

LONGLIVES project: call for PhD funding

Context

The Institut des politiques publiques (IPP), a joint scientific project from PSE-Ecole d'économie de Paris and Crest, is offering **funding for a three-year PhD**, as part of the ANR international project JP-demographics "More years better lives" called LONGLIVES. The project is dedicated to the better understanding of links between health, caring responsibilities and retirement. It is a European consortium of research groups comprising the UK based Institute for Fiscal Studies (IFS), the German *Deutsches Institut für Wirtschaftsforschung* (DIW-Berlin), the Danish National Centre for Social Research (SFI), the Danish Rational Economic Agents Model Group (DREAM) and the Paris School of Economics with the IPP research group. The consortium is led by DIW-Berlin with Prof. Dr. Peter Haan the lead PI.

The PhD candidate will be part of the French team and will be expected to take an active role in the research consortium, participating to all internal workshop and meetings of the consortium. The PhD proposal of the candidate should be dedicated to the LONGLIVES research project (more details below). She/he would be under the supervision of Didier Blanchet (Insee, PSE), PI of the French team, and Antoine Bozio (EHESS-PSE), director of the IPP. Other participants within the French team are Eve Caroli, Pierre-Yves Geoffard, Muriel Roger and Corinne Prost.

LONGLIVES research project

This proposal focuses on two key factors related to the interest among policymakers across Europe in extending working lives: the relationship between longer working lives, health and caring responsibilities. This proposal brings together expertise from four countries – Denmark, Germany, France and the UK – to shed new light on how longer working lives might affect the health and well-being of the older population, and how caring responsibilities may affect individuals' ability to work for longer. A core focus of the work would be understanding differences in these effects across the population and the resulting impact on inequality.

This proposal has three key strengths. First, the consortium brings together renowned public policy experts from four different countries, and would exploit significant differences in the policies in place in each country and over time, to shed light on the role of policies and institutions in determining how longer working lives affect health and care giving, and how the effects differ across groups. Second, the work would exploit currently under-utilised, comparable multidisciplinary data across these four countries to better understand the multi-faceted circumstances of the older populations and how they differ across countries. Third, we would use and improve existing detailed dynamic micro-simulation models for each country to help understand how the circumstances of the older population will evolve in each country and what effect alternative policy regimes could have.

More details are available in the attached document.

Application and selection process

Interested candidate should apply to recrutement@ipp.eu before the end of February and send:

- A letter of motivation ;
- A CV ;
- Grades available from master (at least M1) ;
- A letter of recommendation.

Selection process will take place in March with the interviews of selected candidates. Quick response will be given to the candidates.

Policies for longer working lives: understanding interactions with health and care responsibilities

Background and present state of the art in the research field and preliminary results

Understanding the economic and social activities of the older population, and the institutions and policies that affect them has become increasingly important over time as societies age. In the summary of JPI's project on elderly employment Hasselhorn and Apt (2015) point out that, although there is a large literature on labour market participation of older people across Europe, there are still important gaps in the evidence. They conclude that there is insufficient knowledge about: how different subgroups of the population are affected by changing employment patterns; the multiple factors that affect retirement; the various impacts of longer working lives on individuals and communities.

We propose investigating policies implemented across four European countries to promote longer working lives, and examining how they interact with health, care responsibilities and other inequalities at older age. Our proposed research would contribute to a greater understanding of many of the research topics identified in the JPI's Strategic Research Agenda. Research into the role of social care and health and their interaction with paid work will lead to a greater understanding of the "new labour market" facing older workers, and how longer working lives affect individuals' well-being. Moreover, with our focus on using detailed microdata to assess how policies affect different individuals, we will increase the understanding of the heterogeneous impacts of public policies.

We choose four countries for the institutional comparison: Denmark, France, Germany and the UK. Each country has a different type of welfare state, different rates of labour market participation among older people, and a different demographic outlook. The proposed research will provide new analysis of three main questions: (i) how inequalities at older ages are influenced by pension income inequalities, health status and heterogeneous family support, (ii) how extending working lives affects individuals' health, (iii) how the need to provide informal care affects individuals' ability to work for longer. We will maximise the value of cross-country work by conducting comparable analysis in each country, using comparable data and micro-simulation modelling, and exploiting differences in the institutional and demographic structures of the countries to learn more about the effect of policies to extend working lives on individuals and families.

Multidimensional inequalities at older ages

There is a large literature on the extent of income inequalities at older ages, and how public pension provision reduces it (van Vliet et al. 2012, Brown and Prus, 2004) and substantial evidence of the social gradient in health (Huisman et al. 2005, Grundy and Sloggett, 2003). However, an integrated view of inequalities at older ages, including heterogeneity in family support is far from complete.

