



**Consortium of Household Panels for European Socio-Economic Research**

**CHER**

## **Health, aging and retirement in Europe: A cross-country comparison using the CHER data base**

by Franco Peracchi & Francesca Tuzi

Document n° 11

2003

*Corresponding author:*

Franco Peracchi  
Faculty of Economics  
University of Rome Tor Vergata  
Via Columbia, 2  
00133 Rome, Italy  
Phone: +39 06 7259 5934  
E-mail: [franco.peracchi@uniroma2.it](mailto:franco.peracchi@uniroma2.it)

Francesca Tuzi  
Faculty of Economics  
University of Rome Tor Vergata  
Via Columbia, 2  
00133 Rome, Italy  
E-mail: [tuzi@economia.uniroma2.it](mailto:tuzi@economia.uniroma2.it)

*This publication was supported by the European Commission within the programme “Improving the Human Research potential and the Socio-Economic Knowledge Base”*

## **Comparative Research on Household Panel Studies**

This series presents the results of research projects based on the analysis of one or more household panel studies from the CHER micro database. Papers will cover the wide range of substantive topics and investigations of the particular problems of comparative research.

The series contains in papers no. 1 – 16, among other papers, the results of all of the work being carried out as part of the CHER project, which was funded by the European Commission under within the program “Improving the Human Research potential and the Socio-Economic Knowledge Base. CHER aims to develop instruments for analyzing, programming and stimulating socio-economic policies, and for comparative research on policy issues such as labor force participation, income distribution, unpaid work, poverty, household composition change, and problems of the elderly.

Coordination of the CHER project is provided by CEPS/INSTEAD, Differdange, Luxembourg.

The main partners are:

Joachim R. Frick, Deutsches Institut für Wirtschaftsforschung , DIW Berlin, Germany  
Kimberly Fisher, Institute for Social & Economic Research, ISER Essex University, Colchester, UK

The distinguished partners are:

Alain Degenne, Institut du Longitudinal CNRS-LASMAS, Caen, France  
Franco Peracchi, Centre for International Studies on Economic Growth, CEIS, Tor Vergata University, Rome, Italy  
Sergi Jimenez, Department of Economics, Universidad Carlos III, UIIIIM, Madrid, Spain  
Zoltan Fabian, Social Research Informatics Center , TARKI Budapest, Hungary  
Brunon Gorecki, Dept. of Economics, University of Warsaw, UWARS, Poland  
Ruud Muffels, WORC/TISSER, Katholieke Universiteit Brabant, Tilburg, Netherlands  
Rudy Marynissen, University of Antwerp, UIA, Antwerp, Belgium  
John Kallas, National Centre for Social Research, EKKE, Athens, Greece  
Erwin Zimmermann, The Swiss Household Panel, SHP, Neuchâtel, Switzerland

For more information about this series, or to submit papers for inclusion, contact:

Günther Schmaus  
CEPS/INSTEAD  
Anc. Bât. administratif ARBED  
Rue E. Mark, Boîte postale 48  
L- 4501 Differdange  
Tel: +352 58 58 55-509  
Fax: +352 58 55 88

e-mail: [gunther.schmaus@ci.rech.lu](mailto:gunther.schmaus@ci.rech.lu)  
url: <http://cher.ceps.lu>

## **Acknowledgement**

This research was carried out as part of the work of the *Consortium of Household Panels for European Socio-economic Research (CHER)*, within the programme “*Improving the Human Research potential and the Socio-Economic Knowledge Base*” (Project number HPSE-CT-1999-00037).

**Readers wishing to cite this document are asked to use the following form and words:**

Peracchi F. and Tuzi, F. (2003) - “**Health, aging and retirement in Europe: A cross-country comparison using the CHER data base**”, CHER Working paper 11, CEPS/INSTEAD, Differdange, G.-D. Luxembourg,.

For an on-line version of this working paper and others in the series, please visit the Institute’s website at: <http://cher.ceps.lu/>

### **Abstract**

This paper describes what the CHER data base can tell us about the economic and social conditions of the elderly across Europe. Information of this kind is very important for public policy given the rapidly growing fraction of elderly in the European population. We focus on health status, labor market activity, in particular employment and exit rates into retirement, income level and structure, home ownership and ownership durables, social relations and well-being.

*Keywords:* Health status, labor force, income, housing, social relations.

*JEL-Codes:* I10, J14

## **1. Introduction**

This paper describes what the CHER data base can tell us about the economic and social conditions of the elderly across Europe. Information of this kind is very important for public policy given the rapid growth of the fraction of elderly people in the European population.

This paper updates and extends previous work by the first author (Nicoletti and Peracchi 2001, 2003) based on the User Data Base of the European Community Household Panel (ECHP). The main advantage of using the CHER data base is that it covers seventeen European countries (fourteen countries of the European Union already included in the ECHP, plus Hungary, Poland and Switzerland) over the period 1990-2000. Among other things, this allows us to compare the current members of the European Union (EU) with two countries that will join the EU in year 2004.

The remainder of this paper is organized as follow. Section 2 describes the data set and some of its problems. In the following five sections, we broadly describe the evidence provided by the CHER data on some basic trends associated with aging. This analysis, essentially nonparametric in nature, makes use of all the available waves and computes weighted sample statistics using the cross-sectional personal weights, which are introduced to take into account sampling design and survey non participation. To control for the role played by observed individual characteristics besides age, such as sex, education and marital status, we also fit simple regression models to the data, in this case without using the survey weights. We focus attention on health status (Section 3), household size and composition (Section 4), labor market activity (Section 5), income (Section 6), home ownership (Section 7), and social relations and well-being (Section 8). Finally, Section 9 offers some conclusions.

## **2. Brief description of the CHER data**

The CHER data base is obtained by ex-post harmonizing the information obtained from national longitudinal household surveys conducted in a number of European countries. The current version of the CHER data extends the information contained in the ECHP because, in addition to fourteen EU countries included in that survey (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and the UK), it also covers Hungary and Poland that will join the EU in 2004, plus Switzerland. The CHER data on Austria, Denmark, Finland, France, Greece, Italy, Ireland, Netherlands, Portugal and Spain are directly obtained from the ECHP. For all other countries, the data come from national surveys, namely the Panel Study on Belgian Households (PSBH)

for Belgium, the German Socio-Economic Panel (SOEP) for Germany, the Hungarian Household Survey (HHS) for Hungary, the Panel Socio-Economique Liewen zu Letzebuerg (PSELL) for Luxembourg, the Household Budgets Survey (HBS) for Poland, the Swiss Household Panel (SHP) for Switzerland, and the British Household Panel Survey (BHPS) for the UK.

The data currently contained in CHER span a period of eleven years from 1990 to 2000. The set of countries included is not the same across waves, however, and only limited information is available for the years 1990–1993 and 2000. In particular, the CHER data for the year 1990 only include Germany, those for the year 1991 only include Germany and the UK, those for the years 1992 and 1993 only include Belgium, Germany, Hungary and the UK, whereas those for the year 2000 only include Germany, Luxembourg, Poland, Switzerland and the UK. For this reason, we decided to focus attention on the years 1994–1999, for which information is available for all countries except Switzerland<sup>1</sup>.

The CHER data base collects information at both the personal and the household level. The 1994 data contain information on about 145,000 individuals belonging to 66,900 households in 13 countries<sup>2</sup>. Data from each country are harmonized using a common set of rules, and then organized by topics. Data files are structured for a two-level analysis, the household and the individual, and the sample information covers the following topic: demographics, education and training, activity status, employment, income, expenditure variables, household durables, housing, health, social relations, and subjective variables related to well-being. Information at both the household and the individual level is affected by the missing data problem, which often limits the range of cross-country comparisons. The problem is particularly severe for health, since information on this topic is missing almost completely for Poland and Hungary.

Table 1 shows the available sample size in 1994, 1996 and 1999 for the two subsamples that represent the focus of the present paper, namely people aged 50–69 and 70+.<sup>3</sup> Italy and Spain are the two countries with the largest sample size, while Denmark and Hungary are those with the smallest. For both subsamples, the wide variation across countries reflects both differences in the planned sample size in the first wave and differential nonresponse and

---

<sup>1</sup> Even after confining attention to the period 1994–1999, we do not have complete information for all the countries. In fact, data for Luxembourg and Austria are not available for the year 1994, data for Finland are only available for the years 1996–1999, whereas for Hungary data are not available for the years 1998 and 1999.

<sup>2</sup> We are referring to data contained in the personal files.

<sup>3</sup> For the countries whose information comes from the ECHP, age is subject to top-coding. More precisely, the year of birth is censored at 1909 (1924 for Germany).

attrition across waves. Denmark, Hungary and Ireland are the countries with the greatest loss of sample participants relative to the initial wave, respectively 27, 39 and 32 percent for the subsample of individuals aged 50-69, and 39, 28 and 27 percent for the subsample of individuals aged 70+.

### **3. Health status**

In the last twenty years, increasing attention has been placed on the role of health status in affecting different economic aspects of life. In particular, an extensive literature has investigated the relationship between health and labor market decisions, focusing on the role of decreasing health as one of the key determinants of early exit from the labor market. Health status also affects other aspect of life. For example, the socialization process and the level of well being are strictly related to health status. Further, health (along with income) affects the patterns of expenditure on a variety of goods, ranging from tourism to medical services.

The first theoretical paper where health is treated as an endogenous process is Grossman (1972). In his pioneering model, Grossman argues that “...the level of health of an individual is not exogenous but depends, at least in part, on the resources allocated in its production”. Individuals demand health for two reasons: as a consumption commodity, health directly enters in their preference (in the sense that sick days are source of disutility), whereas as an investment commodity, it determines the total amount of time available for market and non market activities.

The analysis of the health-retirement relationship is known to be very sensitive to the way in which health status is measured. A large part of the recent literature focuses on evaluating whether objective or subjective measures are more appropriate<sup>4</sup>. Generally, supporters of objective measures stress the advantages of these indexes in terms of comparability across individuals. They also stress the fact that they do not require a self-assessment and therefore are not subject to reporting errors. The main drawback of these indicators is that they may be only weakly correlated with the variable of interest, because of measurement error problems. On the other hand, supporters of subjective health measures find that these measures are in fact highly correlated with objective measures of health status. However, since they consist of personal evaluations, a number of potential problems can

---

<sup>4</sup> An original and rigorous exposition on the advantages and disadvantages of using the different health measures is contained in Bound (1990).

arise. First, since respondents are asked to provide a subjective evaluation, it is plausible that responses may not be entirely comparable across individuals. Second, self-reported health measures may be not independent of the phenomena that the investigator is trying to analyze, for example because of “justification bias”.

### **3.1 A preliminary descriptive analysis**

By recognizing that health status plays an important role in determining the labor market outcomes of elderly people,<sup>5</sup> and taking into account the empirical problems associated with the two different kinds of health measures, we conduct the analysis using the set of indicators of health status provided by CHER. Three of them are of a subjective nature, namely an indicator of chronic health problems (“does the respondent have a chronic condition?”), an indicator of health-related limitations on daily activity (“does any health problem limit the respondent’s daily activity?”) and subjective health status (classified in five categories, namely excellent, good, fair, poor, and very poor). Notice that people are asked to report their status in absolute terms, not in relative terms (e.g. relative to people of the same age, social status, etc.). The other four indicators are more objective, namely the number of visits to a doctor (excluding dentist) in the last year, the number of nights spent in hospital in the last year, the number of visits to a dentist in the last year, and whether the respondent is a smoker. For this last indicator, differently from the ECHP, no distinction between cigarettes, pipes, cigars is made and no information on past smoking habits is available.

