschen schlechter gestellt wurden? Können Sie uns sagen, in welchem Bereich des Lebens dies geschehen ist? (In the past 12 months, have you been discriminated against because of your age or placed at a disadvantage in relation to others? Can you tell us which area of life this occurred in?)*
	Bei der medizinischen Versorgung (z.B. bei der ärztlichen Diagnose, bei der Behandlung oder Verordnung von Medikamenten) (In medical care (for example, medical diagnoses, treatments, or prescriptions))
	Ja (Yes): 1
	Nein (No): 2
Source	European Social Survey (ESS)
Year	2014
Survey question	*Question E14: Denken Sie an die letzten 12 Monate: Ist Ihnen aus einem der Gründe auf Liste 49 jemals nicht möglich gewesen, einen Arzttermin oder eine benötigte medizinische Behandlung zu bekommen. (In the last 12 months, was there a time when you were unable to get medical consultation or treatment you needed for any of the reasons listed on this card?*
	Ja (Yes): 1
	Nein (No): 2
	Weiß nicht (Don't know): 8
Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question HC114_UnmetNeedCost: Haben Sie in den letzten 12 Monaten auf einen Arztbesuch oder eine Behandlung verzichtet, weil es Sie zu viel gekostet hätte? (Was there a time in the past 12 months when you needed to see a doctor but could not because of the cost?)*
	Ja (Yes): 1
	Nein (No): 5

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	European Quality of Life Survey (EQLS)
Year	2012
Survey question	*Question Q47: Als Sie das letzte Mal einen Arzt oder medizinischen Spezialisten aufsuchen mussten,in welchem Ausmaß hat jeder der folgenden Gründe Ihnen den*

Arztbesuch erschwert (On the last occasion you needed to see a doctor or medical specialist, to what extent did each of the following factors make it difficult or not for you to do so?)
Q47a Die Entfernung zur Arztpraxis/zum Krankenhaus/ zum medizinischen Zentrum (Distance to doctor's office / hospital / medical centre)
Q47b: Lange Wartezeit auf einen Termin (Delay in getting appointment)
Q47c: Trotz eines vorherigen Termins lange Wartezeit in der Praxis (Waiting time to see doctor on day of appointment)
Q47d: Behandlungs-/ Arztkosten (Cost of seeing the doctor)
Q47e: Zeit zu finden aufgrund von Arbeit, Kinderbetreuung oder sonstigen Gründen (Finding time because of work, care for children or for others)
Sehr erschwert (Very difficult): 1
Etwas erschwert (A little difficult): 2
Überhaupt nicht erschwert (Not difficult at all): 3
Nicht zutreffend/habe nie einen Arzt gebraucht (Not applicable / never needed to see doctor): 4
Weiß nicht (Don't know): 5
Keine Angabe (Refusal): 6

INDICATOR 3.3

VARIABLES USED IN EU-AAI

Definition   Independent living arrangements: Percentage of people aged 75 years and older who live in a single person household or who live as couple (2 adults with no dependent children).
Source   European Union Statistics on Income and Living Conditions (EU-SILC)
Year   2008; 2010; 2012

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source   Deutscher Alterssurvey (DEAS)
Year   2014
Survey question   *Question 323 (BP): Wie viele Personen leben insgesamt – also Sie selbst eingeschlossen in diesem Haushalt (inklusive Kleinkinder und Personen die derzeit abwesend sind)? How many people in total live in your household, including children and yourself? Please include small children and people who normally live here but are absent at the moment (i.e., in the hospital or on vacation).*
                      Anzahl der Personen (Number of people): ___
                      Lebe Allein (I live alone): 95
                      Verweigert (Declined): 97
                      Weiß nicht (Don't know): 98
Source   German Longitudinal Election Study (GLES)
Year   2013
Survey question   *Question pre115 und T01.1: Wie viele Personen leben ständig in Ihrem Haushalt; Sie selbst und alle Kinder eingeschlossen? (How many people live permanently in the same household as you, including yourself and all the children living in your household?*
                      Personen im Haushalt (Persons in the household): ___
                      weiß nicht (don't know): 98
                      keine Angabe (no answer): 99

                      Question pre117: Leben Sie in Ihrem Haushalt mit einem Ehepartner oder Partner zusammen? (Do you share a household with a spouse of life partner?)
                      ja (yes): 1
                      nein (no): 2
                      trifft nicht zu (not applicable): 97
                      weiß nicht (don't know): 98
                      keine Angabe (no answer): 99

                      Question T04.1: Haben Sie einen Partner? Und wenn ja, leben Sie mit ihm in einem Haushalt zusammen? (Do you have a partner? If yes, do you share a household with the partner?)

Ja, leben nicht in einem Haushalt zusammen (yes; not living together in one household): 1

Ja, leben in einem Haushalt zusammen (yes; living together in one household): 2

Nein (no): 3

trifft nicht zu (not applicable): 97

weiß nicht (don't know): 98

keine Angabe (no answer): 99

Source	Microcensus
Year	2015
Survey question	*Question 4: Wie viele Personen haben am Mittwoch der letzten Woche insgesamt zu Ihrem Haushalt gehört? (Last Wednesday, how many people lived/were part of to your household?)*

Anzahl der Personen in Ihrem Haushalt (Sie selbst miteinbezogen) (Number of people in the household (yourself included)): ___

Question 14: Lebt Ihr/-e Lebenbenspartner/-in in diesem Haushalt (Do you share the household with your partner?)

Ja (Yes)

Nein (No)

Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question DN014: Was ist Ihr Familienstand? (What is your marital status?)*

Verheiratet und mit Ehegatten zusammenleben (Married and living together with spouse): 1

In eigetragener Partnerschaft lebend (Registered partnership): 2

Verheiratet, getrennt von Ehegatten lebend (Married, living separated from spouse): 3

Ledig (Never married): 4

Geschieden (Divorced): 5

Verwitwet (Widowed): 6

Question CH526: Wo lebt Ihr Kind/ Ihre Kinder? (Where do your children live?)
Im gleichen Haushalt (In the same household): 1

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	European Quality of Life Survey (EQLS)
Year	2012
Survey question	*Question: HH1: Können Sie mir sagen, wie viele Personen –Sie selbst eingeschlossen – in diesem Haushalt leben? (I'd like to start by asking you a few questions about your household. Including yourself, can you please tell me how many people live in this household?)*

Anzahl der Personen (Number of people):___

INDICATOR 3.4

VARIABLES USED IN EU-AAI

Definition	Relative median income: The relative median income ratio is defined as the ratio of the median equivalised disposable income of people aged 65 and above to the median equivalised disposable income of those aged below 65.
Source	European Union Statistics on Income and Living Conditions (EU-SILC)
Year	2008; 2010; 2012 (survey year) 2011 (income year)
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.