Effect of working longer on health

As is set out in Banks et al. (2015), theory suggests that paid work could be either good or bad for (various different dimensions of) health, suggesting that there could be substantial heterogeneity in the effect of working (or retirement) on health and that the effects may depend heavily on individuals' circumstances and the measure of health used. There is a wealth of evidence on the correlation between working and health, although this literature reaches mixed conclusions about whether they are positively or negatively correlated (Mein et al. 2003; Buxton et al. 2005; Waddell and Burton 2006; Coursolle 2009; Jokela et al. 2010; Roberts et al. 2010; Westerlund et al. 2010). However, there is little robust empirical causal analysis of the effects of working on health. This is primarily because, while work at older ages may affect health, health may in itself affect labour supply. In order to estimate causal effects, empirical strategies need to account for this simultaneity problem. This presents a significant challenge for

researchers: Haan and Myck (2009) find a strong correlation of unobserved characteristics that influence both employment and health. The small literature that does attempt to estimate a causal impact of retirement on health finds weaker effects than the simple correlations and (particularly for physical health and mortality) more mixed results (Charles 2004; Bound and Waidmann 2007; Neuman 2008; Coe and Zamarro 2011; Johnston and Lee 2009; Kuhn et al. 2010; Bloemen et al. 2013; Hernaes et al. 2013).

Relationship between informal caring and labour supply

Increased life expectancy means that older individuals can become increasingly dependent on others to care for them for longer. There are typically three sources of such care: informal care (from family or friends), formal care paid for privately, and formal care provided by the state. The relative importance of these forms of care varies significantly across countries, depending on the structure of institutions and family ties (OECD 2005; Mot et al. 2012). However, in most countries informal care from family members plays a significant role. With increasing labour force participation of older people and (particularly) older women, availability of informal care might decline, and conversely needs to provide care (to, for example, elderly parents) may have a detrimental impact on labour force participation of potential older workers (Colombo et al. 2011).

Many studies analyse the general relation between caring and labour supply (for a literature review, see Lilly et al. (2007)). Depending on the data and the identification strategy, studies find either no significant effect (Wolf and Soldo 1994; Stern 1995; Meng 2013) or a negative impact of caring hours on labour supply (Ettner 1995; Ettner 1996; Carmichael and Charles 1998; 2003; Heitmueller 2007). Less researched is the relationship between employment effects and institutional settings. Heger (2014) uses data from SHARE to measure the effect on labour market participation. She finds negative effects in countries with few formal care alternatives, while this effect is not significant in countries with more generous care systems. Geyer and Korfhage (2015) look at labour supply effects of the German long-term care insurance. For the UK, Schaffer (2015) analyses the effect of the introduction of free personal care in Scotland on the labour supply of women.

Dynamic microsimulation models for the elderly population

Dynamic microsimulation models have been developed mainly for addressing long term pension sustainability issues, and more recently for assessing elderly care needs (Blanchet and Le Minez, 2008, Duée and Rebillard, 2004, Marbot and Roy, 2012, Rickayzen and Walsh, 2002, Wittenberg et al. 2001). There has been little attempt at using these models in cross-country comparisons. The NBER ISS project (Gruber and Wise 1999, 2004, 2007, 2012) has used simulations based on representative types of individuals but stopped short of microsimulation.

Work plan

Work Package 1: Inequalities and policies at older ages: a comparative approach

This work package is the building block of the comparative study of this proposal. Its aim is to provide a state-of-the-art description of the multi-dimensionality of inequalities at older age and the institutional differences in the public policies that are likely to impact older populations across four European countries: Denmark, France, Germany and the United Kingdom (UK).

Multi-dimensional inequalities at older age

For this first part of WP1, our aim is to use large household datasets, which are representative of the older population, to document the multi-dimensionality of inequalities at older ages in each of the four countries and across the four countries. We will start by documenting income inequalities, income poverty, and wealth inequalities. We will also compare levels of income and wealth at different ages to help understand how financial resources change at older age. This will be compared to the employment and retirement patterns observed in each country, and supplemented by a more complete description of

economic and social inequalities. We will measure how objective and self-reported measures of health (both physical and mental), as well as broader measures of wellbeing, quality of life and social inclusion vary within and across the four countries. Importantly, we will document heterogeneity of outcomes in multiple dimensions, which matter for welfare, and on which policies could have an impact, and the extent to which lack of income or wealth is associated with poor health and social outcomes.

Data

The comparative aspect of the work is essential. We will, therefore, exploit rich household survey data from the Survey of Health, Ageing and Retirement in Europe (SHARE) and its sister survey, the English Longitudinal Study of Ageing (ELSA). SHARE covers 20 countries, including Denmark, France and Germany. SHARE and ELSA are part of a harmonised family of innovative, multidisciplinary surveys of the older population (Banks et al. 2014, Malter and Börsch-Supan 2015). They include a large variety of measures of health, wellbeing, social environment, income, wealth and other outcomes. In Denmark, Germany and the UK the surveys have also been linked to administrative data held on the same individuals – including, for example, a history of their social insurance contributions and hospital use. These data will allow us to take a multidimensional and inter-disciplinary approach; the surveys have been devised by experts from a range of disciplines, and mix (among other things) financial information asked for by economists, with health information requested by epidemiologist, and social interaction questions asked by sociologists. These surveys are still under-researched given the breadth of information collected and the significant potential for multi-country analysis and cross-country comparisons.