A serious problem with the CHER data is the limited amount of information on health for Hungary and Poland. The only information available for both countries is the indicator of chronic health problems. Additional information on the number of nights spent in hospital is available for Hungary but not for Poland, whereas the information on being a smoker is available for Poland but not for Hungary. In both cases, however, the fraction of missing data is very high, especially for the smoking question, severely limiting the inferences that can be made.

Figures 1–4 show, for the countries where the necessary information is available, and separately for gender, the age profile of four synthetic measures of personal health status, namely the fraction of people who report themselves in poor or very poor health, the fraction of people who report to having health problems that limit their daily activity, the fraction of people who report having chronic health condition, and the fraction of people who report

---

<sup>5</sup> See for example Sickles and Taubman (1986). For a discussion of the reverse causality running from economic variables to health status, see Deaton (2003).



having spent at least one night in hospital in the last year.<sup>6</sup> For a subset of EU countries, Figures 5 and 6 report the age profile of two additional health measures, namely the fraction of people who, respectively, went to the doctor or to the dentist during the last year. All figures are obtained by pooling all the available waves and computing weighted frequencies using cross-sectional personal weights. These weights are introduced to correct for sampling design and survey nonparticipation.

All figures show, for both genders, a deterioration of health status with age, which is to be expected since people are asked to report their health in absolute terms, and not relative to the group to which they belong. Interestingly, self reported health status tends to be worse in Southern European countries. This is in sharp contrast with the available evidence on life expectancy at various ages, which tends to be higher in these countries relative to the European average. Figure 1 shows no evidence of differences between men and women in subjective health status, except for Finland and Portugal, where health is better for men than for women at all ages. Differences by gender emerge instead from Figures 2 and 3, where the fraction of individuals affected by health-related limitation or chronic conditions is in general higher for women than for men. This happens in particular in the age range 65-80 for Ireland, Netherlands, Spain and United Kingdom and in the age range 50-80 for Denmark and Portugal, and Hungary with respect to chronic condition. Finally, the fraction of people who respectively went to the doctor or the dentist follow opposite patterns, the first increases with age while the second decreases with age. Differences among sexes are evident for almost all country by Figure 5, where the fraction of women went to the doctor is higher than that of men at all ages. That, is likely to be related to a higher attitude of women of attending to family related medical events.

### 3.2 Modeling the probability of being in bad health

To understand the role played by other factors besides age, we estimate simple models for the conditional probability  $p(X)$  of being in bad health given observable individual characteristics  $X$ . We carry out the analysis using two different indicators of health status, the subjective health status indicator and that related to limitation on daily activity. Because of the lack of data, Poland and Hungary are excluded from our analysis.

---

<sup>6</sup> We do not take into account the information on the number of nights spent in hospital for those who have been hospitalized. An odd feature of the CHER data is that all Germans in the sample appear to have spent at least one night in hospital during the previous year.

Our basic model for the dependence of  $p(X)$  on  $X$  is a standard logit model of the form  $p(X) = \exp(\alpha + \beta' X) / [1 + \exp(\alpha + \beta' X)]$ , where  $\alpha$  and  $\beta$  are parameters to be estimated and the covariate vector  $X$  includes age, age squared, equivalized household income<sup>7</sup>, and indicators for being a female, the highest level of completed education (2 dummies, one for college and one for secondary education) and not having a spouse. The intercept  $\alpha$  corresponds to the log-odds of the dependent variable (being in poor health and limited in daily activity) for a man aged 60, married, with primary education completed and personal income equal to the country median for people aged 50 and more.

We begin by presenting the results obtained using self-reported health status. The main advantage of this indicator is the fact that it is available for all countries except Hungary and Poland. The outcome variable for the logit model takes value one if a person classifies herself in poor or very poor health, and value zero otherwise.

Table 7 reports the results obtained by fitting the model, separately by country, to the sample of individuals aged 50-69. The results confirm the finding of our nonparametric analysis that the probability of being in bad health tends to increase with age<sup>8</sup>. Except for Belgium, Finland, Greece and United Kingdom, whose parameters are not significant, and Austria and Ireland, where women are less likely to be in bad health, in all other countries women are more likely to be in poor health than men. We also find that the probability of being in good health is strongly positively related to educational attainments and, with the exception of Italy and Portugal, it is significantly higher for people with third level education. Except for Portugal, married people are more likely to be in good health than people who do not have a spouse. Household income is found to have an important effect, even after controlling for schooling attainment and marital status. In fact, the probability of being in bad health falls significantly with equivalized household income. A comparison of the estimated intercepts shows that the baseline odds of being in bad health are lowest in Ireland and the Netherlands, and highest in Germany and Portugal. The relatively low value of the pseudo  $R^2$ , however, is an indicator that other factors, not included in our model, are important in affecting the probability of being in bad health.

Table 8 reports the results obtained when the outcome variable is the health-related limitations indicator<sup>9</sup>. The results are very similar to those in Table 7. The probability of being hampered increases with age, and is lower for people that are married, have higher schooling

---

<sup>7</sup> Details on the way in which this variable was constructed are contained in Section 6.

<sup>8</sup> The only exception is for United Kingdom, where the estimated parameter is not significant.

<sup>9</sup> The use of this indicator entails the loss of Luxembourg, in addition to Hungary and Poland.

levels or higher income. Germany appears to be an exception, as not having a spouse is negatively related to the probability of being hampered. Lastly, the estimated intercepts show that the baseline odds of being hampered are lowest in Italy and Greece and highest in Germany and Finland.

#### **4. Household size and composition**

In this section we focus on how aging affects the size and composition of a household.

Table 2 shows the average household size (number of household members) and the average number of adults (number of household members aged 16+) by country, sex and age group. For all age groups, household size (top part of the table) tends to be larger for men than for women. Household size is largest for Austria, Greece, Ireland, Italy, Poland, Portugal and Spain. In particular, in the age range 50-69, Spain is the country with the largest households, ranging from 4 components at age 50-59 to about 3 components at age 60-69. Denmark, Finland and Germany, on the other hand, are among the countries where household size is smallest (only two components on average). For people older than 70, the largest household size is found in Poland, the smallest in Denmark and Netherlands. Qualitatively, the results for the average number of adults per household (bottom part of the table) are very similar. The difference between the total number of household members and that of adults, which measures the number of household members aged less than 16, is negligible at each age and for almost all countries. The only exception is Poland, where the difference is significant at all ages.

Figures 7 and 8 show the age profiles of the household size and the average number of adults for men and women respectively. Both measures tend to decline rather smoothly with age until about age 80 when, in most countries, they tend to increase, especially for women.

#### **5. Labor market activity**

We use the information on current labor force status contained in CHER to classify people into three mutually exclusive categories: normally working, unemployed, and inactive (or out of labor force). The individuals normally working are those who at least 15 hours. This category includes “unpaid family workers, homemakers or students working although mainly engaged in non-economic activities, individuals temporarily absent from work (e.g. on holidays or vacation, illness or injury, strike or lock-out, educational or training leave,

parental leave, reduction in economic activity, temporary disorganisation or suspension of work)". It also includes "...those who work 15+ hours only in a second job". CHER departs from the International Labour Office (ILO) convention by considering as employed only those who work at least 15 hours per week. Unemployed people are those "without work with an intention to work, actively seeking or recently looking for a job, and able to start working within 2 weeks". Finally, the inactive is the residual category consisting of those who are neither employed nor unemployed<sup>10</sup>.

In this section we focus on the age profiles of employment rates and the movements from employment to either unemployment or inactivity. We are mainly interested in documenting cross-country differences in the characteristics of the retirement process, and how they relate to observable individuals characteristics.

## 5.1 Employment and unemployment rates

Tables 3 and 4 compare employment and unemployment rates by country, sex and age group. The fraction of people who are employed is very small after age 65. Except for Denmark, Greece, Hungary, Ireland, Portugal and United Kingdom, employment rates are less than 10 percent in the age range 65-79 and, after aged 80, they drop to essentially zero in all countries. In general, the employment rates tend to be lower for women than for men at all ages. Except for a few countries (Germany, Hungary and Poland), the unemployment rates tend to increase with age, at least in the age range 50-79, and, at least in this age range, they tend to be higher for women than for men. After age 80+, for most countries the unemployment rates tend to become negligible, as effect of the fact that all individuals eligible for retirement, even if unemployed, are classified out of the labor force.

Figures 11 and 12 show the age profile by sex of the distribution of the population by labor force status. In each country, the aging process is associated with a decline in the fraction of people who are employed and a corresponding increase in the fraction of those who are out of labor force. The various countries differ from each other in the initial levels of the two profiles and in their subsequent slopes at various ages. Important differences among sexes exist in the initial levels for both employed and unemployed people. In particular, at age 55, the fraction of women who are employed is substantially lower than for men. In general, the fraction of employed people tends to decrease rapidly after age 55, as people start taking advantage of various ways of exiting the labor market (early retirement, disability

---

<sup>10</sup> On the arbitrariness and ambiguity of these definitions, see Jones and Riddell (1999).

programs, etc.). Interestingly, for Hungary, the employment levels after age 55 are unusually higher than the average level for all other countries<sup>11</sup>.

The fraction of unemployed individuals also tends to decline with age, although in some countries (Belgium, Denmark, Finland, France, Germany, Hungary, Poland and Spain) it rises again immediately before age 60. This phenomenon largely reflects the role played by unemployment insurance as one of the pathways of anticipated exit from labor force. In fact, the fraction of people unemployed drops to almost zero in all countries around the age of eligibility for early retirement benefits, lending some support to the view that, at least for the elderly, unemployment and inactivity are not behaviorally distinct labor force status<sup>12</sup>.

To control for the effect of observable individual characteristics, Table 10 shows the estimates of a simple logit model for the probability of employment, fitted separately by country and sex, on the sample of individuals aged 50-69. The model includes among the covariates a cubic polynomial in age, indicators for educational attainments (two dummies, one for college and one for secondary education), not having a spouse and bad health. The intercept of the model corresponds to the log-odds of being employed for a man aged 55, married, in good health and with only primary education completed.

The estimation results contained in Table 10 agree with the nonparametric estimates of previous figures and tabulations. For all countries and both genders the probability of being employed decreases with age. In all countries except Greece for men, employment probabilities increase with schooling attainments and are significantly higher for people with tertiary education (college degree). Excluding United Kingdom, for which the estimated parameter is not significant, people in bad health are also less likely to be employed. Another common feature is the different effect of marital status on the employment probabilities of men and women: not having a spouse tends to reduce employment probabilities for men, whereas, except in Denmark and Finland, for women the effect is just the opposite.

## 5.2 Exit into retirement

We now take advantage of the longitudinal nature of the CHER data to study cross-country differences in exit rates from employment into retirement (broadly defined as being either unemployed or out of the labor force) over a one-year period, for individuals aged 50-64 in the initial year, as a function of sex, age and other personal characteristics.

