Editorial

SHARE: a data set for ageing research

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Population ageing is one of the main societal challenges of our time: what public health policies can help promote successful ageing, and what policies are instead needed (and effective) in helping those older individuals who need health treatment and care?

The population is ageing fast in many countries in the world: not only in highly developed countries like the US, Europe and Japan, but in high growth countries like China and India, as well as in Latin America. In all these countries life expectancy has been rising at a very high pace (after WWII, typically by three months a year) – and quite often fertility has also rapidly fallen.

To tackle such a challenge, policy makers worldwide require rigorous analysis of high quality data. That is the reason why a number of similar, coordinated surveys have been conducted in a host of countries over a prolonged period of time, starting with the US Health and Retirement Study (HRS). These studies interview random samples of individuals aged 50 or more (and their spouses/partners), in stark contrast to medical surveys that typically cover patients. They are also very comprehensive in the information they gather, because successful ageing requires good health, rich social interactions and access to economic resources, and all these conditions are affected by public policies.

Since the beginning of this century, a Europe-wide survey has also been conducted: SHARE, the Survey on Health, Ageing and Retirement in Europe, follows over time a very large number of Europeans aged 50 or more, collecting information on their health (physical and mental, including cognitive abilities), their family and social networks and interactions, their access to economic resources (income and savings), their standard of living (housing accommodation, food consumption), and their activities, personality and life satisfaction.[1] At present twenty-eight countries are involved in SHARE: the twenty-six continental EU countries, plus Switzerland and Israel (separate, but similar, surveys are conducted in England and Wales, Scotland and the Republic of Ireland.) Given that the countries involved in this study have a wide array of different public policies (including public pensions, health care, preventive medicine programmes etc.) and that these policies have also changed over time, SHARE can be seen as an ideal source for research on the effects of such policies on the health and well-being of the 50+ population.

The SHARE data are available, free of charge, to bona fide researchers. They cannot be used for commercial purposes, but academics and policy-makers can access the data by signing a statement that the (anonymized) data they receive will be used exclusively for strictly non-commercial research.

At present, there are more than 8000 registered SHARE users across the world. They are mostly from the social sciences (sociologists and economists), but growing numbers of epidemiologists, geriatricians and public health researchers have started publishing using SHARE data.

SHARE is the ideal data source for devising evidence-informed policies affecting the older population, thanks not only to its longitudinal and interdisciplinary nature, but also to the wide variety of different policies in place in the different European countries. To facilitate international comparisons the SHARE community has collected and made publicly available a large amount of information on *context variables* going back a long way. Education rules and reforms have been documented in an open access book;[2] public pension rules and their changes have been summarised in the appendix of a number of papers, such as Angelini *et al.*[3] and more recently Celidoni *et al.*;[4] maternity leave provisions are detailed in a paper by Avendano *et al.*[5] Of particular interest for public health research is a recent volume by Brugiavini *et al.*[6] that discusses and analyses Long Term Care rules for a number of countries. Some more information on public health policies is available on the SHARE project web site, but researchers in public health and epidemiology will no doubt collect and make available more information over time.

A wide array of papers use SHARE data to investigate topics of interest to public health researchers and policy makers. For instance, the effects of retirement on physical health and on cognition have attracted much attention, also in the light of recent public pension reforms that have raised pension eligibility ages and reduced pension benefits in most countries but at different times and rates (see Gruber and Wise, 2007, for an appraisal).[7] Here the context variables allow researchers to distinguish between the simple correlation between retirement and health, say, and the causal effect of retirement on health. To clarify: the changes in pension eligibility rates over time and across countries allow some, but not all, individuals with the same characteristics to retire with a pension – splitting the sample in a way similar to an experiment.[4,8]

The analysis of SHARE data has shown that retirement has in general a short run, positive effect on physical and mental health and on cognition – this is known as the *honeymoon effect* of retirement. Long-term effects of retirement are instead much less positive, particularly for cognition (for which the literature talks about a *Mental Retirement* effect, following Rohwedder and Willis, 2010).[9]

Another example where context variables have proven useful to identify causal effects is education. Education displays a positive correlation with long-term earnings, but this could be due to selection: brighter children on average attain higher education. A way to investigate the causal effect of education on life-time earnings is to compare individuals whose years of education differ because of changes in compulsory school-leaving rules. A recent paper by Brunello *et al.*[10] has used SHARE data to investigate this issue in relation to the type of circumstances the currently old experienced in their childhood. They exploit information available in SHARE about the number of books at home to show that the positive effect of an extra year of education induced by education-

al reforms was much higher for boys who had at least ten non-school books in the parental home at the age of ten, particularly if they lived in rural areas.

A very large number of research topics can be investigated using SHARE data – further examples can be found in Börsch-Supan et al.,[11] or in the extensive list of publications that is reported on the SHARE project web-site (http://www.share-project.org/).

References

1. Börsch-Supan A, Jürges H, Eds. The Survey of Health, Ageing and Retirement in Europe – methodology. Mannheim: Mannheim Research Institute for the Economics of Aging; 2005.
2. Garrouste C. 100 years of educational reforms in Europe: a contextual database. JRC technical and scientific report. Luxembourg: Publications Office of the European Union; 2010.
3. Angelini V, Brugiavini A, Weber G. Ageing and unused capacity in Europe: is there an early retirement trap? Econ Policy 2009;59:463-508.
4. Celidoni M, Dal Bianco C, Weber G. Retirement and cognitive decline: a longitudinal analysis using SHARE data. J Health Econ 2017;56:113-25.
5. Avendano M, Berkman LF, Brugiavini A, Pasini G. The long-run effect of maternity leave benefits on mental health: evidence from European countries. Soc Sci Med 2015;132:45-53.
6. Brugiavini A, Carrino L, Orso C, Pasini G. Vulnerability and long-term care: an economic approach. Basingstoke: Palgrave McMillan; 2018.
7. Gruber J, Wise DA. Social security programs and retirement around the World: fiscal implications of reform. National Bureau of Economic Research; 2007.
8. Mazzonna F, Peracchi F. Unhealthy retirement? J Human Res 2017;52:128-51.
9. Rohwedder S, Willis RJ. Mental retirement. J Econ Perspect 2010;24:119-38.
10. Brunello G, Weber G, Weiss C. Books are forever: early life conditions, education and lifetime income. Econ J 2017;127:271-96.
11. Börsch-Supan A, Kneip T, Litwin H, et al, Eds. Ageing in Europe - Supporting Policies for an Inclusive Society. Berlin: De Gruyter; 2015.