Institutions and policies

The second part of WP1 will describe the various institutional designs across the four countries that are likely to influence inequalities at older ages. The aim of this strand is to describe and compare alternative approaches that European governments have taken to address the challenges of ageing societies. This part of the project builds upon the expert knowledge within each country's research team of the policy environment in each country in order to understand better how the systems are coping with an ageing population and addressing the issue of longer working lives. We will systematically document how the following policies (which affect adults as they move from working age life into retirement and as they age) are implemented in each country: Pension systems (both state and private/occupational); tax and benefit system (including reduced income/payroll tax rates for older individuals, housing benefit and income support policies and disability benefits), design of the health care system (publicly provided, or privately funded) and provision of publicly-funded formal care for the elderly.

In addition, we will combine insights from different disciplines and will present evidence on the role of the family in each country, which is particularly important with respect to elderly care (WP 3). These policies are rarely assessed together, and even less on a cross-country basis.

In undertaking this, our focus will be twofold. First, it is important to understand how these different systems are related, to what extent they are integrated, and how they compare across countries. Following discussions among the research team involved in the consortium about the different systems, we will synthesise this into a summary of the different approaches to an ageing population and longer working lives taken in the four countries. The second objective will be to document the extent to which policies relate to the existing economic and social inequalities previously described. Given they rely on detailed and complex rules, to do this we will use our micro-simulation models (see below) to calculate the impact of the various policies on reducing the inequalities described above. In the first instance, we will concentrate on describing their impact at a point in time, in a static framework.

Each team in the consortium has developed highly detailed dynamic micro-simulation models: SMILE for Denmark (Stephensen, 2013), PENSIPP for France (Blanchet et al., 2015)¹, DySiMo for Germany (Geyer et al. 2015)², and RetSim for the UK (Browne et al. 2014). These models rely on a representative sample of the population, and model how it ages over time (including probabilities of giving birth, marrying, becoming sick, dependent, and dying) as well as the main socio-economic characteristics (such as the probability of being educated, finding/losing a job, career progression, etc.). Because these models incorporate employment, income, social care, health and disability, they allow us to understand the policies in a context where the decisions facing individuals are multi-faceted, as recommended by Hasselhorn and Apt (2015), rather than just focussing on a single outcome, such as employment.

Work Package 2: Longer working lives and the effects on health

The second work package (WP2) is focused on the effects of longer working lives on health outcomes of older people. The aim of WP2 is to go beyond the correlations between work (or retirement) and health outcomes, which are documented in a large literature (discussed previously), and provide new evidence on the causal impact of retirement on health.

Because better health may itself encourage a longer working life, it is difficult empirically to disentangle the effect of work on health from that of health on work. The identification of the causal impact of working longer on health outcomes is challenging for four main reasons:

- i. Identification – it is difficult credibly to identify changes in retirement patterns that are sufficiently large to potentially affect health, but which are not themselves directly the consequence of changes in health status.
- ii. Heterogeneity – given the theoretical mechanisms that have been suggested for how work might affect health, it is very likely that the effect of longer working lives on health will differ substantially across different groups: there may be positive effects for some and negative effects for others.
- iii. Measuring health – health is not a single concept but rather a multi-dimensional construct and the link between longer working lives and ‘health’ might depend on the measure used.
- iv. Data availability – data sources rarely combine all the information needed to identify the causal effect of work on the various health measures.

We propose to estimate the effect of longer working lives on health by exploiting large pension reforms in each of the four countries of analysis to identify the effect of longer working lives on (different dimensions of) health. Researchers in the consortium have contributed to the impact analysis of pension reforms on retirement outcomes, but so far the impact on health has generally not been studied. Conducting this analysis across a number of countries and comparing the results has several potential advantages over a single country study: we will be able to compare the effects of reforms over a long time period that have both lengthened and shortened working lives, we will be able to examine effects on a wide range of health measures (exploiting the different data sources available in each country), and we will be able to compare the effects in different institutional settings.

The reforms that we will exploit in each of the countries are as follows:

- Denmark
 - i. The 1979 introduction of the ‘post-employment wage’, which encouraged earlier retirement (Bingley and Lanot, 2007) among male blue collar workers who were born after 1918.
 - ii. The reduction in the eligibility age (Bingley et al. 2015) for the old age pension from 67 to 65 (implemented between 2004 and 2006), which affected those ineligible to early pension benefits through the ‘post-employment wage’ programme.
- France

¹ PENSIPP model is an off-spring of the model DESTINIE, developed at Insee, and both models share many distinctive features. For more information the latest version of Destinie, see Blanchet et al. 2011.

² The model builds on previous work of DIW (Dekkers u. a. 2010).