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source   Deutscher Alterssurvey (DEAS)
Year   2014
Survey question *Question 802 (BP): Wie hoch ist das monatliche Nettoeinkommen Ihres Haushalts insgesamt (alle Einkünfte eingerechnet)? (What is the total net monthly income of your household? By that, I mean the sum total of all wages / salaries, income from self-employment, and retirement benefits after deduction of all tax and social security contributions. Please include income from public aid, income from rentals and leases, interest, child benefits and other sources of income.)*
_ _ _ _: Euro monatlich (Euro per month)
Verweigert (Declined): 999997
Weiß nicht (Don't know): 999998

Source   Freiwilligensurvey (FWS)
Year   2014
Survey question *Question F724-F727: Wie hoch ist das monatliche Nettoeinkommen Ihres Haushalts insgesamt? Ich meine damit die Summe aller Einkünfte nach Abzug von Steuern und Sozialversicherungsbeiträgen. (How high is the total monthly net income of your household? I mean the total income from wages, salary, income from self-employment, pension, after tax and social security contributions.)*

Nettoeinkommen (net income)
Bis einschließlich 1.000 Euro (up to and including 1,000 Euro)
Über 1.000 Euro (Over 1,000 Euro)
Bis einschließlich 2.000 Euro (up to and including 2,000 Euro)
Über 2.000 Euro (Over 2,000 Euro)
Bis einschließlich 3.000 Euro (up to and including 3,000 Euro)
Über 3.000 Euro (Over 3,000 Euro)
Bis einschließlich 4.000 Euro (up to and including 4,000 Euro)
Über 4.000 Euro (Over 4,000 Euro)
Verweigert (Declined): 9997
Weiß nicht (Don't know): 9998

Source   German Longitudinal Election Study (GLES)
Year   2013
Survey question *Question T15.1: Wie hoch ist das monatliche Netto-Einkommen Ihres Haushaltes Insgesamt? Ich meine dabei die Summe, die nach Abzug von Steuern und Sozialversicherungsbeiträgen übrig bleibt? (How high is the total monthly net income of your household? I mean the total income from wages, salary, income from self-employment, pension, after tax and social security contributions.)*
unter 500 Euro (Below 500 Euro) 1
500-10.000 Euro (500-10.000 Euro): 2-12
Über 10.000 Euro (Over 10.000 Euro): 13
weiß nicht: 98
keine Angabe: 99

Source   Microcensus
Year   2015
Survey question *Question 161: Wie hoch war das Nettoeinkommen Ihres Haushaltes im letzten Monat insgesamt? (How high was the total net income of your household last month?)*
1 bis 18.000 Euro (1 to 18.000 Euro): 01-23
18.000 Euro und mehr (18.000 Euro and more): 24

Source   The German Socio-Economic Panel (SOEP)
Year   2014
Survey question *Question 57: Wie hoch war Ihr Arbeitsverdienst im letzten Monat? (How high was your income/salary last month?)*
Brutto (Gross)___ Euro
Netto (Net)___ Euro

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	Eurobarometer
Year	2010-14
Survey question	*Question QA43: Ist das gesamte monatliche Nettoeinkommen Ihres Haushalts höher, niedriger oder ungefähr genauso hoch wie dieser Betrag? (Is the total net monthly income of your household ... as this figure?)*

Viel höher (Much higher): 1
Etwas höher (Somewhat higher): 2
Ungefähr genauso hoch (More or less the same): 3
Etwas niedriger (Somewhat lower): 4
Viel niedriger (Much lower): 5
Weiß nicht (Don't know): 6

Question QA44: Bitte wählen aus dieser Liste den Buchstaben aus, der Ihre Haushaltssituation am besten beschreibt (On this card, please select the letter that would best describe the situation of your household
Liste (List): 1 = Sehr arm; 10= Sehr Wohlhabend (1 = Very poor; 10= Very wealthy))
E: 1
B: 2
V: 3
Z: 4
R: 5
P: 6
A: 7
G: 8
O: 9
T: 10
Verweigert (Refusal): 11
Weiß nicht/ Keine Angabe (Don't know): 12

Source	European Quality of Life Survey (EQLS)
Year	2012
Survey question	*Question Q63: Können Sie mir bitte sagen, wie hoch das MONATLICHE NETTOEINKOMMEN Ihres Haushalts ist? Wenn Sie keinen exakten Betrag wissen, reicht eine ungefähre Schätzung. (Can you tell me, please, how much your household's NET income per Month is? If you don't know the exact figure, please give an estimate.)* Betrag (Amount):__
Source	Panel Study 'Labour Market and Social Security' (PASS)
Year	2014
Survey question	*Question P35: Und sagen Sie mir bitte auch noch, wie hoch im letzten Monat Ihr Nettoeinkommen war, also Ihr Einkommen nach Abzug von Steuern und Sozialbeiträgen, wie z.B. den Beiträgen zur Renten-, Arbeitslosen- und Krankenversicherung. (And please tell me also, what your net income was last month, that is your income after deduction of taxes and social security contributions such as contributions to statutory pension, unemployment and health insurance.)* Betrag (Amount):___
Source	Berufliche Weiterbildung als Bestandteil lebenslangen Lernens (WeLL)
Year	2010
Survey question	*Question 810: In der nächsten Frage möchte ich auf Ihre finanzielle Situation zu sprechen kommen. Sagen Sie mir bitte, wie hoch Ihr eigenes monatliches Nettoeinkommen ist, also ohne das Einkommen anderer Haushaltsmitglieder]* *(In the next question I would like to address your financial situation. Please tell me, how high is your total monthly net income, that means the income of other household members excluded)* Betrag (Amount): _ _ _ _

INDICATOR 3.5

VARIABLES USED IN EU-AAI

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).
Source	European Union Statistics on Income and Living Conditions (EU-SILC)
Year	2008; 2010; 2012 (survey year) 2011 (income year)
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.

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey DEAS
Year	2014
Survey question	*Question 802 (BP): Wie hoch ist das monatliche Nettoeinkommen Ihres Haushalts insgesamt? Ich meine damit die Summe, die sich ergibt aus Lohn, Gehalt, Einkommen aus selbstständiger Tätigkeit, Rente oder Pension, jeweils nach Abzug der Steuern und Sozialversicherungsbeiträge. Rechnen Sie bitte auch Einkünfte aus öffentlichen Beihilfen, Einkommen aus Vermietung und Verpachtung, Zinseinkommen, Kindergeld und sonstige Einkünfte dazu. (What is the total net monthly income of your household? By that I mean the total sum of all wages / salaries, income from self-employment, and retirement benefits after deduction of all tax and social security contributions. Please include income from public aid, income from rentals and leases, interest, child benefits and other sources of income.)* _ _ _ _: Euro monatlich (Euro per month) Verweigert (Declined): 999997 Weiß nicht (Don't know): 999998
Source	German Longitudinal Election Study (GLES)
Year	2013
Survey question	*Question T15.1: Wie hoch ist das monatliche Netto-Einkommen Ihres Haushaltes Insgesamt? Ich meine dabei die Summe, die nach Abzug von Steuern und Sozialversicherungsbeiträgen übrig bleibt? (How high is the total monthly net income of your household? I mean the total income from wages, salary, income from self-employment, pension, after tax and social security contributions.)* unter 500 Euro: 1 500-10.000 Euro: 2-12 Über 10.000 Euro: 13 weiß nicht: 98 keine Angabe: 99
Source	Microcensus
Year	2015
Survey question	*Question 161: Wie hoch war das Nettoeinkommen Ihres Haushaltes im letzten Monat insgesamt? (How high was the total net income of your household last month?)* 1 bis 18.000 Euro (1 to 18.000 Euro): 01-23 18.000 Euro und mehr (18.000 Euro and more): 24

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source   Berufliche Weiterbildung als Bestandteil lebenslangen Lernens (WeLL)
Year   2010
Survey question   *Question 810: In der nächsten Frage möchte ich auf Ihre finanzielle Situation zu sprechen kommen. Sagen Sie mir bitte, wie hoch Ihr eigenes monatliches Nettoeinkommen ist, also ohne das Einkommen anderer Haushaltsmitglieder (In the next question I would like to address your financial situation. Please tell me, how high is your total monthly net income, that means the income of other household members excluded)*
Betrag (Amount): _ _ _ _

INDICATOR 3.6

VARIABLES USED IN EU-AAI

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: to pay their rent, mortgage or utility bills; to keep their home adequately warm; to face unexpected expenses; to eat meat or proteins regularly; to go on holiday; a television set; a washing machine; a car; a telephone.
Source   European Union Statistics on Income and Living Conditions (EU-SILC)
Year   2008; 2010; 2012 (survey year)
Survey question   Data on the material items mentioned above is collected using a direct question at the household level.

