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SHARE and its value for science and policy advice

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Abstract

This paper summarizes the main features of SHARE, the “Survey of Health, Ageing and Retirement in Europe”. SHARE is a comparative pan-European survey aimed at documenting and better understanding the repercussions of demographic ageing for individuals and society as a whole, and forming a sound scientific basis for countermeasures adopted by health and social policy.

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SHARE and its value for science and policy advice

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Introduction:

SHARE, the “Survey of Health, Ageing and Retirement in Europe”, is a comparative pan-European survey aimed at documenting and better understanding the repercussions of demographic ageing for individuals and society as a whole, and forming a sound scientific basis for countermeasures adopted by health and social policy.

SHARE uses strictly harmonised methods to collect data on the health, economic status and social integration of persons aged 50 and over in 20 European countries. The focus is on the interdependence of these characteristics. The conceptual background of SHARE implies (a) an extensive thematic and multidisciplinary scope with measurements that are as objective as possible, (b) longitudinality, and (c) strict cross-national comparability with ex-ante harmonised survey tools and methods. This set-up enables the users of SHARE to perform comparative analyses of the causes for, and the effects of, social, economic and health-related developments in the course of demographic change on an international scale.

Box 1: Description of the SHARE infrastructure:

SHARE, the Survey of Health, Ageing and Retirement in Europe, is an infrastructure of micro data that has been created in response to a communication by the European Commission (2000) to the Council and the European Parliament which identified population ageing and its social and economic challenges to growth and prosperity to be among the most pressing challenges of the 21st century in Europe. Since 2004, SHARE has provided every other year longitudinal micro data on the changing health, economic and social living conditions of Europeans aged 50 and over. SHARE lays the foundations for empirical research on ageing through many disciplines, including epidemiology, gerontology, biology, medicine, psychology, public health, health policy, demography, economics, sociology, and statistics.

The questionnaire provides researchers with a very large set of variables measured in each wave:

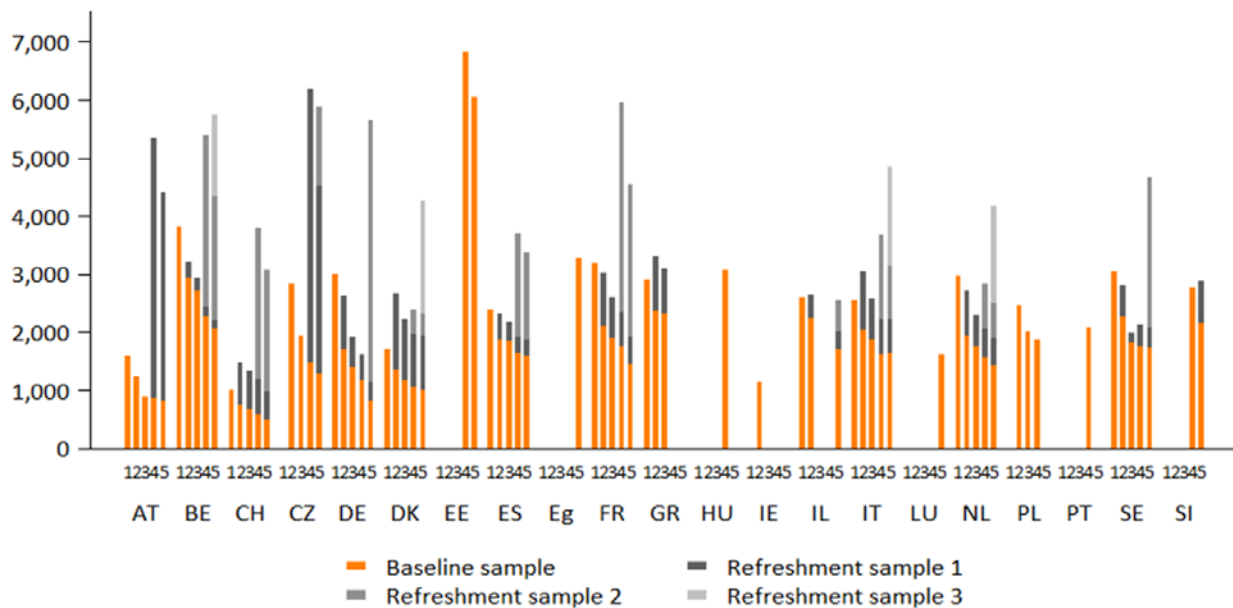
- **health variables** including self-reported health, physical functioning, physical measurements such as grip strength, walking speed, peak expiratory flow, chair stand, and body mass index (BMI); health behaviours; and use of health care facilities. Wave 6 will add biomarkers extracted from capillary blood such as e.g. glycated hemoglobin (HbA1c), a marker of diabetes; C-reactive protein, a marker of cardio-vascular disease; cytokines such as TNF- α , IL-6 and BDNF, involved in low-grade inflammation, frailty and cognitive function; and Vitamin D;
- **psychological variables** including mental health components such as depression, several tests of cognitive functioning, well-being, life satisfaction, and control beliefs;
- **socio-economic variables** including current work activity, job characteristics, job flexibility, opportunities to work past retirement age, employment history, pension rights, sources and