- i. The 1993 pension reform, which had a very significant impact on delaying retirement (Bozio 2008, 2011) but with large variations in this effect across cohorts and the exact length of contributions an individual had made by age 60.
 - ii. The 2010 pension reform which led to a rapid increase of the minimum retirement age (from 60 to 62) and the full-rate pension age (from 65 to 67).
- Germany
 - i. The 1972 introduction of a flexible early retirement option without actuarial deductions, which affected men born in or after 1909, which led to a sharp reduction in the average retirement age (Börsch-Supan and Schnabel 1999).
 - ii. In 1984 eligibility criteria for disability pensions were tightened, affecting mainly women with low labour market attachment and affected their retirement behaviour (Börsch-Supan and Juerges 2011).
 - iii. The introduction of actuarial deductions for early retirement in 1992 and the abolition of several early retirement options for cohorts born in or after 1952 had positive labour market effects (Hanel 2010; Berkel and Börsch-Supan 2004, Engels et al. (2015)).
- United Kingdom
 - i. Since 2010 the age at which women can claim a state pension has been increasing (from age 60 for those born before 1950 to age 66 for those born in or after 1955). This reform has been shown to have significantly increased labour force participation of older women (Cribb et al. 2013).

In each case the basic research approach we propose is to use the pension reforms as instrumental variables in the estimation of the impact of retirement on measures of health. The assumption underlying this is that the pension reforms affect retirement decisions, but do not otherwise directly affect health.³ We know from our previous analysis (cited above) that these pension reforms have been important in changing retirement patterns. We will conduct this analysis using two main categories of data – administrative data and household survey data, which each have different strengths and thus will complement each other – we describe each in turn.

Administrative data

We propose using a number of different types of administrative data to examine the effects of changes in the length of working lives on health. A major advantage of administrative data is that it provides a very large sample of the population of interest, allowing us to identify even small effects robustly. A drawback of relying on administrative data is that not all aspects of health will be captured. However, for all countries we can use administrative data on mortality. For Denmark, we will also be able to use register data to examine other health outcomes, including diagnoses of specific conditions and hospitalisations. In order to examine how the pension reforms affected these health outcomes we will need to link these measures of health outcomes to an indicator of whether or not an individual was affected by the reform. In some cases this can simply be inferred from date of birth (e.g. the increase in the pension eligibility age for women in the UK, or the introduction of deductions for early retirement in Germany). In other cases we will need to link to other administrative data sources to identify those who are affected. To examine the effect of the Danish reforms, we will make use of information on pension contributions and unemployment insurance fund membership also contained in the register data. To examine the effect of the 1993 French reform, we will exploit administrative data from the main Social Security scheme (Cnav), adding evidence to a limited literature (Garrouste and Blake 2012). To examine reforms in Germany we will also use administrative data from the German Pension Insurance Fund.

Household survey data

For recent reforms we will be able to examine the effects on health and well-being using rich household survey data from the SHARE and ELSA datasets, which were described in WP1. These data include a large

³ In cases where pension reforms also affect unearned income at some ages, we can control for this effect and so our approach is still valid.

variety of measures of objective and subjective, physical and mental health and well-being (which are collected in the same way in all countries), as well as detailed information on individuals' labour market participation and pension membership. This makes these data ideally suited to addressing the question proposed here.

The potential limitation of the SHARE data, however, is the relatively small sample sizes for individual countries. This makes their use for examining the effect of some of the pension reforms somewhat risky. We will explore ways to address this limitation – for example, increasing sample size by pooling data on multiple countries and imposing restrictions on the country-specific heterogeneity in coefficients that is allowed. In addition, for the analyses we will exploit other survey data such as German Socio-Economic Panel (SOEP).

In each of the proposed analyses we will, as far as possible, examine whether effects of working on health are different across different groups – including between men and women, different income groups, those working in different occupations, and coming from different educational backgrounds.

Work Package 3: Caring responsibilities and longer working lives

This work package would provide new analysis of the demand for care, and the likelihood of this being met through informal care from family members, in order to refine the way that 'caring' is incorporated into dynamic micro-simulation models in each country. Each country would carry out a set of work looking at:

- Prevalence of (and persistence in) need for care among different types of people;
- How this translates into use of informal care from family members, which will depend on the country-specific institutions;
- Whether this informal care is provided by individuals towards the end of their own working lives;
- How this demand for care relates to the labour supply of older workers.

The insights would be used to introduce, or to improve on, modelling of informal care need and provision in the simulation models for each country (described in WP1). The strength of using dynamic micro-simulation models is that we can model the institutional settings and demographics in detail and relate them to socio-economic outcomes. The models will enable us to change assumptions in order to compare common policies in different countries (described in WP4).

Studying these questions across the four countries proposed will provide valuable insights into the relationship between care need, informal care provision and labour force participation because they differ significantly in public provision of social care, and there is also variation within both Denmark and the UK in how (and how extensively) publicly-funded care is provided.

Need for care and care receipt

We will use a range of survey data to describe the prevalence of need for personal care – including, for example, the proportion of people who have difficulties with activities of daily living (ADLs) – and whether and how this need is met. In particular, we will describe what proportion of people receive informal care from family or friends, formal care paid for by the state, and privately funded formal care. We will also estimate, for each country, the likelihood of transitions between states – between not needing care and needing care, and between different types of care receipt – over time. We will examine how all of these things vary across different groups – including those with different family structures, different socioeconomic backgrounds, and between men and women. The analysis of potential heterogeneous effects will be particularly novel.