---

<sup>11</sup> It could depend on the way in which data are collected, and in particular on how people are categorized in the different labor force status.

<sup>12</sup> See Flinn and Heckman (1983).

Figure 13 shows the exit rates from employment by sex and age, estimated by pooling all the available pairs of waves. For some country, the small size of the available sample leads to noisy estimates of the retirement rates. For most countries, these nonparametric estimates reveal the presence of peaks in the retirement hazard at certain ages, typically age 55, age 60 and age 65. This pattern is typically explained as the results of Social Security rules, which induce concentration of exit at certain ages<sup>13</sup>. Exit rates from employment before age 55 are generally higher for women than for men. We do not consider exit rates from either unemployment or inactivity into employment because in all countries, except probably the UK, inactivity is an absorbing state, with exit rates that decline rapidly with age and become negligible for both men and women after age 55.

Table 11 shows the estimates of a logit model for the probability of leaving employment. As in the previous sections, results are presented separately by country and sex<sup>14</sup>. The covariate vector now contains a linear trend in age, indicators for the critical ages of retirement (age 60 and age 65), indicators for educational attainments (2 dummies, one for college and the other one for secondary education), not having a spouse and bad health. The intercept of the model corresponds to the log-odds ratio of leaving employment for a man aged 62, married, in good health and with only primary education completed.

Qualitatively, the behavior of these estimates agrees with the non parametric results of Figure 13. Retirement rates increase with age in all countries. The dummy age 60, for the critical age of retirement, is significant in most cases for both men and women. As opposite, that related to age 65 is significant for men but only in few cases for women, probably reflecting the fact that women tend to leave the labor force market earlier than men. In most countries, and in particular for men, retirement rates decrease with educational attainment and, except for German and Irish men and Belgian, English and Italian women, they are significantly lower among people with college degree. People in bad health are generally more likely to leave employment, while the probability of leaving employment over a one-year period is affected by marital status only for a few countries (Finland, Greece and Spain for men and Italy, Netherlands and Spain for women). The effect of marital status tends to work in opposite direction with respect to the gender, men without a spouse are more likely to leave employment whereas the opposite is true for women.

---

<sup>13</sup> See Gruber and Wise (1999) for details.

<sup>14</sup> Because of the non availability of information on health status, Hungary and Poland were excluded from the analysis.

## 6. Income

In addition to changes in health status and the allocation of time to market and non-market activities, the aging process is associated with important changes in the level and composition of income. Standard measures of the level of income are total household income, total equivalized household income and total personal income. Equivalized household income, defined as total household income divided by the number of “equivalent adults” in the household, is an attempt to measure the amount of resources available, on average, to each household member. In this paper, we do not explore how results may be sensitive to the choice of equivalence scales.

In general, the CHER data provide detailed information on household income, but only limited information on the different sources of personal income. Further, for all countries but France, income components are measured net of payroll and personal income taxes. The CHER data distinguish between five broad sources of household income, for which we have detailed information on the individual income components: “income from work” (employment and self-employment), “income from pensions” (old age related and survivors benefits), “non-pension public transfers” (unemployment benefits, disability benefits, family and other transfers), “other sources” (educational and other transfers, private transfers, income from other sources), and “non-work private income” (income from sales and agriculture, and income from property). At the personal level, however, we only have detailed information on income from work and income from pensions, plus the amount of unemployment benefits, health and disability benefits and educational transfers.

To homogenize income variables for the different countries, the original data have been converted to 1998 prices and a common scale by using purchasing power parities.

### 6.1 Level and composition of income

Table 5 contains information on the three different measures of income: total household income, total equivalized household income and total personal income. CHER contains an “approximate” measure of total personal income obtained by adding up income from employment, wage and salary, income from self-employment, unemployment benefits, health and disability benefits, pension income, and educational transfers.

Table 5 reveals large cross-country differences in median incomes at all ages. Luxembourg, Ireland and Austria represent the “richest” countries, whereas Poland and Hungary are those with the lowest income levels. Cross-country variability of median

household income tends to decline with age, but there is little evidence of cross-country convergence for the other two income measures. For all countries considered, median incomes tend to decrease with age and at age 80 it is about half its level at age 50. Although this phenomenon also reflects pure cohort effects, most of it appears to be a genuine feature of the life cycle. In all countries, the reduction in household income is at least partly offset by the parallel reduction of the household size. Thus, the median of equivalized household income falls much less, and in some countries (Italy and Spain) hardly changes with age. Finally, the pattern of median personal income is intermediate between the one of household income and equivalized household income.

The bottom part of Table 5 contains information on the variability of income, represented by the interquartile range of the three measures at ages 50, 60, 70 and 80. The general pattern is the decreasing variability with age, especially in the case of personal income. In some countries, especially the Southern European countries, the sharp reduction in the variability of personal income is concentrated around the ages where retirement typically occurs.

Figures 14 and 15 show the distribution of the different sources of personal income distinguished by sex and age. Comparing them with the distributions of labor force status in Figures 11 and 12, we observe substantial changes in the composition of personal income, very similar to these observed for the labor force status at different age. As the employed rates fall and the fraction of inactive people increases, the importance of earnings on the total personal income falls and that of pension income rises. Important differences among sexes exist in the initial levels for both labor income and pension income. In particular at age 55 the levels of labor income (pension income) are higher (lower) for men than for women, and immediately after that age, labor income (pension income) tends to decrease (increase) quicker for women, probably reflecting the earlier exit from labor market of women with respect to men. Interestingly, for all countries except Greece and Italy and for both sexes, other types of transfers, namely disability and unemployment benefits, play an important role over the age range 55-65, where most of the transition from activity to inactivity takes place, and become negligible afterwards. The role of the other income sources is instead negligible.

## **6.2 Poverty**

The problem of poverty among the elderly is of great concern for public policy. The issue is controversial, however, because of the lack of agreement on how poverty should be measured. In this section we follow one of the possible approaches and define poverty in



relative terms, namely as having an equivalized household income that falls below a country-specific “poverty line” defined as a given fraction of the country-specific median equivalized household income. Even following this approach does not solve all problems, however, as there is no clear consensus on how household income should be scaled and where to draw the poverty line. As far as the first problem is concerned, we simply adopt the modified OECD scale. With regard to the second problem, we explore the sensitivity of the results to different income cut-offs.

Figures 16 and 17 reports the incidence of poverty, by gender and age, in the EU and non EU countries under three alternative cut-offs, namely 40%, 50% and 60% of median equivalized household income. The last of the three corresponds to the “poverty line” adopted by the European Commission. For each country, median income has been computed by pooling all the available waves and adjusting by the sample weights. Except for Austria, Greece and Portugal, which follow a monotonic increase with age, and United Kingdom characterized by an opposite pattern, all other countries show no recognizable pattern. Significant differences among sexes are not evident, except for German men which show a very strange pattern after age 80. Our general conclusion is that, apart from German men, Greece and Portugal, it does not seem to be evidence of strong worsening in the poverty levels at older age and then that poverty does not seem to be a problem among elderly.

In the following sections we focus attention on two main income sources of the elderly, namely wage and salary earnings and old-age related pensions. We present evidence on cross-country differences in the structure of these income components, that is, on the differentials by sex, age, and other observable individual characteristics, and on replacement rates by sex, age and education.

### **6.3 Structure of earnings**

Table 13 and 14 present the results obtained by the estimations of simple median regression models for the logarithm of annual wage plus salary earnings divided by number of months an individual is employed in a year. With the exception of France, for all other countries, wages and salaries are expressed net of taxes and social security contributions, at constant 1998 prices and converted to a common scale by using purchasing power parities. The choice to use a median regression instead of a classical mean regression is justified by the fact that the first one offers some protection against outliers and makes the interpretation of the results somewhat easier. The models specify the conditional median of the logarithm of

wages and salaries given a vector  $X$  of observable individual characteristics as  $m(X)=\alpha+\beta'X$ , with  $\alpha$  and  $\beta$  parameters to estimate and  $X$  vector of covariates including educational attainment, health, marital status and a dummy for gender, plus, for the specification of Table 13 a linear trend in age and a cubic polynomial in age, and for the specification in Table 14 two indicators for potentially labor market experience<sup>15</sup>. The intercept  $\alpha$  corresponds to the logarithm of the median monthly earnings for a worker aged 62, married, with 40 years of labor market experience and only primary education completed<sup>16</sup>.

The sample of reference is represented by full-time employed individuals with age between 50 and 69. Because of the non availability of information for Italy, Netherlands, Finland, Greece and Spain, we didn't exclude from the analysis individuals employed in agricultural sector. Further, information on the number of months an individual was employed, unemployed or inactive in the last year is not available for Netherlands, we adopted the convention of dividing the annual wage plus salary earnings by 12 for this country. Lastly, the exact year when an individual left last main job is unknown for some Belgian individuals (those who stopped before 1993 and before 1995), we gave to them respectively 1993 and 1995 as retirement year.

The estimated standard errors have been computed under the homoskedasticity assumption. Tables 13 and 14 also report a measure of goodness of fit ( $R^2$ ) computed, by analogy with ordinary least squares, as complement to 1 of the ratio between the mean absolute regression residual and the mean absolute deviation of the log earnings from its median. For both specifications almost all the estimated coefficients have the expected sign. In particular, earnings increase with educational attainments (often substantially, as in Austria, France, Ireland, Portugal and Spain) and tend to be lower for women, people in bad health and without a spouse. The variables related to age and experience have in general the expected sign and are statistically significant (especially that of experience). Important differences among countries and gender are point out by the large variability of the estimated coefficients. What account for these large differences across countries, in particular the relative importance of the market forces, institutional settings and measurement problems, is an open issue.

---

<sup>15</sup> We constructed the variable experience as difference between the current age and the one at which the person started the working life.

<sup>16</sup> Because the median is equivariant under increasing transformations, it then follows that the exponential of the intercept  $\alpha$  corresponds to median monthly earnings for a worker aged 62, with 40 years of labor experience and primary education.

## 6.4 Structure of pensions

Table 14 shows the results obtained by the estimation of a simple median regression model for the logarithm of net monthly old-age benefits, defined as the annual benefits divided by number of months an individual was inactive in the last at constant 1998 prices and converted to a common scale by using purchasing power parity.

The model for the logarithm of old-age benefits is very similar to the one discussed in the previous section, except that the covariates vector now contains the number of years since retirement (defined as the difference between the current year and the year the person stopped working in the last job), the length of working career, indicators for educational attainment (2 dummies, one for college and one for secondary education), not having a spouse and a dummy for the sex. The intercept of the model corresponds to the logarithm of median monthly benefits for a new retiree, married, with a working career of 40 years and only primary education completed. The model has been fitted jointly for men and women, on a sample of individual aged 50-69, who have been retired for at least one year. As before, the estimated standard errors have been computed under the homoskedasticity assumption.