composition of current income, wealth and consumption, housing, and education; in some countries linkage to administrative data on employment, labour income and pension claims;

- **social support variables** including assistance within and beyond families, transfers of income and assets, social networks including ego-centered network size and intensity, and volunteer activities.

Funded by grants from the Commission’s Framework Programmes and from the US National Institute on Aging, SHARE first developed a prototype survey consisting of 3 waves: baseline, follow-up, and life-histories. In 2004 a baseline wave of data of about 31,000 respondents aged 50 and over was collected in 11 European countries: Sweden, Denmark, Netherlands, Belgium, France, Germany, Austria, Switzerland, Spain, Italy, and Greece. A first longitudinal follow-up was collected in 2006/2007 and four new countries were added: the Czech Republic, Poland, Ireland and EU-associated Israel. As part of its third wave in 2008 and 2009, SHARE established a prototype of retrospective life-history data collection in 15 countries for about 28,000 respondents. With Wave 4 in 2010, the main survey evolved into a de-centrally funded ESFRI project. By Wave 5, five more countries and one region (Girona in Spain) joined SHARE. Figure 1 shows the sample sizes by country and wave, and the cohorts, which were sampled in 2004, 2006, 2010 and 2013.

Figure 1: Participation in SHARE by country

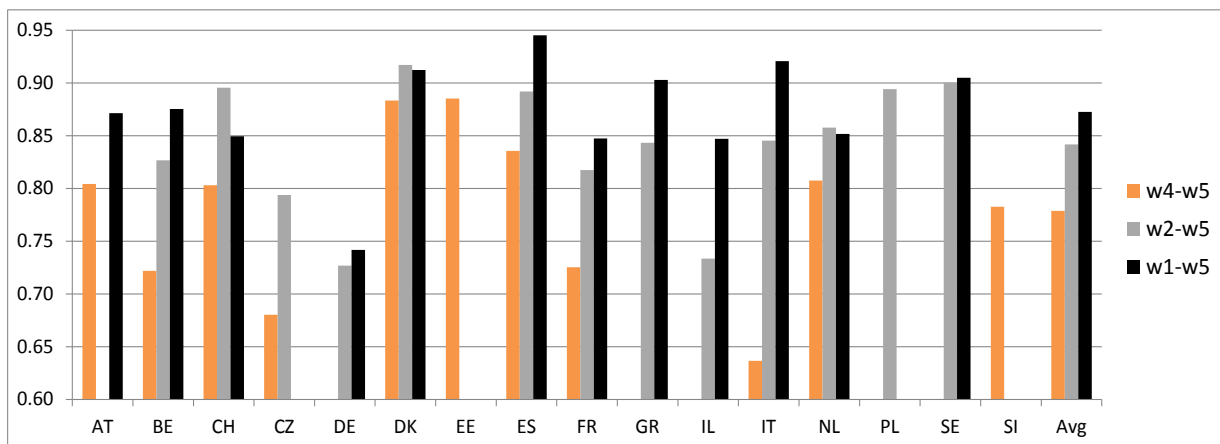


SHARE started the first *prototypical wave* in 2004 with relatively small samples. Depending on the country-specific funding situation, the start of the *main survey* was in Wave 4 or Wave 5 with large refreshment samples. About 67,000 respondents participated in Wave 5, which finished in November 2013.