The core of this analysis will be based on common survey questions from SHARE and ELSA, allowing us to construct comparable measures of care need and receipt in each country. In Denmark, France and Germany this will be augmented by analysis of other country-specific data sources.

For Denmark, we would make use of SFI's Danish Longitudinal Study of Ageing, which has interviewed a panel of elderly respondents every 5 years since 1997, with a significant care component, and is linked to

the administrative registers (Lauritzen 2014). We would also explore the possibility of collecting administrative data on publicly provided care for the largest municipalities, which could be linked to the register data.

For France, we will take advantage of cohort data collected by epidemiologists from Inserm (cohort data Gazel, Constances and Paquid), which provides a wealth of health data on a long panel of individuals, allowing us to estimate very precisely transition probabilities between healthy and unhealthy/dependent states. In particular these data allow the use of alternative measures of care needs (including ADLs and the AGGIR grid used to assess eligibility to public support in France).

For Germany, we will also use the SOEP, which provides long panel data and rich information on informal care at home, the degree of limitations in daily activities and other health outcomes, and transitions into nursing homes.

Care provision and labour supply

We will also examine the prevalence of informal care provision among older people in each of the countries, how this differs across groups and how it is related to labour force participation. Again, the core of the analysis will use common survey measures from ELSA and SHARE, augmented by additional country-specific data. For Denmark we would use SHILD – the SFI Survey of Health, Impairment and Living conditions in Denmark – which was conducted in 2012 (Damgaard et al. 2013). For France, we will take advantage of the survey *Handicap-Santé*, which provides information on informal carers and the characteristics that increase the likelihood of providing informal care. For Germany, in addition to SOEP, we would also use the Germany Ageing Survey (DEAS), which focuses on the elderly population (with five waves available from 1996 to 2014).

Having described the relationship between care giving and labour supply in each country we will explore what the causal effect is of informal care giving on labour supply. Specifically, we will exploit policy changes in France and Germany which have altered the prevalence of informal care giving to estimate the knock-on effect on labour supply. In France, it will be possible to examine the effect of the 2002 reform, which introduced the personalised autonomy allowance (allocation personnalisée d'autonomie, or APA) and which has been found to have significantly reduced informal care giving (Fontaine 2012). In Germany, we will similarly exploit the 1995 reform, which incentivised informal care giving. In Denmark and the UK there have not been any significant nationwide reforms to the provision of publicly-funded social care. However, it may be possible instead to identify the effects of informal care giving on labour supply by exploiting (arguably exogenous) time-varying regional differences in the nature and extent of public care provision within in each country.

Improving the modelling of care-giving and care receipt in micro-simulation models

At the moment, RetSim (for the UK) contains a basic model of care giving and receipt, but the micro-simulation models for the other three countries do not. We will use the insights from the work described above to improve the modelling of care giving and care receipt in RetSim and to add new care modules into the other models. In particular, we will extend each model to incorporate:

- Modelling of the need for social care: how this depends on a relatively detailed measure of health status, and persistence of care need over time.
- Modelling of the receipt of three forms of care (publicly-funded formal care, privately-funded formal care, and informal care): how these depend on characteristics such as health status, family structure, and income level.
- Modelling of informal care provision, and the intensity of this provision (e.g. whether it is full- or part-time): how this depends on characteristics such as the availability of formal care, family structure, and health status (including the health of an individual's partner).
- Modelling of the dependence of individuals' labour force participation on informal care demand.

Work Package 4: The outlook for labour supply, health and care giving and the possible effects of alternative policies

In this work package, we will use the four improved dynamic micro-simulation models to simulate how labour supply, health, and care giving will evolve over the next 10 to 50 years in each country under current and alternative policies.

Without any policy changes there are profound changes in demographic and economic trends, which will affect long term inequalities at older ages. Documenting the likely impact of these trends in each country will help policy makers to understand expected changes in needs. The advantage of these micro-simulation models is that we will be able to present results at a household level and to describe in detail heterogeneity across the population, how existing inequalities are likely to evolve, and to identify the most vulnerable groups of the older population under current policies.

Having described the outlook under current policies, we will then use the models to simulate what could happen under an alternative set of policies and scenarios, specifically relating to public provision of social care, public pensions, and incentives for older people to participate in the labour force. These could be taken from promising examples among the countries studied: for example increasing labour force participation rates to the highest seen for that age group across all four countries. Alternative policies that we could simulate include the likely impacts of less generous state pensions, change in the provision of public support for elderly care, or a world in which private pension resources were significantly lower/higher upon reaching old age. We will discuss possible reforms to simulate with policymakers in each country and also with representatives of other organisations, such as charities and trade unions. Options could be assessed by looking at the public finance impact and the changes in inequalities, highlighting the possible interaction between policy instruments.

Project coordination and management

The consortium will be led by Prof. Dr. Haan (DIW-Berlin) who will assume a coordination role of the different country team. He will be supported in this task by country PIs who interact regularly by Skype or emails to ascertain that progress is made in all countries in time.