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source   Deutscher Alterssurvey (DEAS)
Year   2014
Survey question   *Question 56 (drop-down list): Wir möchten gerne etwas über Ihre Wohnsituation erfahren. Wie ist Ihre Wohnung ausgestattet? (Now we would like to ask a few questions about your living situation. How is your home equipped?)*
Zentral- oder Etagenheizung (Central heating or self-contained central heating)
Ja (Yes): 1
Nein (No): 0

Question 804 (BP): Wie bewerten Sie Ihren derzeitigen Lebensstandard? (This question concerns the estimation of your standard of living, that is, what you are able to afford. How would you rate your current standard of living?)
Sehr gut (Very good): 1
Gut (Good): 2
Teils gut/ teils schlecht (Average): 3
Schlecht (Bad): 4
Sehr schlecht (Very bad): 5
Verweigert (Declined): 7
Weiß nicht (Don't know): 8

Source   European Social Survey (ESS)
Year   2014
Survey question   *Question F42 Karte 70 Welche der Beschreibungen auf dieser Karte kommt dem am nächsten, wie Sie die derzeitige Einkommenssituation Ihres Haushalts beurteilen? Mit dem gegenwärtigen Einkommen kann ich bzw.können wir...? (Which of the descriptions on this card comes closest to how you feel about your household's income nowadays?)*
bequem leben (Living comfortably on present income): 1
zurechtkommen (Coping on present income): 2
nur schwer zurechtkommen (Finding it difficult to live on present income): 3
nur sehr schwer zurechtkommen (Finding it very difficult to live on present income): 4
weiß nicht (Don't know): 8

Source	Freiwilligensurvey (FWS)
Year	2014
Survey question	*Question D-27 (2004: D017): Wie würden Sie heute Ihre finanzielle Situation einstufen? Als... (How would you rate your current financial situation? As...)*
	sehr gut (Very good): 1
	gut (Rather good): 2
	teils/teils (Average): 3
	schlecht (Rather poor): 4
	sehr schlecht (Very poor): 5
	KA (No answer): 6

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	The German General Social Survey (ALLBUS)
Year	2014
Survey question	*Question F002: Und Ihre eigene wirtschaftliche Lage heute? (How would you generally rate your own current financial situation?)*
	Sehr gut (Very good): 1
	Gut (Good): 2
	Teils gut/teils schlecht (Partly good/partly bad): 3
	Schlecht (Bad): 4
	Sehr schlecht (Very bad): 5
	Weiß nicht (Don't know): 6
	KA (refusal): 0
Source	Eurobarometer
Year	2014
Survey question	*Question 46: Which of the following goods do you have?*
	Television: 1
	DVD player: 2
	Music CD player: 3
	Desk computer: 4
	Laptop: 5
	Tablet: 6
	Smartphone: 7
	An Internet connection at home: 8
	A car: 9
	An apartment, which you finished paying for: 10
	An apartment, which you are or have been paying for: 11
	None: 12
	DK: 13
Source	European Quality of Life Survey (EQLS)
Year	2012
Survey question	*Question Q57: Können Sie bitte die finanzielle Situation Ihres Haushalts beurteilen? Im Vergleich zu den meisten Bürgern Deutschlands, ist Ihre Situation (Could you please evaluate the financial situation of your household? In comparison to most people in Germany)*
	Erheblich schlechter (Much worse): 1
	Etwas schlechter (Somewhat worse): 2
	Weder schlechter noch besser (Neither worse nor better): 3
	Etwas besser (Somewhat better): 4
	Viel besser (Much better): 5
	Weiß nicht (Don't know): 6
	Keine Angabe (Refusal): 7
	Question Q58: Jeder Haushalt hat eine andere Einkommenssituation und unterschiedlich viele Personen, die zum Haushaltseinkommen beitragen. Bitte denken Sie jetzt an Ihr gesamtes monatliches Haushaltseinkommen. Kommen Sie mit Ihrem Einkommen...? (A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total monthly income: is your household able to make ends meet....?)

sehr gut aus (Very easily): 1
gut aus (Easily): 2
ziemlich problemlos aus (Fairly easily): 3
mit einigen Schwierigkeiten aus (With some difficulty): 4
mit Schwierigkeiten aus (With difficulty): 5
mit großen Schwierigkeiten aus (With great difficulty): 6
Weiß nicht (Don't know): 7
Keine Angabe/ Verweigerung (Refusal): 8

Source   German Longitudinal Election Study (GLES)
Year   2013
Survey question *Question Nw541: Und nun zu Ihrer wirtschaftlichen Lage. Wie beurteilen Sie Ihre derzeitige eigene wirtschaftliche Lage? Bitte sagen Sie es mir anhand dieser Liste. (How would you rate your current financial situation? As…)*
sehr gut (Very good): 1
gut (Rather good): 2
teils/teils (Average): 3
schlecht (Rather poor): 4
sehr schlecht (Very poor): 5
weiß nicht (Don't know): 98
keine Angabe (No answer): 99

INDICATOR 3.7

VARIABLES USED IN EU-AAI

Definition   Percentage of people aged 55 years and older who are feeling very safe or safe to walk after dark in their local area.
Source   European Social Survey (ESS)
Year   2008; 2010; 2012
Survey question 'How safe do you – or would you - feel walking alone in this area (Respondent's local area or neighbourhood) after dark? Do – or would – you feel'
very safe: 1
safe: 2
unsafe: 3
very unsafe: 4
Answer categories 'very safe' and 'safe' are taken into account

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source   Deutscher Alterssurvey (DEAS)
Year   2014
Survey question *Question 59 (drop-down list): Wenn Sie an Ihre Wohnung und Ihr Wohnumfeld denken, welche der folgenden Aussagen treffen zu? (If you think of your home and living environment, which of the following statements would apply to you?)*
Nach Einbruch der Dunkelheit fühle ich mich auf der Straße unsicher (I do not feel safe on the streets after dark)
Trifft genau zu (Strongly agree): 1
Trifft eher zu (Agree): 2
Trifft eher nicht zu (Disagree): 3
Triff gar nicht zu (Strongly disagree): 4
Source   European Social Survey (ESS)
Year   2014
Survey question *Question C6: Wie sicher fühlen Sie sich – oder würden Sie sich fühlen –, wenn Sie nach Einbruch der Dunkelheit alleine zu Fuß in Ihrer Wohngegend unterwegs sind oder wären? Fühlen Sie sich …? (How safe do you – or would you – feel walking alone in this area after dark? Do – or would – you feel)*
sehr sicher (very safe):1
sicher (safe): 2
unsicher (unsafe): 3
oder sehr unsicher (or very unsafe): 4
weiß nicht (don't know): 8

Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question HH023: Vandalismus und Kriminalität sind in dieser Gegend ein großes Problem. (Vandalism or crime is a big problem in this area.)* Stimme voll zu (Strongly agree): 1 Stimme zu (Agree): 2 Stimme nicht zu (Disagree): 3 Stimme gar nicht zu (Strongly disagree):4

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	Eurobarometer
Year	2015
Survey question	*Question QE4: Wie sicher fühlen Sie sich, wenn Sie nach Einbruch der Dunkelheit allein zu Fuß in der Gegend in der sie wohnen? (How safe do you feel walking alone in the area where you live after dark?)* Sehr sicher (Very Safe): 1 Ziemlich sicher (Fairly safe): 2 Etwas Unsicher (A bit unsafe): 3 Sehr unsicher (Very unsafe): 4 weiß nicht (don't know): 5