Figure 1 shows the number of interviews per wave also providing an indication of the panel mortality for each cohort, reflecting actual mortality, refusal and – although rarely – failure to re-contact. Its counterpart, the retention of previous respondents, is shown in Figure 2. It shows the average retention rate for the 2004 sample (averaged over the four retention rates between Waves 1 and 5) including the recovery of respondents who missed a wave, and similarly for the 2006 and 2013 samples. Re-

tention is lowest between baseline interview and first re-interview: averaged over all countries, about 78% for persons interviewed for the first time in Wave 4 and re-interviewed in Wave 5. For those interviewed for the first time in Wave 1 (Wave 2, resp.) and re-interviewed in Wave 5, this rate reaches 87% (84%). This reflects the high retention of long-term panel members including the recovery of those respondents who missed a wave. Actually, for every person lost between Wave 4 and Wave 5, almost one person could be recovered from previous waves. Comparing countries, Germany is retaining fewer respondents than other countries, mainly caused by a large attrition between the first and the second wave of the first two sample cohorts.

Figure 2: Average two-year retention rates by sample and country



Since 2005, 11 *Scientific Data Releases* of the SHARE data were compiled. This means the users now have access to over 230,000 interviews with 86,000 individuals aged 50 and over from 20 different countries and one region. Access to the infrastructure via two data archives is free for all scientists globally, subject to European Union data protection regulations.

SHARE is harmonised with similar panel surveys in the United States, the British Isles, Japan, Korea, China, India, Mexico, Brazil, and South Africa, and is a leading partner in this global network of studies in the health and socio-economic development of ageing populations.

Data usage:

The scientific power of SHARE is based on three elements: its panel design which grasps the dynamic character of the ageing process, its multidisciplinary approach which delivers the full picture of the ageing process, and its ex-ante cross-national harmonization which permits rigorous benchmarking and policy evaluation across countries. Such a data set takes time to build up. Since 2004, when SHARE was started, the number of countries almost doubled from 11 to 21. The number of participating individuals has more than doubled to reach 67,000 in wave 5. We now have released four waves of data, and are winding up the data release of the fifth wave in May 2015. The SHARE data base currently carries about 230,000 completed interviews, plus a rich array of para- and metadata for methodological studies.

SHARE has succeeded surprisingly fast to create a large user community. Since the first public release of SHARE data in April 2005, SHARE has attracted more than 4,300 registered users with an unbroken, more than linearly increasing trend. Since we count registrations not including work students

and students in class, we estimate an approximate number of 10,750 actual users. While users include mainly scientists from Europe, researchers from the US are now the second largest user group after Germany; before Italy and the Netherlands. We interpret the acceptance of SHARE by so many researchers, and particularly in the US, as an indicator of SHARE's high scientific value.

Arguably the best indicator for the success of a research infrastructure is the number of published findings emanating from it. In addition to four comprehensive volumes of first results from the SHARE baseline, longitudinal, and retrospective waves (2004-2012) which have been complemented by several national collections of findings, more than 50 books and 1000 articles in peer-reviewed journals and volumes have been published based on SHARE data. This is the current state. Based on the experience of other panel data, their usefulness and thus user and publication numbers will increase steeply with the number of future waves.