Project members from all countries will gather two to three times a year for a small workshop where progress will be presented and results discussed among the consortium. Once specific milestones of the research are completed, authors will circulate working papers which will be discussed within the consortium before their public release and their submission to peer-reviewed journals.

Bibliography

- Banks, J., J. Nazroo and A. Steptoe (eds.) 2014. *The dynamics of ageing: Evidence from the English Longitudinal Study of Ageing 2002-12 (Wave 6)*, London: Institute for Fiscal Studies.
- Banks, J., T. Chandola and K. Matthews 2015. "Retirement and Health", mimeo.
- Berkel, B. and Axel Börsch-Supan. 2004. "Pension Reform in Germany: The Impact on Retirement Decisions". *FinanzArchiv: Public Finance Analysis* 60 (3): 393-421.
- Bingley, P., N. Datta Gupta, P.J. Pedersen 2015. Health, disability insurance and retirement in Denmark, in Wise D (ed.) *Social Security Programs and Retirement Around the World – Volume 6*, 2015 in press; University of Chicago Press. Also NBER Working Paper 20114.
- Bingley P., G. Lanot 2007. Public pension programmes and the retirement of married couples in Denmark, *Journal of Public Economics* 91 (10): 1897-1901
- Blake H. and C. Garrouste 2012. "Collateral effects of a pension reform in France", PSE Working Papers 2012-25.
- Blanchet, D., A. Bozio and S. Rabaté 2015. "Reducing Growth Dependence of the French pension system: options for reforms", PSE Working Paper.

- Blanchet, D. and S. Le Minez 2008. "Projecting Pensions and Retirement Age in France: some Lessons from the Destinie I Model". In: *Frontiers in microsimulation modelling*, A. Harding, P. Williamson and A. Zaidi, (eds.), Ashgate.
- Bloemen, H., H. Stefan and J. Zweerink 2013. "The Causal Effect of Retirement on Mortality: Evidence from Targeted Incentives to Retire Early". IZA Discussion Paper 7570.
- Börsch-Supan, A. H. and H. Juerges 2011. "Disability, Pension Reform and Early Retirement in Germany". National Bureau of Economic Research Working Paper Series 17079.
- Börsch-Supan, A., and R. Schnabel 1999. "Social Security and Retirement in Germany". In: *Social Security and Retirement around the World*. J. Gruber and D. A. Wise (eds.), 135-80. Chicago: National Bureau of Economic Research, Inc.
- Bound, J. and T. Waidmann 2007. "Estimating the Health Effects of Retirements". Working Paper 168. University of Michigan.
- Bozio, A. 2008. "How Elastic is the Response of the Retirement-Age Labor Supply? Evidence from the 1993 French Pension Reform". In: *Pension strategies in Europe and the United States*, G. de Menil, R. Fenge and P. Pestieau (eds.), MIT Press, 37-85.
- Bozio, A. 2011. "La réforme des retraites de 1993: l'impact de l'augmentation de la durée d'assurance". *The 1993 French pension reform: the impact of the increased contribution requirement*. *Économie et Statistique*, (441-442), 39-53.
- Brown, R. L. and S. G. Prus 2004. Social transfers and income inequality in old age: A multinational perspective. *North American Actuarial Journal*, 8 (4), 30-36.
- Browne, J., C. Emmerson, K. Heald and A. Hood. 2014. "Modelling work, health, care and income in the older population: The IFS retirement simulator (RetSim)", IFS Working Paper W14/12.
- Buxton, J. W., N. Singleton and D. Melzer 2005. The mental health of early retirees. *Social Psychiatry and Psychiatric Epidemiology*, 40, 99-105.
- Carmichael, F., and S. Charles 2003. "The opportunity costs of informal care: does gender matter?". *Journal of Health Economics* 22 (5): 781-803. doi:10.1016/S0167-6296(03)00044-4.
- Carmichael, F. and S. Charles. 1998. "The labour market costs of community care". *Journal of Health Economics* 17 (6): 747-65. doi:10.1016/S0167-6296(97)00036-2.
- Charles, K. K. 2004. "Is Retirement Depressing?: Labor Force Inactivity and Psychological Well Being in Later Life", *Research in Labor Economics*, 23, 269-299.
- Coe, N. B. and G. Zamarro 2011. "Retirement effects on health in Europe". *Journal of Health Economics* 30 (1): 77-86. doi:16/j.jhealeco.2010.11.002.
- Colombo, F., A. Llana-Nozal, J. Mercier and F. Tjadens 2011. *Help Wanted? Providing and Paying for Long-Term Care*. OECD Health Policy Studies. Paris: OECD Publishing. <http://www.oecd-ilibrary.org/content/book/9789264097759-en>.
- Coursolle, K. M., M. M. Sweeney, J. M. Raymo and J. H. Ho 2010. The Association Between Retirement and Emotional Well-being: Does Prior Work-Family Conflict Matter? *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 65 (5), 609-620.
- Cribb, J., C. Emmerson and G. Tetlow. 2014. "Labour supply effects of increasing the female state pension age in the UK from age 60 to 62", IFS Working Paper W14/19, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/publications/7323>).
- Cribb, J., C. Emmerson and G. Tetlow 2013. "Incentives, shocks or signals: labour supply effects of increasing the female state pension age in the UK", IFS Working Paper W13/03.
- Damgaard, M. and S. Bengtsson 2013. "Everyday life and living conditions for individuals with reduced functional capacity" (in Danish) SFI Report 13:26.
- Dekkers, G., H. Buslei, M. Cozzolino, R. Desmet, J. Geyer, D. Hofmann, M. Raitano, et al. 2010. "The Flip Side of the Coin: The Consequences of the European Budgetary Projections on the Adequacy of Social Security Pensions". *European Journal of Social Security* 12 (2), 94-120.
- Duée M. and C. Rebillard C. 2004. "La dépendance des personnes âgées : Une projection à long terme (Older people's dependency: a long run projection)". Working Paper INSEE/Dese G2004/02.