INDICATOR 3.8

VARIABLES USED IN EU-AAI

Definition	Percentage of people aged 55 to 74 who stated that they received education or training in the four weeks preceding the survey.
Source	EU Labour Force Survey (EU-LFS)
Year	2008; 2011; 2012
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 Yes: 1 No: 2

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 432: Wie oft besuchen Sie Kurse oder Vorträge, z.B zur Fort- oder Weiterbildung? (How often do you take classes or go to lectures, for example, for education and further training?)* Täglich (Daily): 1 Mehrmals in der Woche (Several times a week): 2 Einmal in der Woche (Once a week): 3 1- bis 3- mal im Monat (1-3 times a month): 4 Seltener (Less often): 5 Nie (Never): 6 Verweigert (Declined): 7 Weiß nicht (Don't know): 8
Source	European Social Survey (ESS)
Year	2014
Survey question	*Question F60: Während der letzten 12 Monate, haben Sie irgendwelche Kurse, Seminare oder Konferenzen besucht, die Ihrer beruflichen Fort- und Weiterbildung dienten? (During the last 12 months, have you taken any course or attended any lecture or conference to improve your knowledge or skills for work?)* Ja (Yes): 1 Nein (No): 2 weiß nicht (Don't know): 8
Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*AC035: Bitte sehen Sie sich Karte 32 an: Welche der dort aufgeführten Aktivitäten haben Sie – falls überhaupt – in den letzten 12 Monaten ausgeübt? (Please look at*

card 32: which of the activities listed on this card – if any – have you done in the past 12 months?)
Teilnahme an einem Fort- oder Weiterbildungskurs (Attended an educational or training course): 4

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	Berufliche Weiterbildung als Bestandteil lebenslangen Lernens (WeLL)
Year	2010
Survey question	*Question 301_1: Bitte sagen Sie mir, ob Sie im Zeitraum von [Interviewdatum letzte Welle] bis heute an den folgenden Möglichkeiten der Fort- oder Weiterbildung teilgenommen haben. Uns interessieren nur berufliche Fort- und Weiterbildungen (Please tell me, if you have taken any course or attended any lecture or conference to improve your knowledge or skills (since the last Interview))*
	Ja (Yes): 1
	Nein (No): 2
	Verweigert (Declined): 7
	Weiß nicht (Don't know): 8

DOMAIN 4 'CAPACITY AND ENABLING ENVIRONMENT FOR ACTIVE AGEING'

INDICATOR 4.1

VARIABLES USED IN EU-AAI

Definition	Remaining life expectancy achievement of 50 years (55)
Source	European Health and Life Expectancy Information System (EHLEIS)
Year	2009/2010

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Indicators and Maps for regionals and urban development (INKAR)
Year	2010-2012

INDICATOR 4.2

VARIABLES USED IN EU-AAI

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.
Source	European Health and Life Expectancy Information System (EHLEIS)
Year	2008, 2010, 2012

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 503aa (BP): Haben Sie eine oder mehrere lang andauernde, chronische Krankheiten? (Do you have any long standing illness or health problem?)*
	Ja, eine (Yes, one): 1
	Ja, mehrere (Yes, several): 2
	Nein (No): 3
	Verweigert (Declined): 7
	Weiß nicht (Don't know): 8
	Question 518a(BP): Bitte sehen Sie sich folgende Liste an: Hat Ihnen ein Arzt schon einmal gesagt, dass Sie unter einer der dort aufgeführten Krankheiten leiden? Bitte nennen Sie mir die entsprechenden Buchstaben. (Please look at the following list: has a doctor ever told you that you are suffering from one of the illnesses listed? Please tell me the letters corresponding to all illnesses that apply.)
	Liste der Krankheiten (List of illnesses): A-T
	nicht genannt (Not mentioned): 0
	genannt (Mentioned): 1

Keine Erkrankung (No illness): 95
Verweigert (Declined): 97
Weiß nicht (Don't know): 98

Source	European Social Survey (ESS)
Year	2014
Survey question	*Question C8: Werden Sie bei Ihren täglichen Aktivitäten in irgendeiner Weise von einer längeren Krankheit oder einer Behinderung, einem Gebrechen oder einer seelischen Krankheit beeinträchtigt? Wenn Ja, gilt das stark oder nur bis zu einem gewissen Grad? (Are you hampered in your daily activities in any way by any longstanding illness, or disability, infirmity or mental health problem? If Yes, is that a lot or to some extent?)*

Ja, stark (yes, a lot): 1
Ja, bis zu einem gewissen Grad (yes, to some extent): 2
Nein (no): 3
Weiß nicht (don't know): 8

Question C7: Wie schätzen Sie alles in allem Ihren Gesundheitszustand ein? Würden Sie sagen, er ist… (How is your health in general? Would you say it is…)
sehr gut (very good): 1
gut (good): 2
durchschnittlich (fair): 3
schlecht (bad): 4
oder sehr schlecht (or very bad): 5
Weiß nicht (don't know): 8

Source	Freiwilligensurvey (FWS)
Year	2014
Survey question	*Question F751: In welchem Ausmaß sind Sie durch Krankheit in der Ausübung Ihrer alltäglichen Arbeiten dauerhaft eingeschränkt? Sind Sie gesundheitlich stark eingeschränkt, etwas eingeschränkt oder nicht eingeschränkt oder haben Sie keine Erkrankung? (To what extent are you permanently restricted by illness in carrying out your everyday work?).*

Stark eingeschränkt (severely restricted): 1
Etwas eingeschränkt (somewhat restricted): 2
Nicht eingeschränkt (not restricted): 3
Habe keine Erkrankung (have no illness): 4
Verweigert (Declined): 9997
Weiß nicht (Don't know): 9998

Source	Microcensus
Year	2015
Survey question	Variable EF467: Waren Sie in den letzen 4 Wochen krank? (have you being sick/ill in the last 4 weeks)
	Variable EF469: Wie lange dauerte Ihre Krankheit an? (for how long did that sickness/illness last?)
Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question PH003: Würden Sie sagen ihr Gesundheitszustand ist? (Would you say your health is…).*

Ausgezeichnet (Excellent): 1
Sehr gut (Very good): 2
Gut (Good): 3
Mittelmäßig (Fair): 4
Schlecht (Poor): 5

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	Eurobarometer
Year	2010-14
Survey question	*Question QA2: Wie zufrieden sind Sie mit jedem der folgenden Aspekte Ihres Lebens? Bitte antworten Sie mir anhand einer Skala von 1 bis 10, wobei 1 bedeutet, Sie sind sehr unzufrieden, und 10 bedeutet, Sie sind sehr zufrieden (Could you*

please tell me on a scale of 1 to 10 how satisfied you are with each of the following items, where [1] means you are "very dissatisfied" and [10] means you are "very satisfied"?)
Mit Ihrer Gesundheit (Your health): 2

Source	European Quality of Life Survey (EQLS)
Year	2012
Survey question	*Question: Q42 Im nächsten Abschnitt möchten wir Ihnen einige Fragen zu Ihrer Gesundheit stellen. Alles zusammengenommen, würden Sie sagen Ihre Gesundheit ist... (In the next section, we would like to ask you a few questions about your health. In general, would you say your health is...)*

Sehr gut (Very good): 1
Gut (Good): 2
Mittelmäßig (Fair): 3
Schlecht (Bad): 4
Sehr schlecht (Very bad): 5
Weiß nicht (Don't know): 6
Keine Angabe/ Verweigerung (Refusal): 7