As for the logarithm of earnings, the logarithm of the pension benefits increases with educational attainments and is higher for men, for individuals with college degree and in better health. In particular, the sign and magnitude of the estimated coefficients on education are very similar to those of Tables 13 and 14, which is exactly what one would expect if pension benefits were roughly proportional to lifetime earnings, as in the case for most countries considered. Notice that, despite the progressive nature of most benefit formulae, the differences by education tend to be larger for pension than for earnings. This means that, at least along the educational dimension, pre-retirement inequalities in the distribution of earnings are actually accentuated after retirement.

Also notice that for Finland, Greece and United Kingdom the coefficient on the number of years since retirement tends to be positive. For these countries, the order and magnitude of the coefficient appears to be roughly consistent with the indexation of outstanding pension real productivity growth

Apart from Finland, Germany and United Kingdom, where old-age pensions is positively affected by the length of working career, in all other cases, a very puzzling result is suggested by the sign of the coefficient where it is significant. Finally, the sign of the marital status coefficient is ambiguous, individuals without spouse tend to have higher pensions than those

with spouse in France, Greece, Netherlands and United Kingdom, while the opposite is true for Ireland, Italy and Spain.

## 6.5 Replacement rates

In this section we exploit the longitudinal nature of the CHER data to study the extent to which pensions of retirees replace pre-retirement earnings. The replacement rates, defined as the ratio of post-retirement pension benefits to pre-retirement earnings, play an important role in public policy debate because they provide a simple and easily understandable measure of the income-smoothing role of pensions.

Replacement rates are not directly available in the CHER data, and must be approximated by some method. We compute the replacement rates of employees (the self-employed are excluded) using the labor market history available for each individual. We only consider people who switched from employment to out of the labor force only once during the period for which they are observed. We then locate the year of retirement by using the self-reported information on labor force status by month in the year before each interview. Finally, we compute the replacement rate by taking the ratio of monthly pension benefits (annual pension income divided by the number of months out of the labor force) to monthly earnings (annual earnings divided by the number of months employed).

Pension income only includes old-age pensions, while earnings consist only of wage and salary earnings. Except for France, all incomes are expressed net of taxes and social security contributions and have been converted to constant prices using country-specific consumer price indices<sup>17</sup>. We excluded Netherlands from the analysis, since information on the number of months an individual was employed, unemployed or inactive is not available and Belgium, Finland, Hungary, Ireland, Luxembourg, Poland and United Kingdom because of the small sample size. In fact, even with six waves available, the available sample sizes are quite small, ranging from a minimum of 20 observations for Belgium to a maximum of 257 observations for Italy<sup>18</sup>.

Table 15 shows the results obtained by the estimate of a median regression model for the logarithm of the replacement rates fitted separately by country. The covariates in the model

---

<sup>17</sup> If the ratio between net and gross earnings equal the ratio between net and gross pension benefits, then the replacement rate for France should not be affected by the fact the income is gross instead of net.

<sup>18</sup> The small sample size is likely to be also affected by the way in which we identify transitions into retirement using the information on the number of months spent in each different labor force status. In fact, the information on the number of months employed, unemployed or inactive is affected by high non response rates. Further, because we focus attention on those who make a single transition from the labor force into retirement, we miss a large set of people who appear to alternate between employment and out of the labor force.

include age, the length of the working career, pre-retirement earnings<sup>19</sup>, indicators for females, educational attainment and not having a spouse. The intercept corresponds to the median replacement rate for a married man aged 62 at the time of retirement, with a work career of 40 years, only primary or lower secondary education completed, and pre-retirement earnings equal to the country median for a new retiree aged 50-69. The exponential of the intercept is the estimated median baseline replacement rate. It ranges between a minimum of 54% in Germany and 65% in Denmark to 96% in Austria. The median regression shows that in all countries except Portugal, the replacement rates are highly and negatively affected by pre-retirement earnings, that is, in all countries pension benefits increase less than proportionally with respect to pre-retirement earnings, this effect is particularly strong for countries like Denmark.

Everything else equal, people with higher education tend to have higher replacement rates, even if this effect is significant only in few countries (Italy, Portugal and Spain). On the other hand, the coefficients on age, length of work career and not having a spouse, although quite different across countries, are not statistically significant in general. Differences among sexes, are significant only in few cases (Austria, Germany and Italy), where women are characterized by lower replacement rates.

## 7. Housing

The CHER data base provides only limited information on wealth. In particular, only information at the household level is available, and information on financial wealth is completely missing. In this section, we consider one special aspect of wealth holding, namely home ownership.

Figures 9 and 10 show by sex and age, the fractions of individuals living in a home owned by the household, those who live in a rented home and those for whom the accommodation is provided rent-free<sup>20</sup>. The percentage of homeowners varies widely by countries, it tends to be lower for Germany and Poland and higher for Ireland and for Southern European countries. In some countries we observe a steady decline in home ownership after age 50 and a parallel increase in the fraction of elderly people living in rented homes, this is particularly evident for Denmark, Netherlands and United Kingdom. In no country, except Poland, we see a trend towards increasing home ownership with age 50. This

---

<sup>19</sup> Pre-retirement earnings enter the model as the ratio to median pre-retirement earnings for the estimation sub-sample.

<sup>20</sup> Sample frequencies are computed by pooling all the available waves and using cross-sectional personal weights.

evidence may be viewed as lending support to the life cycle hypothesis, which predicts some form of asset decumulation at older age. In general, the fraction of individuals living in rented homes tends to be higher for women than for men.

To control for the effect of observable individual characteristics, we also consider a standard logit model for the probability of home ownership, defined in broad sense by including the case when the dwelling is provided free of rent. The covariate vector consists of age, age squared and indicators for sex and educational attainments, not having a spouse and bad health. The intercept of the model corresponds to the log-odds of home ownership for a person age 62, married, in good health and with only primary education completed.

Table 9 reports the estimation results obtained by fitting the model separately for country on the sub-sample of people aged 50-69. Increasing the age positively impacts on the probability to have an own house for Austria, Finland, France, Germany, Greece, Ireland and Italy, while the opposite is true for Netherlands, Spain and United Kingdom. Except for Austria, Greece and Spain, education attainments increase the probability to be home ownership. Not having a spouse and being in bad health negatively affect the probability of home ownership. The effect of gender is not always statistically significant and the direction of the effect is ambiguous, women are more likely to have an own home in France, Germany, Greece, Italy and United Kingdom, while the opposite is true for Austria, Denmark and Netherlands.

## **8. Social relations and well-being**

In this section we focus attention on how indicators of satisfaction with certain aspects of life and relations with other people change with age and other demographic factors. The CHER data base provides measures of satisfaction with five aspects of life: work or main activity, income or financial situation, housing, health, and life in general. It also provides four measures of the way in which individuals socialize with others: the frequency the respondent talks to neighbors, the frequency she sees friends, whether she is a member of a club or social group, and whether she attends religious services. Because information on satisfaction with health and life in general, membership of clubs or organizations, and participation to religious services is only available for a few countries, we decided to omit these variables from our analysis and focus on satisfaction with work or main activity, income or financial situation and housing, and on frequency the respondent talks to neighbors or sees friends.

## 8.1 Variables related to satisfaction

Figures 18 to 20 show the age profile of the three synthetic measures of personal satisfaction: satisfaction with work or main activity, satisfaction with income or financial situation and satisfaction with housing. Figures are distinguished by sex and constructed on the sample of people aged 50-80, data are obtained by pooling all the available waves. We recoded the five-categories indicator of personal satisfaction in a two categories indicator ranging from satisfied (including completely satisfied and somewhat satisfied) to neutral or not satisfied (including neutral, not at all satisfied and somewhat dissatisfied).

Figure 18 shows the profile by sex and age of the satisfaction with work or main activity. Apart from Germany, there is not clear evidence of deteriorating of satisfaction with age, in fact, immediately after the early retirement age and until age 70, people belonging to most countries (Belgium, Finland, France, Hungary, Netherlands and United Kingdom) seems to be more satisfied with her working life. However, countries substantially differ in the initial levels and subsequent slopes at various age, in general countries belonging to the Mediterranean area (Italy, Portugal and Spain in particular) seem to be more dissatisfied. Apart from Finland, Germany and Hungary, men are more satisfied than women at all age. A very similar picture is given by Figure 19 and 20, again, there is no clear evidence of deteriorating of satisfaction with income and housing with the ageing process.

With the purpose to analyze the possible effect of retirement on the satisfaction with previous aspects of life, we used the information on the location of the retirement date obtained in section 6.3, to analyze the patterns of satisfaction before and after the retirement age. Figures 21-23, by analogy to Figures 18-20, present the age profiles of the three measures of satisfaction. Because of the small sample size, data for men and women were pooled. Apart from Germany, which shows some peaks down at certain ages, for all three measures, and Austria and United Kingdom, the patterns of satisfaction do not seem to be in general affected by the exit from the labor market. For all three considered measures no evidence of systematic differences between the behavior before and after the age of retirement is recognizable and in particular satisfaction does not peak down after the retirement as one should expect.

## 8.2 Socialization process

In this section we investigate social relationships by focusing attention on information contained in the following measures: the frequency the respondent talks to neighbors and the

frequency she sees friends. We classify an individual as available to socialize if he/she talks or see friends not least of once or twice for month, whilst not available to socialize if the frequency to talks or see friends is less than once per month.

The fraction of people who talk with neighbors more than one time for month is very high at all age and for all countries, although, except for Greece and Ireland, a slight tendency to a decreasing pattern after age 70 characterize all others. Except for France, Italy and Portugal, differences among genders are negligible. Cross-country differences are instead noticeable for the variable frequency to see friends. Large differences across countries are observable either at initial levels and subsequent slopes for Austria, France, Italy, Portugal, Spain, where the fraction of people available to socialize decreases more than proportionally after age 70.

As in previous section, Figures 26 and 27 compare the frequency to see friends and talk with neighbors before and after the retirement age with the purpose to analyze if socialization process is affected in same manner by the retirement decision. Except for few countries (Denmark, Italy and Spain for the frequency to talk with neighbors and Italy for the frequency to see friends) it does not seems that retirement negatively impacts on the frequency to see friends and talk with neighbors, in fact, at certain ages and in most cases the fraction of individuals who socializes after the retirement decision tends to be higher than that before the exit from labor market.

To understand the role of factors other than age on the availability to socialize, we estimated a simple logit model by using as proxy for the socialization, the availability to see friends. Table 16 shows the results obtained by fitting the model jointly for sex, to the subsample of individuals aged 50-69. We excluded from the analysis, Hungary, Luxembourg and Poland, for which information on the frequencies to see friends was not available. The model includes among the covariates age, age squared, an indicator for gender, two dummies for educational attainment (one for college, the other for secondary education), not having a spouse, a measure of health status and the level of equivalized household income.

Although the goodness of fit, measured by the pseudo  $R^2$ , is rather low, indicating the importance of other factors left out of the model, the estimates confirm the non parametric results obtained in Figure 14. The age covariate is not always statistically significant, in general the probability to see friends is negatively affected by age for France, Italy and United Kingdom, and positively for Belgium, Finland and Germany, confirming the previous non parametric results. Excluding Italy, in general women are more likely to socialize than men. With the exception of Germany, Spain and United Kingdom, people more educated are



also more likely to socialize with others. In almost all countries, except United Kingdom, the probability to see friends is strictly and positively related to the level of household income. Finally, marital status and health seems to play an important role in affecting the probability to socialize. With the exception of a very few number of countries, not having a spouse and being affected by a poor health tend to work as factors of isolation from social relationships.