- Engels, B., J. Geyer and P. Haan 2015. "Labor supply effects and the pension system - Evidence from a Regression Kink Design". Mimeo.
- Ettner, S. L. 1995. "The Impact of 'Parent Care' on Female Labor Supply Decisions". *Demography* 32 (1): 63-80. doi:10.2307/2061897.
- 1996. "The Opportunity Costs of Elder Care". *The Journal of Human Resources* 31 (1), 189-205. doi:10.2307/146047.
- Geyer, J., H. Buslei and P. Haan, 2015. "DySiMo: A dynamic microsimulation model for Germany". Mimeo.
- Geyer, J. and T. Korfhage. 2015a. "Long-Term Care Insurance and Carers' Labor Supply: A Structural Model". *Health Economics*, forthcoming.
- 2015b. "Long-term Care Reform and the Labor Supply of Household Members – Evidence from a Quasi-experiment". Mimeo.
- Gruber, J. and D. Wise (eds.) 2012. *Social Security Programs and Retirement around the World: Historical Trends in Mortality and Health, Employment, and Disability Insurance Participation and Reforms*. NBER Book Series – International Social Security. University of Chicago Press. <http://papers.nber.org/books/wise11-1>.
- (eds.) 2010. *Social security programs and retirement around the world the relationship to youth employment*. NBER Book Series - International Social Security. Chicago; London: University of Chicago Press.
- (eds.) 2007. *Social Security Programs and Retirement around the World: Fiscal Implications of Reform*. NBER Book Series – International Social Security. University of Chicago Press. <http://papers.nber.org/books/grub07-1>.
- (eds.) 2004. *Social security programs and retirement around the world : micro-estimation*. NBER Book Series – International Social Security. Chicago: University of Chicago Press.
- (eds.) 1999. *Social Security and Retirement around the World*. NBER Book Series – International Social Security. University of Chicago Press. <http://papers.nber.org/books/grub99-1>.
- Grundy, E. and A. Sloggett 2003. Health inequalities in the older population: the role of personal capital, social resources and socio-economic circumstances. *Social science & medicine*, 56 (5), 935-947.
- Haan, P. and M. Myck 2009. "Dynamics of health and labor market risks". *Journal of Health Economics*, 28 (6), 1116-25.
- Hanel, B. 2010. "Financial incentives to postpone retirement and further effects on employment – Evidence from a natural experiment". *Labour Economics* 17 (3), 474-86.
- Hasselhorn, H. M. and W. Apt. 2015. "Understanding employment participation of older workers: Creating a knowledge base for future labour market challenges." Research Report. Federal Ministry of Labour and Social Affairs (BMAS) and Federal Institute for Occupational Safety and Health (BMAS/BAuA), Berlin.
- He, D. und P. McHenry 2015. "Does Formal Employment Reduce Informal Caregiving?: Formal Employment Reduces Informal Caregiving". *Health Economics*, doi:10.1002/hec.3185.
- Heger, D. 2014. "Work and Well-Being of Informal Caregivers in Europe". Ruhr Economic Paper 0512. Rheinisch-Westfälisches Institut für Wirtschaftsforschung, Ruhr-Universität Bochum, Universität Dortmund, Universität Duisburg-Essen. <https://ideas.repec.org/p/rwi/repape/0512.html>.
- Heitmueller, A. 2007. "The chicken or the egg?: Endogeneity in labour market participation of informal carers in England". *Journal of Health Economics* 26 (3), 536-59. doi:10.1016/j.jhealeco.2006.10.005.
- Hernaes, E., S. Markussen, J. Piggott and O. L. Vestad 2013. "Does retirement age impact mortality?". *Journal of Health Economics* 32 (3), 586-98.
- Huisman, M., A. E. Kunst, M. Bopp, J. K. Borgan, C. Borrell, G. Costa, P. Deboosere, S. Gadeyne, M. Glickman, C. Marinacci, C. Minder, E. Regidor, T. Valkonen and J. P. Mackenbach 2005. "Educational inequalities in cause-specific mortality in middle-aged and older men and women in eight western European populations". *The Lancet*, 365 (9458), 493-500.
- Johnston, D. W. and W.-S. Lee 2009. "Retiring to the good life? The short-term effects of retirement on health". *Economics Letters* 103 (1), 8-11.