Question Q43: Haben Sie irgendwelche chronischen (lang-anhaltenden) körperlichen oder seelischen gesundheitlichen Probleme, Krankheiten oder Behinderungen? Unter chronisch (langhaltend) verstehen wir in diesem Zusammenhang Krankheiten und gesundheitliche Beschwerden, die bereits 6 Monate und länger anhalten, bzw. die insgesamt länger als 6Monate anhalten werden (Do you have any chronic (long-standing) physical or mental health problem, illness or disability? By chronic (long- standing) I mean illnesses or health problems which have lasted, or are expected to last, for 6 months or more.).
Ja (Yes): 1
Nein (No): 2
(Don't know): Weiß nicht: 3
(Refusal) Keine Angabe: 4

INDICATOR 4.3

VARIABLES USED IN EU-AAI

Definition	Mental well-being (using EQLS 2011 and WHO's ICD-10 measurement model)
Source	European Quality of Life Survey (EQLS)
Year	2011-12
Survey question	*Over the last two weeks:*

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:
All of the time: 1
Most of the time: 2
More than half of the time: 3
Less than half of the time: 4
Some of the time: 5
At no time: 6
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).

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014

Survey question	*Question 504: Bei den folgenden Fragen soll es nun darum gehen, wie Sie sich in den letzten Wochen gefühlt haben. Bitte nennen Sie mir für jede der Aussagen, die ich nun vorlese, die Antwort auf dieser Liste, die Ihrem Befinden während der letzten Woche am besten entspricht (Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week)].* Liste (List): A-P

Haben mich Dinge beunruhigt, die mir sonst nichts ausmachen (I was bothered by things that usually don't bother me): A
Konnte ich meine trübsinnige Laune nicht loswerden, obwohl meine Freunde/Famie versuchten, mich aufzumuntern (I felt that I could not shake off the blues even with help from my family or friends): B
Hatte ich Mühe, mich zu konzentrieren (I had trouble keeping my mind on what I was doing): C
War ich deprimiert/niedergeschlagen (I felt depressed): D
War alles anstrengend für mich (I felt that everything I did was an effort): E
Dachte ich, mein Leben ist ein einziger Fehlschlag (I thought my life had been a failure): F
Hatte ich Angst (I felt fearful): G
Habe ich schlecht geschlafen (My sleep was restless): H
War ich fröhlich gestimmt (I was happy): J
Habe ich weniger als sonst geredet (I talked less than usual): K
Fühlte ich mich einsam (I felt lonely): L
Habe ich das Leben genossen (I enjoyed life): M
War ich traurig (I felt sad): N
Hatte ich das Gefühl, dass mich Leute nicht leiden können (I felt that people dislike me): O
Konnte ich mich zu nichts aufraffen (I could not get "going"): P

Selten/überhaupt nicht; weniger als 1 Tag lang (Rarely or none of the time; less than 1 day): 1
Manchmal;1 bis 2 Tage lang (Some or a little bit of the time; for 1 to 2 days): 2
Öfters; 3 bis 4 Tage lang (Occasionally or a moderate amount of time; for 3 to 4 days): 3
Meistens, die ganze Zeit; 5 bis 7 Tage lang (Most or all of the time; for 5 to 7 days): 4
Verweigert (Declined): 7
Weiß nicht (Don't know): 8

Question drop-off 4 und drop-off 22: Bitte geben Sie an, wie sie sich in den letzten Monaten gefühlt haben. (Please indicate to what extent you have felt this way during the past few months.)
Liste (drop-down4): z.B. begeistert, bedrückt, ängstlich etc. (e.g. Excited, upset, scared…)
Liste (drop-down 22): z.B. zufrieden, traurig, erschöpft etc. (e.g. Satisfied, sad, exhausted…)
Nie (Very slightly or not at all): 1
Eher selten (A little): 2
Manchmal (Moderately): 3
Häufig (Quite a lot): 4
Sehr häufig (Extremely): 5

Source	European Social Survey (ESS)
Year	2014
Survey question	*Question C1: Alles in allem betrachtet, was würden Sie sagen, wie glücklich sind Sie? Bitte sagen Sie es mir anhand von Liste 21. (Overall, how happy would you say you are? Please use this card).* Skala 1-10: (1= äußerst unglücklich/extremely unhappy – 10= äußerst glücklich/extremely happy) weiß nicht (don't know): 88

Source	Freiwilligensurvey (FWS)
Year	2014
Survey question	*Question 749: Wie sehr trifft folgende Aussage auf Sie persönlich zu: "Ich bin zufrieden mit meinem Leben". (To what extent does the following statement apply to you personally: "I am satisfied with my life".)*

Trifft voll und ganz zu (Fully applies): 1
Trifft eher zu (Partially applies): 2
Teils/teils (Partly): 3
Trifft eher nicht zu (Applies less): 4
Trifft ganz und gar nicht zu (Doesn't apply at all): 5

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source European Quality of Life Survey (EQLS)
Year 2012
Survey question *Question Q41: Alles in allem betrachtet, was würden Sie sagen, wie glücklich sind Sie? Bitte sagen Sie es mir anhand einer Skala von 1 bis 10. 1 bedeutet nun Sie sind sehr unglücklich, und 10 bedeutet Sie sind sehr glücklich. (Taking all things together on a scale of 1 to 10, how happy would you say you are? Here 1 means you are very unhappy and 10 means you are very happy.)*
Skala (Scale): 1-10
Weiß nicht (Don't know): 11
Keine Angabe/ Verweigerung (Refusal): 12

Question Q45 (a-e): Bitte sagen Sie mir für jede der folgenden 5 Aussagen, wie häufig Sie sich in den letzten zwei Wochen entsprechend gefühlt haben.
Ich war fröhlich und guter Laune (I have felt cheerful and in good spirits): A
Ich fühlte mich ruhig und entspannt (I have felt calm and relaxed): B
Ich fühlte mich aktiv und energisch (I have felt active and vigorous): C
Ich wachte erfrischt und ausgeruht auf (I woke up feeling fresh and rested): D
Mein tägliches Leben war voll mit Dingen, die mich interessieren (My daily life has been filled with things that interest me):
Die ganze Zeit (All of the time): 1
Meistens (Most of the time): 2
Etwa die Hälfte der Zeit (More than half of the time): 3
Weniger als die Hälfte der Zeit (Less than half of the time): 4
Einen Teil der Zeit (Some of the time): 5
Zu keiner Zeit (At no time): 6
Weiß nicht (Don't know): 7
Keine Angabe/ Verweigerung (Refusal) 8

Question Q46 (a-c): Bitte geben Sie für jede der Aussagen an, wie häufig Sie sich in den letzten zwei Wochen entsprechend gefühlt haben.
Habe ich mich besonders angespannt gefühlt (I have felt particularly tense): A
Habe ich mich einsam gefühlt (I have felt lonely): B
Habe ich mich niedergeschlagen und depremiert gefühlt (I have felt downhearted and depressed): C
Die ganze Zeit (All of the time): 1
Die meiste Zeit (Most of the time): 2
Mehr als die Hälfte der Zeit (More than half of the time): 3
Weniger als die Hälfte der Zeit (Less than half of the time): 4
Manchmal (Some of the time): 5
Nie (At no time): 6
Weiß nicht (Don't know): 7
Keine Angabe (Refusal): 8

Source Panel Study 'Labour Market and Social Security' (PASS)
Year 2014
Survey question *Question P63: Wie sehr haben Ihnen in den letzten 4 Wochen seelische Probleme, wie Angst, Niedergeschlagenheit oder Reizbarkeit, zu schaffen gemacht? (How strongly have you been affected by mental problems, such as fear, dejection or irritability in the past 4 weeks?)*
Überhaupt nicht (Not at all): 1

Wenig (A little bit): 2
Mäßig (Moderately): 3
Ziemlich (Quite a lot): 4
Sehr (Extremely): 5
WN (DK): 8
KA (REF): 9

INDICATOR 4.4

VARIABLES USED IN EU-AAI

Definition	Share of people aged 55-74 using the Internet at least once a week.
Source	Eurostat, ICT Survey
Year	2008; 2010; 2012
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]

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 425: Wenn Sie nun einmal an die letzten 12 Monate denken: Wie häufig gehen Sie in der Regel den folgenden Tätigkeiten nach? Bitte sagen Sie mir anhand dieser Liste, wie oft Sie das tun (If you think back over the past 12 months: how often on an average do you engage in the following activities?).*

C Wie oft nutzen Sie im Internet "soziale Netzwerke" wie beispielsweise facebook, stayfriends oder feierabend.net? (C How often do you use social networks like Facebook, stayfriends, 'feierabend.net'?)