## 9. Conclusions

The main purpose of this paper was to analyze some important issues surrounding elderly. We focused attention on a sample of European countries to study in particular the relationship between aging process, decision of retirement and health status. To this aim the CHER data set represented an important source of information. The comparability of the survey across countries and waves represents in fact its main advantage over other data sets. Further, by extending availability of data to countries not yet entered in the European Community (Poland and Hungary) it allowed us to make interesting comparisons between experiences of EU and non EU members. When carrying out cross-countries comparison, however, a number of relevant issues has to be taken into account. First, the heterogeneity in the sample design, the different data collection process, the non responses patterns and the different importance of the imputation and weighting procedures reduce the comparability of information across countries. Second, the survey collects almost no information on working career and lifetime earnings. For this reason, we can only study short-run labor and income dynamics, such as exit rates from the labor force over a one-year period and replacement rates for new retirees. Even in this last case, results are not completely satisfactory, information on working career for example, where present, is available at a too high level of aggregation, then analysis can be performed only in an approximate way. Third, the survey provides little information on wealth, private pension coverage, intra-family transfers and in general, while detailed information is provided on household income, only limited information on the different sources of personal income is available. Finally, information on health status is limited to only a pair of indicators for each of the two non EU countries and data are available only for one period interval, limiting not only the possibility to make cross-country comparison but also to perform longitudinal analysis.

The analysis of CHER data shows that some basic relations between aging and socio-economic characteristics of the individuals and the household they live are qualitatively the same across Europe. In all countries considered, aging is associated with a substantial reduction in the size of a household and with changes in its composition. These phenomena partly offset the observed fall of the household income, causing only modest decline in the median equivalized household income. While aging increases the differences in the household income with respect to people of younger ages, it does appear to reduce household income differentials within the various age groups and cohorts.

In all countries, aging is accompanied by a steady deterioration of health status, as measured by a variety of indicators. Over the age range considered, however, we see no evidence that this deterioration accelerates with age.

In terms of labor market outcome, aging is characterized by a rapid decline in labor force participation and a parallel decline of the importance of labor earnings as a source of personal income. After age 70, labor earnings become negligible and personal income is made up almost entirely by old-age and survivors pensions. In several countries, other types of social insurance benefits play an important role during the transitional period from activity to inactivity, but become negligible afterwards. The role played by other types of private income, instead, is always negligible.

Although the CHER data contain little information on wealth, the decline in home ownership with age and parallel increase in the fraction of elderly people living in rented homes leads support to the life cycle hypothesis which predicts some form of asset decumulation at older ages.

Finally, we focused attention on certain variables related to social relationships and satisfaction with certain aspects of life. In general, countries belonging to the Mediterranean area seem to be more dissatisfied with respect to the other countries but they also tend to socialize more with other people. We saw no significant evidence of decreasing of the frequency to socialize and on the levels of satisfaction with respect to the aging process. Differently from one should expect, we didn't find systematic differences in the patterns of satisfaction and socialization before and after an event of retirement, in particular, satisfaction does not peak down after the retirement and in some countries people tend to socialize more when retired.

The precise nature of these trends differs across countries. This is also true for the estimated parameters of the models that describe their basic relationships with observable individuals characteristics. What accounts for these large differences is an open issue. On the other hand, these differences are likely to reflect genuine differences linked to economic, social and institutional diversity across countries. On the other hand, they may also be related to nonsampling problems, such as the importance of measurement errors and survey nonresponse.

## References

- Anderson K.H. and Burkhauser R.V. (1985), "The retirement-health nexus: A new measure of an old puzzle", *Journal of Human Resources*, 20, 315-330.
- Bound J. (1990), "Self-reported versus objective measures of health and retirement models", *Journal of Human Resources*, 20, 214-234.
- Bound J., Schoenbaum M., Stinebrickner T.R., and Waidman T. (1999), "The dynamic effects of health on the labor force transition of older workers", *Labour Economics*, 6, 179-202.
- Currie J. and Madrian B.C. (1999), "Health, health insurance and labor market", in O. Ashenfelter and D. Card (eds.), *Handbook of Labor Economics*, Vol. 3, North-Holland, Amsterdam.
- Deaton A. (2003), "Health, inequality and economic development", *Journal of Economic Literature*, 41, 113-158.
- Dwyer D.S. (2001), "Planning for retirement: the accuracy of expected retirement dates and the role of health shocks", Center for Retirement Research at Boston College, Working Paper 2001-08.
- Flinn C.J. and Heckman J.J. (1983), "Are unemployment and out of the labor force behaviorally distinct labor force states", *Journal of Labor Economics*, 1, 26-42.
- Gruber J. and Wise D.A. (2002), "Social Security Programs and Retirement around the World: Micro Estimation", NBER Working Paper 9407.
- Jones S.R.G. and Riddell W.C. (1999), "The measurement of unemployment: An empirical approach", *Econometrica*, 67, 147-162.
- Little J.A. and Rubin D.B. (1987), *Statistical Analysis with Missing Data*, Wiley, New York.
- Lumsdaine R.L. and Mitchell O.S. (1999), "New development in the economic analysis of retirement", in O. Ashenfelter and D. Card (eds.), *Handbook of Labor Economics*, Vol. 3, North-Holland, Amsterdam.
- Nicoletti C. and Peracchi F. (2002), "A cross-country comparison of survey participation in the ECHP", ISER Working Paper No. 2002-32, University of Essex, Colchester.
- Nicoletti C. and Peracchi F. (2001), "Aging in Europe: What can we learn from the Europanel?", in T. Boeri, A. Börsch-Supan, A. Brugiavini, R. Disney, A. Kapteyn and F. Peracchi (eds.), *Pensions: More Information, Less Ideology. Assessing the Long-Term*

*Sustainability of European Pension Systems: Data Requirements, Analysis and Evaluations*, Kluwer, Dordrecht.

Nicoletti C. and Peracchi F. (2003), "Aging in Europe: A cross-country comparison", in O. Castellino and E. Fornero (eds.), *Pension Policy Harmonization in an Integrating Europe*, Edward Elgar, Cheltenham.

Peracchi F. (2002), "The European Community Household Panel: A review", *Empirical Economics*, 27, 63-90.

Sickles R. C. and Taubman P. (1986), "An analysis of the health and retirement status of the elderly", *Econometrica*, 54, 1339-1356.

Table 1: Achieved sample size by country and age group in waves 1994, 1996, 1998 of the CHER.

|                    | 1994  |      |       | 1996  |      |       | 1998  |      |       |
|--------------------|-------|------|-------|-------|------|-------|-------|------|-------|
|                    | 50-69 | 70+  | Total | 50-69 | 70+  | Total | 50-69 | 70+  | Total |
| Austria            |       |      |       | 2024  | 840  | 7271  | 1853  | 809  | 6561  |
| Belgium            | 1665  | 816  | 6717  | 1508  | 785  | 6182  | 1803  | 839  | 7020  |
| Denmark            | 1523  | 775  | 5903  | 1273  | 612  | 4994  | 1117  | 472  | 4187  |
| Finland            |       |      |       | 2297  | 598  | 8173  | 2185  | 554  | 7381  |
| France             | 3773  | 1612 | 14333 | 3330  | 1494 | 13050 | 3000  | 1423 | 11209 |
| Germany            | 3502  | 1006 | 12696 | 3394  | 1011 | 12777 | 3887  | 1227 | 13880 |
| Greece             | 3852  | 1593 | 12492 | 3528  | 1588 | 11602 | 3035  | 1501 | 9985  |
| Hungary            | 1427  | 624  | 4976  | 1082  | 517  | 3859  |       |      |       |
| Ireland            | 2486  | 975  | 9904  | 1945  | 773  | 7487  | 1680  | 707  | 6324  |
| Italy              | 4877  | 1724 | 17729 | 4915  | 1834 | 17736 | 4435  | 1814 | 15934 |
| Luxembourg         |       |      |       | 1504  | 536  | 5789  | 1385  | 508  | 5315  |
| Netherlands        | 2295  | 953  | 9407  | 2335  | 942  | 9277  | 2319  | 925  | 8826  |
| Poland (1994-1996) | 3201  | 814  | 11884 | 3266  | 946  | 11806 | 1910  | 604  | 10528 |
| Poland (1997-2000) |       |      |       |       |      |       |       |      |       |
| Portugal           | 3622  | 1610 | 11621 | 3467  | 1664 | 11702 | 3271  | 1743 | 11412 |
| Spain              | 5018  | 2265 | 17893 | 4101  | 2120 | 15640 | 3503  | 1985 | 13779 |
| United Kingdom     | 2214  | 1171 | 9481  | 2226  | 1168 | 9436  | 2311  | 604  | 7757  |

Table 2: Average household size and average number of adults in a household by country, sex and age.

| Country            | Average household size |       |       | Average number of adults |       |       |
|--------------------|------------------------|-------|-------|--------------------------|-------|-------|
|                    | 50-64                  | 65-79 | 80+   | 50-64                    | 65-79 | 80+   |
| Men                |                        |       |       |                          |       |       |
| Austria            | 2.996                  | 2.779 | 2.472 | 2.786                    | 2.489 | 2.325 |
| Belgium            | 2.666                  | 2.032 | 1.680 | 2.541                    | 1.993 | 1.677 |
| Denmark            | 2.372                  | 1.903 | 1.755 | 2.252                    | 1.899 | 1.755 |
| Finland            | 2.352                  | 1.955 | 1.793 | 2.192                    | 1.944 | 1.757 |
| France             | 2.714                  | 2.090 | 1.890 | 2.558                    | 2.071 | 1.889 |
| Germany            | 2.463                  | 2.010 | 1.727 | 2.341                    | 1.997 | 1.702 |
| Greece             | 3.262                  | 2.525 | 2.403 | 3.033                    | 2.398 | 2.308 |
| Hungary            | 3.009                  | 2.349 | 2.177 | 2.786                    | 2.232 | 2.095 |
| Ireland            | 3.666                  | 2.364 | 1.960 | 3.274                    | 2.316 | 1.925 |
| Italy              | 3.487                  | 2.579 | 2.309 | 3.304                    | 2.523 | 2.264 |
| Luxembourg         | 2.820                  | 2.099 | 1.992 | 2.651                    | 2.074 | 1.954 |
| Netherlands        | 2.459                  | 1.920 | 1.704 | 2.347                    | 1.916 | 1.704 |
| Poland (1994-1996) | 3.257                  | 2.857 | 3.410 | 2.857                    | 2.533 | 2.885 |
| Poland (1997-2000) | 3.312                  | 3.098 | 3.399 | 2.924                    | 2.703 | 2.853 |
| Portugal           | 3.520                  | 2.687 | 2.526 | 3.263                    | 2.532 | 2.437 |
| Spain              | 4.006                  | 2.819 | 2.881 | 3.751                    | 2.684 | 2.705 |
| United Kingdom     | 2.527                  | 1.913 | 1.801 | 2.382                    | 1.896 | 1.781 |
| Women              |                        |       |       |                          |       |       |
| Austria            | 2.743                  | 2.243 | 2.166 | 2.567                    | 2.003 | 2.041 |
| Belgium            | 2.355                  | 1.750 | 1.453 | 2.320                    | 1.730 | 1.441 |
| Denmark            | 2.106                  | 1.602 | 1.399 | 2.072                    | 1.602 | 1.366 |
| Finland            | 2.120                  | 1.604 | 1.571 | 2.058                    | 1.591 | 1.480 |
| France             | 2.403                  | 1.832 | 1.518 | 2.345                    | 1.812 | 1.509 |
| Germany            | 2.215                  | 1.600 | 1.223 | 2.151                    | 1.579 | 1.217 |
| Greece             | 2.847                  | 2.236 | 2.402 | 2.725                    | 2.082 | 2.266 |
| Hungary            | 2.655                  | 2.021 | 2.413 | 2.475                    | 1.916 | 2.179 |
| Ireland            | 3.531                  | 2.038 | 1.926 | 3.067                    | 2.048 | 2.007 |
| Italy              | 3.166                  | 2.131 | 2.121 | 3.067                    | 2.048 | 2.007 |
| Luxembourg         | 2.525                  | 1.867 | 1.929 | 2.444                    | 1.804 | 1.870 |
| Netherlands        | 2.228                  | 1.572 | 1.281 | 2.192                    | 1.569 | 1.281 |
| Poland (1994-1996) | 2.880                  | 2.632 | 3.024 | 2.538                    | 2.222 | 2.593 |
| Poland (1997-2000) | 3.021                  | 2.840 | 3.419 | 2.650                    | 2.362 | 2.942 |
| Portugal           | 3.284                  | 2.527 | 2.698 | 3.065                    | 2.340 | 2.370 |
| Spain              | 3.675                  | 2.578 | 2.952 | 3.502                    | 2.431 | 2.774 |
| United Kingdom     | 2.301                  | 1.615 | 1.340 | 2.234                    | 1.600 | 1.321 |