- Johnston, D. W. and W.-S. Lee. 2009. "Retiring to the good life? The short-term effects of retirement on health". *Economics Letters* 103 (1), 8-11.
- Jokela, M., J. E. Ferrie, D. Gimeno, T. Chandola, M. J. Shipley, J. Head, and M. Kivimäki 2010. From midlife to early old age: health trajectories associated with retirement. *Epidemiology (Cambridge, Mass.)* 21 (3), 284.
- Kuhn, A., J.-P. Wuellrich and J. Zweimüller. 2010. "Fatal attraction? Access to early retirement and mortality". IEW-Working Paper 499.
- Lauritzen, H. H. 2014. "Ældres Ressourcer og behov 1997-2012 på baggrund af Ældredatabasen" (Resources and needs of the elderly 1997-2012 a review of findings from the Danish Longitudinal Study of Ageing), SFI report 14:10.
- Lilly, M. B., A. Laporte and C. P. Coyte. 2007. "Labor Market Work and Home Care's Unpaid Caregivers: A Systematic Review of Labor Force Participation Rates, Predictors of Labor Market Withdrawal, and Hours of Work". *Milbank Quarterly* 85 (4), 641-90.
doi:10.1111/j.1468-0009.2007.00504.x.
- Malter, F. and A. Börsch-Supan (eds.) 2015. *SHARE Wave 5: Innovations & Methodology*. Munich: MEA, Max Planck Institute for Social Law and Social Policy.
- Marbot C. and D. Roy 2012. "Projections du coût de l'APA et des caractéristiques de ses bénéficiaires à l'horizon 2040 à l'aide du modèle Destinie (Projecting the cost of APA and characteristics of its beneficiaries at the 2040 horizon with the Destinie Model)". Working Paper Insee-Dese 2012/10.
- Mein, G., P. Martikainen, H. Hemingway, S. Stansfeld and M. Marmot 2003. Is retirement good or bad for mental and physical health functioning? Whitehall II longitudinal study of civil servants. *Journal of Epidemiology and Community Health*, 57 (1), 46-49.
- Meng, A. 2013. "Informal home care and labor-force participation of household members". *Empirical Economics* 44 (2), 959-79. doi:10.1007/s00181-011-0537-1.
- Mot, E., R. Faber, J. Geerts and P. Willeme (eds.) 2012. *Performance of Long-term Care Systems in Europe*. ENEPRI research report 117, Brussels. www.ancien-longtermcare.eu
- Neuman, K. 2008. "Quit Your Job and Get Healthier? The Effect of Retirement on Health". *Journal of Labor Research* 29 (2), 177-201.
- OECD 2005. *Long-Term Care for Older People*. The OECD Health Project. Paris.
- Rickayzen, B. and D. Walsh 2002. "A Multi-State Model of Disability for the UK: Implications for Future Need for Long-Term Care for the Elderly", *British Actuarial Journal* 8 (2), 341-393.
- Roberts, B. A., R. Fuhrer, M. Marmot and M. Richards 2011. Does retirement influence cognitive performance? The Whitehall II Study. *Journal of epidemiology and community health*, 65 (11), 958-963.
- Schaffer, S. K. 2015. "The Effect of Free Personal Care for the Elderly on Informal Caregiving". *Health Economics* 24, 104-17.
- Stephensen, P. 2013. "The Danish microsimulation model SMILE – an overview". Paper presented at 4th General Conference of the International Microsimulation Association Canberra, Wednesday 11th to Friday 13th December 2013, downloadable from http://www.dreammodel.dk/SMILE/N2013_01.pdf
- Stern, S. 1995. "Estimating Family Long-Term Care Decisions in the Presence of Endogenous Child Characteristics". *The Journal of Human Resources* 30 (3), 551-80. doi:10.2307/146035.
- van Vliet, O., J. Been, K. Caminada and K. Goudswaard 2012. Pension reform and income inequality among older people in 15 European countries. *International Journal of Social Welfare*, 21, 8-29.
- Waddell, G and A. K. Burton 2006. *Is work good for your health and well-being?* The Stationery Office, London.
- Westerlund, H., J. Vahtera, J. E. Ferrie, A. Singh-Manoux, J. Pentti, M. Melchior and M. Kivimäki 2010. Effect of retirement on major chronic conditions and fatigue: French GAZEL occupational cohort study. *BMJ: British Medical Journal*, 341.
- Wittenberg, R., L. Pickard, A. Comas-Herrera, B. Davies and R. Darton 2001. "Demand for Long-Term Care for Older People in England to 2031", *Health Statistics Quarterly* 12, 5-17.

Wolf, D. A. and B. J. Soldo 1994. "Married Women's Allocation of Time to Employment and Care of Elderly Parents". *The Journal of Human Resources* 29 (4), 1259-76. doi:10.2307/146140.