Täglich (Daily): 1
Mehrmals in der Woche (Several times a week): 2
Einmal in der Woche (Once a week): 3
1- bis 3-mal im Monat (1-3 times a month): 4
Seltener (Less often): 5
Nie (Never): 6
Verweigert (Declined): 7
Weiß nicht (Don't know): 8

Source	German Longitudinal Election Study (GLES)
Year	2013
Survey question	*Question pre057: Internetnutzung allgemein. An wie vielen Tagen in der Woche nutzen Sie im Durchschnitt das Internet?*

nutze das Internet an _____ Tagen: 1-7
nutze das Internet seltener als 1 Tag in der Woche: 8
nutze nie das Internet: 9
kein Internetzugang vorhanden: 10
weiß nicht: -98
keine Angabe: -99

Question pre057: Internet use, in general. How many days of the week do you use the Internet on average?
On _____ days: 1-7
Less than one day a week: 8
I never use the Internet: 9
I haven't got an Internet connection: 10
Don't know: 98
No answer: 99

Question Nw387: An wie vielen Tagen in der Woche nutzen Sie im Durchschnitt das Internet? (How many days of the week do you use the Internet on average?)
seltener als 1 Tag pro Woche (less than one day a week): 0
1 Tag: 1
2 Tage: 2
3 Tage: 3
4 Tage: 4
5 Tage: 5
6 Tage: 6
7 Tage: 7
nutze nie das Internet (Never using the Internet): 8
kein Internetzugang vorhanden (I haven't got an Internet connection): 9
weiß nicht (Don't know): 98
keine Angabe (Refusal): 99

Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question IT004: Haben Sie während der letzten 7 Tage das Internet mindestens einmal genutzt, sei es für E-Mails, zur Informationssuche, für Eink äufe oder zu einem anderen Zweck? (Did you use the Internet during the last 7 days at least once?)* Ja (Yes): 1 Nein (No): 5

INDICATOR 4.5

VARIABLES USED IN EU-AAI

Definition	The indicator measures the share of people aged 55 or more that meet socially with friends, relatives or colleagues at least once a week. "Meet socially" implies meet by choice, rather than for reasons of either work or pure duty. The indicator measures contacts outside the household.
Source	European Social Survey (core questionnaire)
Year	2008; 2010; 2012
Survey question	*'How often socially meet with friends, relatives or colleagues?'* Answers: Never: 1 less than once a month: 2 once a month: 3 several times a month: 4 once a week: 5 several times a week: 6 every day: 7

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	Deutscher Alterssurvey (DEAS)
Year	2014
Survey question	*Question 425: Wenn Sie nun einmal an die letzten 12 Monate denken: Wie häufig gehen Sie in der Regel den folgenden Tätigkeiten nach? Bitte sagen Sie mir anhand dieser Liste, wie oft Sie das tun (If you think back over the past 12 months: How often on average do you engage in the following activities? Please tell me how often you do each activity on this list)* F: Wie oft beeuchen Sie Freunde und Bekannte oder laden diese ein? (F How often do you visit friends and acquaintances or invite them over to your home?) Täglich (Daily): 1 Mehrmals in der Woche (Several times a week): 2 Einmal in der Woche (Once a week): 3 1- bis 3-mal im Monat (1-3 times a month): 4 Seltener (Less often): 5 Nie (Never): 6 Verweigert (Declined): 7 Weiß nicht (Don't know): 8

Source	European Social Survey (ESS)
Year	2014
Survey question	*Question C2: Verwenden Sie bitte diese Karte. Wie oft treffen Sie sich mit Freunden, Verwandten oder privat mit Arbeitskollegen? (Using this card, how often do you meet socially with friends, relatives or work colleagues?)*
	nie (Never): 1
	weniger als einmal im Monat (Less than once a month): 2
	einmal im Monat (Once a month): 3
	mehrmals im Monat (Several times a month): 4
	einmal in der Woche (Once a week): 5
	mehrmals in der Woche (Several times a week): 6
	täglich (Every day): 7
	weiß nicht (Don't know): 88
Source	Freiwilligensurvey (FWS)
Year	2014
Survey question	*Question F149: Sind das Verwandte, Nachbarn oder sonstige Bekannte oder Freunde?* (Who can you turn to then?)
	Verwandte (Relatives): 1
	Nachbarn (Neighbours): 2
	Bekannte/Freunde (Friends): 3
	Andere, z.B. Gemeindeschwester (Acquaintances or others): 4
	KA (Not applicable): 5
Source	Survey of Health, Ageing and Retirement in Europe (SHARE)
Year	2013
Survey question	*Question CH014: Während der letzten zwölf Monate – wie häufig hatten Sie Kontakt mit … entweder persönlich oder über das Telefon oder durch einen Brief. (During the past twelve months, how often did you have contact with {…}, either personally, by phone, mail, email or any other electronic means?)*
	Täglich (Daily): 1
	Mehrmals in der Woche (Several times a week): 2
	Ungefähr einmal pro Woche (About once a week): 3
	Ungefähr einmal alle zwei Wochen (About every two weeks): 4
	Ungefähr einmal pro Monat (About once a month): 5
	Weniger als einmal pro Monat (Less than once a month): 6
	Nie (Never): 7

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	European Quality of Life Survey (EQLS)
Year	2012
Survey question	*Question Q33: Denken Sie jetzt bitte an Personen, die NICHT IN IHREM HAUSHALT leben. Wie oft haben Sie im Durchschnitt direkten persönlichen Kontakt mit …? (On average, thinking of people living OUTSIDE YOUR HOUSEHOLD how often do you have direct face-to-face contact with…)*
	Question Q33a: Ihrem Kind oder einem Ihrer Kinder? (Any of your children?)
	Question Q33b: Ihrer Mutter oder Ihrem Vater? (Your mother or father?)
	Question Q33c: Einem Bruder, einer Schwester oder einem anderen Verwandten (brother, sister or other relative?)
	Question Q33d: Freunden oder Nachbarn (friends or neighbours?)
	Täglich oder fast täglich (Every day or almost every day): 1
	Mindestens einmal pro Woche (At least once a week): 2
	1- bis 3-mal im Monat (One to three times a month): 3
	Seltener/weniger häufig (Less often): 4
	Nie (Never): 5
	Ich habe keinen dieser Verwandten (Don't have such relatives):6
	Weiß nicht (Don't know):7
	Keine Angabe (Refusal): 8
Source	Panel Study 'Labour Market and Social Security' (PASS)
Year	2014
Survey question	*Question P80: Wie oft treffen Sie diese Personen bei gemeinsamen sportlichen Aktivitäten? (How often do you meet this person to share sport activities?)*

Mindestens einmal pro Woche (At least once a week): 1
Mindestens einmal pro Monat (At least once a month): 2
Seltener (Less frequently): 3
Nie (Never): 4
WN (DK): 8
KA (REF): 9

INDICATOR 4.6

VARIABLES USED IN EU-AAI

Definition	Percentage of older persons aged 55-74 with upper secondary or tertiary educational attainment.
Source	EU-Labour Force Survey (EU-LFS)
Year	2008; 2010; 2012
Survey question	Highest ISCED level attained?