Table 3: Employment rates by country, sex and age group.

| Country            | Men   |       |      | Women |       |      |
|--------------------|-------|-------|------|-------|-------|------|
|                    | 50-64 | 65-79 | 80+  | 50-64 | 65-79 | 80+  |
| Austria            | .549  | .013  | .008 | .297  | .006  | .000 |
| Belgium            | .574  | .033  | .008 | .245  | .006  | .000 |
| Denmark            | .733  | .103  | .007 | .546  | .027  | .002 |
| Finland            | .554  | .040  | .002 | .531  | .014  | .000 |
| France             | .552  | .013  | .002 | .358  | .009  | .000 |
| Germany            | .582  | .036  | .007 | .350  | .018  | .000 |
| Greece             | .666  | .104  | .015 | .254  | .029  | .005 |
| Hungary            | .532  | .255  | .053 | .398  | .151  | .027 |
| Ireland            | .658  | .179  | .043 | .222  | .019  | .000 |
| Italy              | .566  | .070  | .001 | .224  | .015  | .004 |
| Luxembourg         | .654  | .012  | .000 | .309  | .009  | .000 |
| Netherlands        | .586  | .029  | .004 | .255  | .003  | .000 |
| Poland (1994-1996) | .389  | .037  | .000 | .235  | .020  | .002 |
| Poland (1997-2000) | .344  | .022  | .000 | .228  | .014  | .008 |
| Portugal           | .695  | .252  | .055 | .428  | .098  | .022 |
| Spain              | .584  | .023  | .000 | .192  | .010  | .001 |
| United Kingdom     | .802  | .114  | .061 | .604  | .071  | .032 |

Table 4: Unemployment rates by country, sex and age group.

| Country            | Men   |       |      | Women |       |      |
|--------------------|-------|-------|------|-------|-------|------|
|                    | 50-64 | 65-79 | 80+  | 50-64 | 65-79 | 80+  |
| Austria            | .066  | .659  | .593 | .122  | .680  | 1    |
| Belgium            | .136  | .155  | .232 | .226  | .260  | 1    |
| Denmark            | .074  | .355  | .787 | .107  | .416  | .863 |
| Finland            | .118  | .319  | .000 | .134  | .453  | 1    |
| France             | .056  | .316  | .755 | .098  | .189  |      |
| Germany            | .180  | .070  | .139 | .214  | .230  | 1    |
| Greece             | .056  | .177  | .289 | .082  | .178  | .323 |
| Hungary            | .072  | .017  | .000 | .051  | .013  | .000 |
| Ireland            | .092  | .172  | .316 | .253  | .446  | 1    |
| Italy              | .072  | .231  | .847 | .110  | .272  | .000 |
| Luxembourg         | .013  | .059  |      | .022  | .000  |      |
| Netherlands        | .070  | .429  | .309 | .335  | .802  |      |
| Poland (1994-1996) | .066  | .015  |      | .041  | .000  | .000 |
| Poland (1997-2000) | .089  | .000  |      | .052  | .000  | .000 |
| Portugal           | .066  | .195  | .366 | .122  | .294  | .342 |
| Spain              | .131  | .280  | 1    | .225  | .315  | 1    |
| United Kingdom     | .065  | .022  | .071 | .042  | .008  | .025 |



Table 5: Median and interquartile range of income (in thousands of purchasing power parities) by country and age.

| Country             | Household income |       |       |       | Equivalentized household income |       |       |       | Personal income |       |       |       |
|---------------------|------------------|-------|-------|-------|---------------------------------|-------|-------|-------|-----------------|-------|-------|-------|
|                     | 50               | 60    | 70    | 80    | 50                              | 60    | 70    | 80    | 50              | 60    | 70    | 80    |
| Median              |                  |       |       |       |                                 |       |       |       |                 |       |       |       |
| Austria             | 34.80            | 26.80 | 21.20 | 15.50 | 13.90                           | 12.30 | 10.90 | 11.10 | 12.80           | 10.10 | 9.00  | 9.30  |
| Belgium             | 28.20            | 17.70 | 13.90 | 10.60 | 12.70                           | 10.30 | 9.10  | 8.40  | 12.70           | 8.00  | 8.40  | 7.50  |
| Denmark             | 34.10            | 24.50 | 15.80 | 13.10 | 15.70                           | 14.30 | 10.10 | 9.30  | 15.10           | 12.20 | 7.40  | 7.10  |
| Finland             | 27.70            | 19.70 | 15.50 | 12.30 | 12.60                           | 11.80 | 9.70  | 9.10  | 18.50           | 13.00 | 9.60  | 9.10  |
| France              | 30.20            | 21.10 | 18.10 | 15.40 | 13.30                           | 11.50 | 11.20 | 10.40 | 14.30           | 10.00 | 9.60  | 8.90  |
| Germany             | 27.70            | 20.50 | 16.30 | 11.80 | 13.50                           | 11.80 | 10.80 | 10.30 | 14.00           | 9.30  | 8.40  | 9.40  |
| Greece              | 19.30            | 14.40 | 9.90  | 7.60  | 7.30                            | 6.70  | 5.60  | 4.70  | 8.10            | 5.20  | 4.70  | 2.70  |
| Hungary             | 11.00            | 8.10  | 7.00  | 5.70  | 4.60                            | 4.30  | 4.20  | 3.80  | 4.30            | 3.50  | 3.60  | 3.30  |
| Ireland             | 29.00            | 23.40 | 12.50 | 10.40 | 9.60                            | 9.40  | 7.40  | 6.70  | 8.90            | 5.90  | 5.80  | 5.70  |
| Italy               | 24.80            | 20.20 | 14.40 | 13.40 | 9.00                            | 8.90  | 8.40  | 8.50  | 12.00           | 8.10  | 6.70  | 6.70  |
| Luxembourg          | 49.20            | 34.40 | 28.20 | 26.10 | 20.20                           | 17.90 | 18.20 | 19.50 | 21.20           | 18.00 | 17.70 | 16.20 |
| Netherlands         | 27.50            | 21.20 | 16.20 | 12.70 | 12.40                           | 12.40 | 11.20 | 9.60  | 13.70           | 11.30 | 9.20  | 8.50  |
| Poland (1997-2000)  | 9.00             | 7.40  | 7.20  | 7.30  | 3.50                            | 3.50  | 3.30  | 3.40  | 3.30            | 3.00  | 2.80  | 3.00  |
| Portugal            | 20.80            | 15.90 | 10.20 | 6.90  | 7.20                            | 6.50  | 5.20  | 4.40  | 7.30            | 3.70  | 3.50  | 3.40  |
| Spain               | 22.90            | 19.30 | 13.80 | 12.60 | 7.40                            | 7.50  | 7.40  | 6.80  | 7.10            | 4.90  | 6.40  | 6.00  |
| United Kingdom      | 27.80            | 19.20 | 14.00 | 10.80 | 13.10                           | 11.70 | 9.50  | 8.70  | 9.20            | 2.30  | 2.90  | 4.90  |
| Interquartile range |                  |       |       |       |                                 |       |       |       |                 |       |       |       |
| Austria             | 25.30            | 21.90 | 17.50 | 16.20 | 8.00                            | 7.50  | 6.30  | 7.30  | 16.40           | 12.00 | 8.50  | 7.90  |
| Belgium             | 24.80            | 17.10 | 11.60 | 10.30 | 9.40                            | 8.40  | 7.20  | 6.70  | 19.40           | 14.30 | 13.10 | 11.10 |
| Denmark             | 16.90            | 13.50 | 9.10  | 7.30  | 6.80                            | 6.60  | 5.00  | 3.90  | 7.60            | 8.00  | 5.00  | 3.00  |
| Finland             | 17.00            | 13.50 | 9.90  | 9.10  | 6.00                            | 6.00  | 3.70  | 3.40  | 14.40           | 10.80 | 7.00  | 4.70  |
| France              | 22.00            | 17.30 | 14.60 | 13.10 | 9.90                            | 9.00  | 7.60  | 7.60  | 16.80           | 14.00 | 10.10 | 8.80  |
| Germany             | 21.10            | 16.70 | 11.20 | 9.50  | 9.00                            | 7.80  | 6.00  | 5.60  | 14.90           | 11.50 | 7.90  | 6.80  |
| Greece              | 16.90            | 15.30 | 11.00 | 11.20 | 6.30                            | 5.80  | 5.20  | 4.60  | 15.20           | 11.50 | 6.10  | 5.20  |
| Hungary             | 12.80            | 7.30  | 5.70  | 6.00  | 4.60                            | 3.00  | 2.50  | 2.50  | 5.80            | 2.50  | 2.20  | 3.00  |
| Ireland             | 23.80            | 24.40 | 13.50 | 10.60 | 7.50                            | 7.40  | 5.70  | 2.70  | 20.10           | 14.90 | 5.40  | 1.80  |
| Italy               | 18.90            | 17.90 | 13.20 | 14.20 | 6.90                            | 6.30  | 5.80  | 5.30  | 16.60           | 12.30 | 6.00  | 5.10  |
| Luxembourg          | 34.60            | 29.20 | 18.00 | 22.90 | 13.10                           | 11.60 | 8.80  | 9.20  | 32.30           | 26.60 | 23.90 | 10.30 |
| Netherlands         | 16.00            | 15.10 | 12.00 | 8.90  | 7.60                            | 8.00  | 7.00  | 5.20  | 18.30           | 18.30 | 7.80  | 4.70  |
| Poland (1997-2000)  | 6.30             | 6.10  | 5.70  | 8.50  | 2.50                            | 2.20  | 2.00  | 1.90  | 3.60            | 2.10  | 1.80  | 1.30  |
| Portugal            | 17.30            | 16.70 | 12.00 | 10.30 | 6.10                            | 5.70  | 4.60  | 3.30  | 12.90           | 8.10  | 3.40  | 2.20  |
| Spain               | 18.70            | 18.70 | 13.10 | 14.70 | 6.20                            | 6.20  | 4.50  | 4.10  | 16.20           | 11.90 | 5.20  | 2.30  |
| United Kingdom      | 28.30            | 21.50 | 11.90 | 11.00 | 11.70                           | 9.80  | 6.40  | 6.20  | 18.80           | 12.20 | 7.60  | 7.10  |