SHARE has generated some surprising findings which have received wide-spread attention. Three examples may show the breadth and quality of successful SHARE-based research:

- Already the first wave of data revealed a European North-South gradient in many more dimensions than previously documented. While the income gradient was known thanks to earlier Eurostat data, the health and subjective well-being differences between the North and the South of Europe surprised because they contradict mortality data and folklore about healthy Mediterranean life style. These findings pose new fundamental questions, e.g., about the economic, social and medical causes for a divergence between mortality and morbidity.
- Another surprising finding from SHARE has sparked an entire new area of research and a lot of controversy: SHARE data revealed a strong correlation between early retirement and the loss of cognitive abilities both within and between European countries. A fruitful cooperation between cognitive psychologists, gerontologists, economists, and sociologists has begun to identify the causes for this finding which range from the cognition-stimulating effect of work even if it is unpleasant to the social isolation experienced by many retirees. It sheds new light on the EU's strive for active ageing.
- Equally surprising is the finding that the large international differences in the uptake of disability benefits are not at all correlated with health or demographic differences in Europe, such as those mentioned above between the North and the South. Rather, they are almost completely explained by the different rules and regulations of the various disability insurance schemes in the member states and document how powerful economic incentives are for retirement behaviour.

Many of the SHARE findings have strong policy implications, such as tighter targeting rules for disability insurance or a stricter handling of early retirement pathways. SHARE has been successful in providing help for evidence-based policy making, both at the Union and the member state level. SHARE is also intensely used by the Organisation for Economic Cooperation and Development (OECD) and the World Health Organisation (WHO). Three examples on the EU level may illustrate this:

- The European Commission's Directorate-General for Economic and Financial Affairs (DG ECFIN) has used SHARE data to add detail for its long-term projections of pension and health care expenditures. Such detailed data included health services utilisation, morbidity by age and years before death, and retirement propensities by age and health.

- DG for Health and Food Safety (SANTE) uses SHARE for their set of indicators, including the demographic and socio-economic situation (e.g., income inequality); health status (e.g. cancer incidence); health determinants (e.g., consumption of fruit); and health services (e.g. insurance coverage). SHARE was also used to compute health-adjusted life expectancies in Europe.
- The policy of the DG for Employment, Social Affairs and Equal Opportunities (EMPL) on active ageing, highlighted during the European Year of Active Ageing and Solidarity between Generations, is based on many findings from SHARE. Its recent report on Employment and Social Developments in Europe, for instance, stresses the importance of health prevention and work place quality to foster labour force participation at older ages. Evidence on these cross-cutting themes has only become possible through the multi-disciplinarity of SHARE data.

On the member state level:

- In the Czech Republic, a new law on long-term care specifies a list of activities (mobility, communication, orientation, nutrition, dressing, hygiene etc.) for which a person needs help and may qualify for social service provided by the government. The Czech Ministry of Labour and Social Affairs asked SHARE researchers to calibrate this list to the proportion of the population that needs assistance, stratified by household income, hospitalization, activities and other socio-economic characteristics, in order to set evidence-based needs levels. Following this successful cooperation, the ministry has procured a country specific add-on to SHARE to estimate the effects of hypothetical higher pensions awarded for a postponed exit from the labour force. These results will serve as the factual foundation for the next step of the Czech pension reform with new regulations on pensions and retirement age.
- In France, the controversial debate about the retirement age was finally decided by political arguments. However, the debate was moderated by SHARE findings. Two domains have been particularly important. First, the idea of adapting work conditions after age 50 is gaining ground as a pre-condition for later retirement. Second, the SHARE-detected link between early retirement and various negative outcomes, among them declining health, increasing social isolation, or reduced cognitive capacity, has received much attention. In fact, the new French legislation on earlier retirement is much more differentiated than often stated. SHARE provides the empirical basis for such differentiation.
- In Italy, the Minister of Welfare in the Monti government, Elsa Fornero, was a SHARE researcher at the University of Turin before taking office in Rome. She has used various pieces of evidence to support her pension reform end of 2011, in particular benchmarking Italy to other EU member states. Italian SHARE data on old-age poverty was used in safeguarding the Italian minimum pension from the cuts implied by the new benefit indexation rules.
- In Austria, the Ministry of Labour and Social Affairs is evaluating strategies for the European Year of Active Aging, to allow longer employment of elderly workers by investigating working conditions and better health services within firms. These strategies are based on reports based on SHARE.

A collection of policy briefs based on SHARE data can be found at <http://www.share-project.org/publications/policy-papers.html>.