Answers:
pre-primary: 0
primary: 1
lower secondary: 2
(upper)secondary: 3
post-secondary non tertiary: 4
tertiary: 5

VARIABLES USED IN THE LOCAL AAI FOR GERMANY

Source	European Social Survey (ESS)
Year	2014
Survey question	*Question F15: What is the highest level of education you have successfully completed?*

not completed ISCED level 1: 000
ISCED 1, completed primary education: 113
Qualification from vocational ISCED 2C programmes of duration shorter than 2 years, no access to ISCED 3: 129
Qualification from vocational ISCED 2C programmes of 2 years or longer duration, no access to ISCED 3: 221
Qualification from vocational ISCED 2A/2B programmes, access to ISCED 3 vocational: 222
Qualification from a vocational ISCED 2 programme giving access to ISCED 3 (general or all): 223
Qualification from general/pre-vocational ISCED 2A/2B programmes, access to ISCED 3 vocational: 212
Qualification from general ISCED 2A programmes, access to ISCED 3A general or all 3: 213
Qualification from vocational ISCED 3C programmes of duration shorter than 2 years, no access to ISCED level 5: 229
Qualification from vocational ISCED 3C programmes of 2 years or longer duration, no access to ISCED level 5: 321
Qualification from vocational ISCED 3A programmes, access to 5B/lower tier 5A institutions: 322
Qualification from vocational ISCED 3A programmes, access to upper tier ISCED 5A/all ISCED level 5 Institutions: 323
Qualification from general ISCED 3 programmes of 2 years or longer duration, no access to ISCED level 5 institutions: 311
Qualification from general ISCED 3A/3B programmes, access to ISCED 5B/lower tier 5A institutions: 312
Qualification from general ISCED 3A programmes, access to upper tier ISCED 5A/all ISCED level 5 Institutions:313
Qualification from ISCED 4 programmes without access to ISCED level 5: 421
Qualification from vocational ISCED 4A/4B programmes, access to ISCED 5B/lower tier 5A institutions: 422
Qualification from vocational ISCED 4A programmes, access to upper tier ISCED 5A or all ISCED level 5

Institutions: 423
Qualification from general ISCED 4A/4B programmes, access to ISCED 5B/lower tier 5A institutions 412
Qualification from general ISCED 4A programmes, access to upper tier ISCED 5A/all ISCED level 5 Institutions: 413
ISCED 5B programmes of short duration, advanced vocational qualifications: 520
ISCED 5A programmes of short duration, intermediate certificate or academic/general tertiary qualification below the bachelor's level:510
ISCED 5A programmes of medium duration, qualifications at the bachelor's level or equivalent from a lower tier tertiary institution: 610
ISCED 5A programmes of medium duration, qualifications at the bachelor's level or equivalent from an upper/single tier tertiary institution: 620
ISCED 5A programmes of long cumulative duration, qualifications at the master's level or equivalent from a lower tier tertiary institution: 710
ISCED 5A programmes of long cumulative duration, qualifications at the master's level or equivalent from an upper/single tier tertiary institution: 720
ISCED 6, doctoral degree: 800
Other: 5555
Don't know: 8888

Source	Freiwilligensurvey (FWS)
Year	2014
Survey question	*Question F123: Welchen höchsten Bildungsabschluss haben Sie? (What is your highest school qualification?).*

Volks- oder Hauptschule / Abschluss 8. Klasse (Primary or lower secondary school with qualification 8th class): 1
Mittlere Reife / Abschluss 10. Klasse (GCSE, intermediate secondary school (Realschulabschluss) qualification with qualification 10th class): 2
Fachhochschulreife (Advanced Technical College Entrance Qualification (qualification usually after the 12th or 11th class (if not A-Level)), qualification from vocational schools, specialist college, specialist A-Level): 3
Abitur / Hochschulreife (4: A-Level (Abitur), Qualification from an extended secondary school (erweiterte Oberschule, EOS), University Entrance Qualification): 4
Anderen Schulabschluss (Other qualification): 5
keinen Schulabschluss: (No qualification):6
KA (Not applicable): 7

Source	German Longitudinal Election Study (GLES)
Year	2013
Survey question	*Question T05.1: Welchen höchsten allgemeinbildenden Schulabschluss haben Sie? (What is your highest school qualification?).*

Schule beendet ohne Abschluss (Finished school without school leaving certificate): 1
Hauptschulabschluss, Volksschulabschluss, Abschluss der polytechnischen Oberschule 8. oder 9. Klasse (Lowest formal qualification of Germany's tripartite secondary school system, after 8 or 9 years of schooling): 2
Realschulabschluss, Mittlere Reife, Fachschulreife oder Abschluss der polytechnischen Oberschule 10. Klasse (Intermediary secondary qualification, after 10 years of schooling): 3
Fachhochschulreife (Abschluss einer Fachoberschule etc.) (Technical or vocational college certificate): 4
Abitur bzw. erweiterte Oberschule mit Abschluss 12. Klasse (Hochschulreife) (Higher qualification, entitling holders to study at a university): 5
anderen Schulabschluss, und zwar (Other school leaving certificate, please enter):_____: 6
bin noch Schüler (Still at school): 7
weiß nicht (Don't know): 98
keine Angabe (Refusal): 99

Source	Microcensus
Year	2015

Survey question	*Question 128: Welchen höchsten Bildungsabschluss haben Sie? (What is your highest school qualification?).* Abschluss nach höchstens 7 Jahren Schulbesuch (certificate after attending school up to 7 years): 6 Hauptschulabschluss (secondary modern school qualification): 1 Polytechnische Oberschule der DDR mit Abschluss der 8 oder 9. Klasse (A lower secondary school degree from a so-called Polytechnic School (POS/Polytechnische Oberschule) in the GDR after 8th or 9th grade): 2 Polytechnische Oberschule der DDR mit Abschluss der 10 Klasse (An intermediate secondary degree from a so-called Polytechnic School (POS/Polytechnische Oberschule) in the GDR after 10th grade): 7 Realschulabschluss, Mittlere Reife (Intermediary secondary qualification, after 10 years of schooling): 3 Fachhochulreife (Technical or vocational college certificate): 4 Abitur Higher School Certificate (A level): 5 *Question 130: welchen höchsten Abschluss haben Sie?* *Choice from List 11* Anlernsausbildung, berufliches Praktikum (semi-skilled training, practical training): 01 Berufsvorbereitungsjahr (vocational preparatory class): 02 Lehre, Berufsausbildung im dualen System (apprenticeship, vocational training in the dual system): 03 Berufsqualifizierender Abschluss an einer Berufsfachschule, Kollegschule (Professional qualification at a technical or vocational college): 04 Vorbereitungsdienst für den mittleren Dienst in der öffentlichen Verwaltung (Preparatory service for the central service in public administration): 5 Ausbildungsstätten/Schulen für Gesundheits- und Sozialberufe (training centres/schools for health care- and social professions: Einjährig (yearlong): 06 Zweijährig (biennial): 07 Dreijährig (triennial): 16 Meister/-in, Techniker/-in oder gleichwertiger Fachschulabschluss (Master, technician or equivalent technical college degree): 08 Fachschule der DDR (technical college in the GDR): 09 Fachakademie (nur in Bayern) (professional academy (Bavaria only)): 10 Diplom, Bachelor, Magister, Staatsprüfung, Lehramtsprüfung (Diploma, Bachelor's degree, Master degree, State examination, teaching qualification): Berufsakademie (vocational academy certificate): 11 Verwaltungsfachhochschule (professional administrative school certificate): 12 Fachhochschule (Technical or vocational college certificate): 13 Universität (University): 14 Promotion (doctoral degree): 15
Source	The German Socio-Economic Panel (SOEP)
Year	2014
Survey question	*Question 69: Um was für einen Bildungsabschluss handelt es sich? (What is your highest school qualification?).* *Abschluss (Qualification):_ _ _ _*