Table 6: Fraction of ownership of durables by type of durable, country and age group.

| Country            | 50-69 |      |      |      |      |      |      | 70+  |      |      |      |      |      |      |
|--------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                    | Car   | CTV  | VR   | MW   | DW   | PH   | PC   | Car  | CTV  | VR   | MW   | DW   | PH   | PC   |
| Austria            | .889  | .979 | .712 | .583 | .560 | .969 | .360 | .877 | .976 | .687 | .568 | .529 | .971 | .340 |
| Belgium            | .895  | .981 | .721 | .554 | .384 | .956 | .320 | .730 | .970 | .500 | .354 | .236 | .955 | .135 |
| Denmark            | .822  | .985 | .770 | .425 | .455 | .990 | .534 | .679 | .974 | .548 | .292 | .311 | .988 | .305 |
| Finland            | .880  | .974 | .712 | .788 | .561 | .968 | .317 | .715 | .953 | .501 | .681 | .407 | .972 | .166 |
| France             | .908  | .967 | .701 | .529 | .471 | .980 | .    | .812 | .966 | .489 | .355 | .329 | .981 | .    |
| Germany            | .851  | .980 | .701 | .588 | .551 | .963 | .262 | .696 | .976 | .527 | .394 | .404 | .955 | .104 |
| Greece             | .687  | .948 | .431 | .074 | .188 | .956 | .120 | .495 | .898 | .301 | .052 | .146 | .919 | .076 |
| Hungary            | .443  | .773 | .358 | .198 | .007 | .315 | .092 | .352 | .741 | .244 | .189 | .008 | .336 | .077 |
| Ireland            | .761  | .978 | .796 | .639 | .273 | .857 | .258 | .664 | .964 | .683 | .545 | .197 | .848 | .198 |
| Italy              | .907  | .980 | .669 | .168 | .283 | .952 | .273 | .848 | .978 | .602 | .147 | .270 | .946 | .240 |
| Luxembourg         | .918  | .996 | .765 | .530 | .687 | .937 | .425 | .865 | .997 | .555 | .395 | .529 | .971 | .233 |
| Netherlands        | .795  | .982 | .790 | .643 | .294 | .987 | .600 | .780 | .979 | .758 | .612 | .276 | .989 | .542 |
| Poland (1994-1996) | .485  | .844 | .476 | .034 | .003 | .313 | .044 | .413 | .762 | .338 | .020 | .001 | .292 | .027 |
| Poland (1997-2000) | .537  | .945 | .525 | .078 | .005 | .498 | .059 | .510 | .906 | .369 | .055 | .003 | .452 | .048 |
| Portugal           | .694  | .928 | .582 | .195 | .207 | .821 | .213 | .671 | .921 | .568 | .187 | .211 | .815 | .208 |
| Spain              | .806  | .992 | .687 | .407 | .220 | .913 | .299 | .658 | .983 | .540 | .302 | .157 | .902 | .171 |
| United Kingdom     | .856  | .987 | .910 | .819 | .308 | .973 | .349 | .609 | .963 | .646 | .573 | .134 | .950 | .118 |
| Women              |       |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Austria            | .789  | .981 | .648 | .555 | .522 | .975 | .315 | .745 | .978 | .600 | .521 | .471 | .971 | .283 |
| Belgium            | .834  | .981 | .685 | .539 | .372 | .964 | .273 | .547 | .973 | .403 | .308 | .206 | .934 | .101 |
| Denmark            | .758  | .984 | .738 | .411 | .432 | .994 | .502 | .473 | .973 | .410 | .231 | .230 | .991 | .211 |
| Finland            | .772  | .965 | .687 | .808 | .547 | .989 | .287 | .436 | .921 | .349 | .613 | .293 | .986 | .103 |
| France             | .864  | .974 | .676 | .524 | .461 | .988 | .    | .605 | .967 | .407 | .307 | .275 | .982 | .    |
| Germany            | .785  | .980 | .648 | .548 | .517 | .961 | .211 | .396 | .960 | .352 | .324 | .289 | .927 | .062 |
| Greece             | .627  | .942 | .411 | .071 | .191 | .953 | .111 | .426 | .883 | .275 | .054 | .141 | .907 | .070 |
| Hungary            | .391  | .771 | .317 | .190 | .009 | .318 | .075 | .292 | .705 | .192 | .160 | .008 | .327 | .045 |
| Ireland            | .730  | .987 | .803 | .670 | .277 | .885 | .238 | .589 | .968 | .644 | .558 | .191 | .881 | .167 |
| Italy              | .828  | .978 | .616 | .156 | .267 | .948 | .231 | .726 | .971 | .525 | .128 | .247 | .935 | .191 |
| Luxembourg         | .876  | .996 | .713 | .513 | .676 | .964 | .360 | .662 | .995 | .429 | .361 | .498 | .977 | .176 |
| Netherlands        | .724  | .986 | .734 | .619 | .266 | .995 | .521 | .674 | .981 | .668 | .577 | .243 | .996 | .459 |
| Poland (1994-1996) | .418  | .839 | .438 | .033 | .004 | .325 | .037 | .343 | .738 | .309 | .020 | .001 | .310 | .033 |
| Poland (1997-2000) | .474  | .944 | .506 | .082 | .005 | .528 | .054 | .421 | .891 | .350 | .062 | .007 | .455 | .043 |
| Portugal           | .650  | .927 | .568 | .195 | .199 | .826 | .212 | .610 | .913 | .537 | .182 | .197 | .807 | .207 |
| Spain              | .756  | .992 | .683 | .406 | .214 | .921 | .287 | .566 | .979 | .509 | .292 | .147 | .903 | .167 |
| United Kingdom     | .801  | .985 | .893 | .811 | .290 | .984 | .306 | .408 | .973 | .533 | .554 | .107 | .958 | .081 |

Table 7: Estimated logit models for the probability of being in poor health.

| Country     | Intercept | Age    | Age <sup>2</sup> | Sex     | Tertiary | Second. | No spouse | Hh. income | <i>n</i> | <i>R</i> <sup>2</sup> |
|-------------|-----------|--------|------------------|---------|----------|---------|-----------|------------|----------|-----------------------|
| Austria     | -1.783**  | .021** | .001             | -.233** | -1.304** | -.481** | .446**    | -.025**    | 10064    | .033                  |
| Belgium     | -2.621**  | .014** | .003**           | .013    | -.912**  | -.655** | .674**    | -.020**    | 8288     | .043                  |
| Denmark     | -2.351**  | .016** | -.001            | .261**  | -.811**  | -.579** | .593**    | -.051**    | 7887     | .068                  |
| Finland     | -1.874**  | .030** | -.004 **         | -.052   | -.828**  | -.056   | .429**    | -.023**    | 8626     | .040                  |
| France      | -2.097**  | .025** | .001             | .120**  | -.607**  | -.301** | .261**    | -.038**    | 20208    | .035                  |
| Germany     | -.790**   | .017** | -.002**          | .126**  | -.475**  | -.274** | .005      | -.023**    | 21939    | .018                  |
| Greece      | -1.832**  | .066** | -.002**          | .053    | -1.156** | -.397** | .340**    | -.049**    | 21188    | .055                  |
| Ireland     | -2.775**  | .030** | -.002*           | -.195** | -1.406** | -.534** | .426**    | -.071**    | 11985    | .058                  |
| Italy       | -1.545**  | .065** | -.001            | .224**  | -.701**  | -.792** | .264**    | -.045**    | 29039    | .061                  |
| Netherlands | -2.727**  | .016** | -.001            | .178**  | -.401**  | -.281** | .226**    | -.046**    | 14449    | .025                  |
| Portugal    | -.736**   | .061** | -.002            | .487**  | -.522**  | -.853** | -.081**   | -.058**    | 21508    | .063                  |
| Spain       | -1.377**  | .054** | -.003            | .380**  | -.978**  | -.684** | .161**    | -.059**    | 24977    | .058                  |
| UK          | -1.683**  | -.004  | -.002            | -.062   | -.513**  | -.377** | .238**    | -.021**    | 14003    | .019                  |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%

Table 8: Estimated logit models for the probability of being hampered in daily activities.

| Country     | Intercept | Age    | Age <sup>2</sup> | Sex     | Tertiary | Second. | No spouse | Hh. income | <i>n</i> | <i>R</i> <sup>2</sup> |
|-------------|-----------|--------|------------------|---------|----------|---------|-----------|------------|----------|-----------------------|
| Austria     | -.555**   | .028** | -.001            | -.278** | -1.065** | -.211** | .276**    | -.021**    | 10061    | .026                  |
| Belgium     | -.945**   | .033** | .000             | -.056   | -.499**  | -.587** | .453**    | -.002      | 8242     | .029                  |
| Denmark     | -.855**   | .036** | -.001*           | .392**  | -.549**  | -.396** | .426**    | -.028**    | 7881     | .060                  |
| Finland     | -.075*    | .043** | -.005**          | .134**  | -.572**  | -.156** | .175**    | -.015**    | 9236     | .042                  |
| France      | -.681**   | .052** | .001**           | -.019   | -.715**  | -.282** | .292**    | -.023**    | 20262    | .050                  |
| Germany     | .327**    | .051** | -.002**          | .189**  | -.225**  | -.024   | -.267**   | -.021**    | 18294    | .030                  |
| Greece      | -1.084**  | .051** | -.001**          | -.020   | -.649**  | -.301** | .287**    | -.035**    | 21188    | .037                  |
| Ireland     | -1.076**  | .048** | -.001            | -.125** | -.828**  | -.243** | .262**    | -.031**    | 11879    | .044                  |
| Italy       | -1.276**  | .054** | -.001            | .096**  | -.481**  | -.548** | .186**    | -.032**    | 28975    | .038                  |
| Netherlands | -.662**   | .032** | -.002**          | .078**  | -.202**  | -.094** | .092**    | -.026**    | 14445    | .020                  |
| Portugal    | -.616**   | .043** | -.002**          | .296**  | -.267**  | -.845** | .040      | -.033**    | 21508    | .032                  |
| Spain       | -.836**   | .051** | -.004**          | .197**  | -.868**  | -.703** | .241**    | -.042**    | 24995    | .050                  |
| UK          | -1.058**  | .023** | -.002**          | -.003   | -.428**  | -.276** | .114**    | -.021**    | 14009    | .023                  |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%