VARIABLES NOT USED IN THE PILOT STUDY DUE TO RESTRICTED DATA ACCESS

Source	The German General Social Survey (ALLBUS)
Year	2014
Survey question	*Question F018: Als nächstes kommen jetzt Fragen zu Ihrer Ausbildung und Ihrem Beruf. Beginnen wir mit Ihrer Ausbildung: Welchen allgemeinbildenden Schulabschluss haben Sie? (Next we come to questions about your education and job. Let's begin with your education: What general school leaving certificate do you have?)* Noch Schüler: (Still at school): A Schule beendet ohne Abschluss (Finished school without school leaving certificate): B

Volks- / Hauptschulabschluss bzw. Polytechnische Oberschule mit Abschluss 8. oder 9. Klasse (Lowest formal qualification of Germany's tripartite secondary school system, after 8 or 9 years of schooling): C

Mittlere Reife, Realschulabschluss bzw. Polytechnische Oberschule mit Abschluss 10. Klasse (Intermediary secondary qualification, after 10 years of schooling): D

Fachhochschulreife (Abschluss einer Fachoberschule etc.) (Certificate fulfilling entrance requirements to study at a university of applied Science): E

Abitur bzw. Erweiterte Oberschule mit Abschluss 12. Klasse (Hochschulreife) (Higher qualification, entitling holders to study at a university): F

Anderen Schulabschluss, und zwar (Other school leaving certificate, please enter): _____: G

Keine Angabe (Refusal): 0

Question F019: Welchen beruflichen Ausbildungsabschluss haben Sie? Was von dieser Liste trifft auf Sie zu?
Nennen Sie mir bitte die entsprechenden Kennbuchstaben (What vocational or professional training do you have?
Which of the categories on the card apply to you? Please name the appropriate letter(s))

Beruflich-betriebliche Anlernzeit mit Abschlusszeugnis, aber keine Lehre (On-the-job vocational training with final certificate, but not within traineeship or apprenticeship scheme): A

Teilfacharbeiterabschluss (Compact vocational training course): B

Abgeschlossene gewerbliche oder landwirtschaftliche Lehre (Completed trades/crafts or agricultural traineeship: C

Abgeschlossene kaufmännische Lehre (Completed commercial traineeship): D

Berufliches Praktikum, Volontariat (Work placement/internship): E

Berufsfachschulabschluss (Specialised vocational college certificate): F

Fachschulabschluss (Technical or vocational college certificate): G

Meister-, Techniker- oder gleichwertiger Fachschulabschluss (Master (craftsman), technician or equivalent college certificate): H

Fachhochschulabschluss (auch Abschluss einer Ingenieurschule) (Degree from a university of applied sciences (or engineering college degree)): J

Hochschulabschluss (University degree): K

Anderen beruflichen Ausbildungsabschluss, und zwar (Other vocational training certificate, please enter): _____: L

Keinen beruflichen Ausbildungsabschluss (No completed vocational training): M

Keine Angabe (Refusal): 1

Source	Panel Study 'Labour Market and Social Security' (PASS)
Year	2014
Survey question	*Question P17: Und welchen höchsten allgemeinbildenden Schulabschluss haben Sie? (And what is your highest school-leaving certificate from a general education school?)*

Sonderschulabschluss, Abschluss der Förderschule (A degree from a school incorporating physically or mentally disabled children ("Sonderschulabschluss") or a degree from a mixed ability teaching school ("Förderschule")): 1

Hauptschulabschluss, Volksschulabschluss (A lower secondary school degree (e.g. CSE, Hauptschulabschluss or Volksschulabschluss)): 2

Polytechnische Oberschule (POS) Abschluss 8. Klasse (DDR Abschluss) (A lower secondary school degree from a so-called Polytechnic School (POS/Polytechnische Oberschule) in the GDR after 8th grade): 3

Realschulabschluss, Mittlere Reife, Fachoberschulreife (An intermediate secondary school degree (e.g. "O-levels", "Realschulabschluss" or "Mittlere Reife", "Fachoberschulreife"):4

Polytechnische Oberschule (POS) Abschluss 10. Klasse (DDRAbschluss) (An intermediate secondary degree from a so-called Polytechnic School (POS/Polytechnische Oberschule) in the GDR after 10th grade)): 5

Fachhochschulreife (z.B. Abschluss einer Fachoberschule) (An upper secondary school degree from an advanced vocational school ("Fachoberschule", "Fachhochschulreife")) 6

Abitur / allgemeine oder fachgebundene Hochschulreife: (A general or subject-specific upper secondary school degree (e.g. Abitur, A-Levels, High school degree, Baccalaureate))7

Abschluss einer Erweiterten Oberschule (EOS) (DDR-Abschl.) oder Berufsausbildung mit Abitur (DDR-Abschluss) (An upper secondary school degree from a so-called Extended Secondary School in the GDR (EOS/Erweiterte Oberschule)): 8

Anderer deutscher Schulabschluss, und zwar (Other German degree, namely): 9

Ausländischer Schulabschluss (Foreign degree: 10

KA (Refusal)

APPENDIX 2: AARP LIVABILITY INDEX AND POSSIBLE EXTENSIONS OF AAI

The AARP (American Association of Retired Persons) Livability Index might be seen partially as a measure of preconditions for active ageing. For example, the AARP Livability Index measures the crime rate (in the domain of 'Neighborhood: Access to life, work and play') whereas AAI measures 'Physical Safety' (subjective physical safety in the own local area or neighbourhood after dark, in the domain of 'Independent, healthy and secure living'). Likewise, the AARP Livability Index measures Internet access (number of wireline Internet providers and of providers that offer fast download speed, in the domain of 'Engagement – Civic and social involvement') and AAI measures the frequency of the Internet use (which is probably facilitated by access to providers and fast connections). The same applies to the number of organisations (civic, social, religious, political, business) per 10,000 people (AARP, in the same domain as the Internet access) and collective forms of voluntary activities or of political participation in AAI (both in the domain 'Participation in society'). Collective forms refer to activities conducted in cooperation with other citizens, in contrast e.g. to electoral participation, contacting politicians or donating money.

Therefore, the indices are conceptually different yet related. Outcomes measured by AAI can be influenced by circumstances measured by the Livability Index, so that policymakers and other stakeholders might need to target characteristics measured in the Livability Index in order to increase active ageing outcomes and AAI figures.

The Active Ageing Index does not measure objective circumstances but outcomes. Yet, it is possible that, for example, despite very good objective circumstances the Internet use in a certain geographical unit is lower than in other geographical units simply because the geographical unit's older residents are less keen to use the Internet, for whichever reasons. Then policymakers' capabilities are rather limited.

Similarly the AARP Livability Index measures objective circumstances and possibilities without regard to the question if these possibilities are used.