Table 9: Estimated logit model for home hownership

| Country     | Intercept | Age     | Age <sup>2</sup> | Tertiary | Secondary | Sex     | No spouse | Bad health | <i>n</i> | <i>R</i> <sup>2</sup> |
|-------------|-----------|---------|------------------|----------|-----------|---------|-----------|------------|----------|-----------------------|
| Austria     | 2.041**   | .019**  | .000             | -1.174** | -.833**   | -.085*  | -.742**   | -.343**    | 9675     | .044                  |
| Belgium     | 1.929**   | -.002   | -.001            | .613**   | .585**    | .019    | -1.595**  | -.488**    | 7907     | .104                  |
| Denmark     | 1.706**   | -.008   | .002**           | .548**   | .218**    | -.199** | -1.722**  | -.926**    | 7606     | .143                  |
| Finland     | 2.758**   | .070**  | .001             | .645**   | .448**    | .086    | -1.511**  | -.349**    | 8396     | .093                  |
| France      | 1.691**   | .020**  | -.003**          | .627**   | .337**    | .214**  | -1.161**  | -.372**    | 19349    | .055                  |
| Germany     | -.327**   | .022**  | .001             | .673**   | .638**    | .172**  | -.635**   | -.297**    | 21286    | .031                  |
| Greece      | 2.676**   | .026**  | -.003**          | -.432**  | -.564**   | .135**  | -.400**   | -.160**    | 20268    | .020                  |
| Ireland     | 3.215**   | .029**  | -.002            | 1.425**  | .929**    | -.025   | -1.227**  | -.977**    | 11548    | .083                  |
| Italy       | 1.921**   | .022**  | .000             | .869**   | .420**    | .130**  | -.635**   | -.320**    | 28016    | .019                  |
| Luxembourg  | 2.133**   | -.009   | -.004*           | -.036    | .492**    | .260    | -.962**   | -.658**    | 1550     | .054                  |
| Netherlands | .283**    | -.065** | -.001            | 1.494**  | .296**    | -.085** | -.932**   | -.719**    | 13884    | .087                  |
| Portugal    | 1.700**   | .004    | .000             | .011     | -.041     | -.029   | -.340**   | -.188**    | 20518    | .005                  |
| Spain       | 2.522**   | -.013** | .001             | -.210**  | -.531**   | -.019   | -.477**   | -.236**    | 23919    | .011                  |
| UK          | 1.572**   | -.021** | -.001            | 1.075**  | 1.485**   | .101**  | -1.194**  | -.746**    | 13343    | .103                  |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%

Table 10: Estimated logit models for the probability of being employed.

| Country     | Men       |         |                  |                  |          |         |           |            | <i>n</i> | <i>R</i> <sup>2</sup> |
|-------------|-----------|---------|------------------|------------------|----------|---------|-----------|------------|----------|-----------------------|
|             | Intercept | Age     | Age <sup>2</sup> | Age <sup>3</sup> | Tertiary | Second. | No spouse | Bad health |          |                       |
| Austria     | .924**    | -.385** | -.029**          | .002**           | 1.241**  | .466**  | -.586**   | -1.791**   | 4662     | .434                  |
| Belgium     | .890**    | -.298** | -.014**          | .001**           | .833**   | .582**  | -.517**   | -2.083**   | 3527     | .385                  |
| Denmark     | 2.052**   | -.232** | -.027**          | .002**           | .689**   | .017    | -.882**   | -1.955**   | 3726     | .351                  |
| Finland     | 1.087**   | -.264** | -.007*           | .001*            | .456**   | .131    | -.632**   | -.938**    | 4125     | .305                  |
| France      | 1.224**   | -.376** | -.030**          | .002**           | 1.065**  | .126*   | -.378**   | -1.407**   | 9201     | .486                  |
| Germany     | 1.141**   | -.234** | -.020**          | .001**           | .579**   | .070    | -.176**   | -.789**    | 10658    | .306                  |
| Greece      | 1.744**   | -.202** | -.010**          | .000**           | -.069    | -.549** | -.403**   | -1.891**   | 9834     | .293                  |
| Ireland     | 1.488**   | -.122** | -.008**          | .000             | .536**   | -.042   | -.579**   | -2.581**   | 5747     | .194                  |
| Italy       | .674**    | -.188** | .000             | -.000**          | 1.557**  | .398**  | -.312**   | -1.015**   | 13805    | .243                  |
| Luxembourg  | 1.562**   | -.588** | -.007            | .001             | 1.271**  | .396    | -.299     | -.908*     | 619      | .579                  |
| Netherlands | 1.431**   | -.332** | -.033**          | .002**           | .425**   | .212**  | -.775**   | -2.146**   | 6592     | .441                  |
| Portugal    | 1.577**   | -.127** | .003             | -.000**          | .188     | -.337** | -.285**   | -1.413**   | 9367     | .185                  |
| Spain       | 1.039**   | -.141** | -.004*           | -.001**          | 1.016**  | .238**  | -.517**   | -1.453**   | 11416    | .338                  |
| UK          | 2.115**   | -.147** | -.014**          | .000             | -.203**  | -.383** | -.160*    | -.059      | 6327     | .281                  |

| Women       |          |         |         |         |         |         |         |          |       |      |
|-------------|----------|---------|---------|---------|---------|---------|---------|----------|-------|------|
| Austria     | -.937**  | -.279** | -.007*  | .000    | 1.050** | .434**  | .202**  | -.654**  | 5003  | .272 |
| Belgium     | -1.181** | -.245** | -.015** | .001**  | 1.123** | .800**  | .405**  | -1.068** | 4090  | .281 |
| Denmark     | .395**   | -.177** | -.015** | .000    | .986**  | .662**  | -.046   | -1.888** | 3878  | .307 |
| Finland     | .725**   | -.203** | -.020** | .001*   | .875**  | .290**  | -.293** | -1.037** | 4273  | .307 |
| France      | -.217**  | -.220** | -.025** | .001**  | .702**  | .249**  | .670**  | -1.083** | 10142 | .299 |
| Germany     | -.122**  | -.208** | -.028** | .001**  | .870**  | .159**  | .610**  | -.533**  | 10629 | .256 |
| Greece      | -.589**  | -.094** | -.006** | .000    | .484**  | -.652** | .075    | -1.061** | 10437 | .125 |
| Ireland     | -1.584** | -.110** | -.001   | .000    | 1.862** | .610**  | .455**  | -1.584** | 5808  | .160 |
| Italy       | -1.276** | -.170** | -.014** | .001**  | 1.937** | 1.212** | .673**  | -.386**  | 14201 | .193 |
| Luxembourg  | -1.653** | -.149** | -.007   | -.001   | .575    | -.193   | 2.733** | -1.021** | 625   | .290 |
| Netherlands | -1.160** | -.183** | -.016** | .000    | 1.315** | .254**  | .975**  | -1.595** | 7292  | .258 |
| Portugal    | -.067    | -.050** | -.002   | -.000** | 1.179** | .158    | .245**  | -.857**  | 11151 | .116 |
| Spain       | -1.590** | -.065** | .000    | -.001** | 1.771** | .849**  | 1.002** | -.333**  | 12503 | .175 |
| UK          | .762**   | -.198** | -.010** | .001**  | .357**  | .194    | .116*   | -.051    | 7076  | .217 |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%

Table 11: Estimated logit models for the probability of leaving employed.

| Country     | Men       |        |         |         |          |         |           |            | <i>n</i> | <i>R</i> <sup>2</sup> |
|-------------|-----------|--------|---------|---------|----------|---------|-----------|------------|----------|-----------------------|
|             | Intercept | Age    | Age 60  | Age 65  | Tertiary | Second. | No spouse | Bad health |          |                       |
| Austria     | -.059     | .294** | 1.151** | -.434   | -1.404** | -.076   | .398      | 2.045**    | 1420     | .197                  |
| Belgium     | -1.029**  | .160** | 1.124** | .567    | -.728**  | -.551** | .152      | -.390      | 1086     | .123                  |
| Denmark     | -1.388**  | .211** | 1.094** | -.127   | -.245    | -.001   | .219      | 1.697**    | 1702     | .170                  |
| Finland     | -1.054**  | .175** | .007    | -.099   | -.580**  | -.041   | .470**    | .853**     | 1477     | .120                  |
| France      | -.624**   | .218** | 1.021** | -1.098  | -.656**  | .083    | -.168     | 1.097**    | 3021     | .142                  |
| Germany     | -1.014**  | .162** | .222    | .959**  | -.189    | .253**  | .197      | .682**     | 4095     | .086                  |
| Greece      | -1.300**  | .163** | -.105   | .602**  | -.490**  | .133    | .420**    | .476**     | 4160     | .111                  |
| Ireland     | -2.065**  | .113** | .344    | .182    | -.150    | .185    | -.060     | 1.462**    | 2652     | .052                  |
| Italy       | -1.212**  | .107** | .208    | .566**  | -.769**  | -.364** | .089      | .709**     | 5209     | .058                  |
| Luxembourg  | -.624     | .286** | .987    | .       | .        | .602    | .708      | 1.478*     | 197      | .192                  |
| Netherlands | -.989**   | .238** | 1.038** | -.683   | -.011    | .222    | .309      | 1.916**    | 2376     | .164                  |
| Portugal    | -2.104**  | .088** | .074    | .632**  | .250     | .159    | -.006     | .749**     | 4405     | .054                  |
| Spain       | -1.152**  | .158** | -.168   | 1.700** | -.553**  | -.177   | .380**    | 1.038**    | 3844     | .110                  |
| UK          | -1.605**  | .181** | -.164   | .848**  | .128     | .040    | -.010     | .519**     | 3309     | .117                  |

| Women       |          |        |         |         |          |         |         |         |      |      |
|-------------|----------|--------|---------|---------|----------|---------|---------|---------|------|------|
| Austria     | .076     | .198** | .089    | .816    | -.548    | -.305   | -.128   | .774**  | 798  | .094 |
| Belgium     | -.509*   | .162** | 1.195** | -.459   | -.121    | -.390   | -.161   | .687    | 558  | .096 |
| Denmark     | -.895**  | .172** | .428    | .683    | -.288    | -.266   | -.111   | 1.679** | 1302 | .120 |
| Finland     | -.640**  | .176** | -.568   | .455    | -.829**  | -.137   | -.076   | .673**  | 1431 | .107 |
| France      | -.757**  | .171** | .774**  | .604    | -.178    | -.104   | -.110   | .334    | 2108 | .092 |
| Germany     | -.642**  | .147** | 1.698** | .353    | -.174    | -.088   | -.169   | .505**  | 2444 | .098 |
| Greece      | -.767**  | .094** | .138    | .974**  | -.402    | .230    | .014    | .269    | 1809 | .054 |
| Ireland     | -.787**  | .088** | -.332   | 1.800** | -.943**  | -.179   | -.282   | 2.109** | 766  | .068 |
| Italy       | -.538**  | .115** | -.158   | -.085   | -.548**  | -.628** | -.237*  | .097    | 2067 | .049 |
| Luxembourg  | -1.690** | .194** | 1.614   | .       | .        | 1.340   | .465    | .696    | 83   | .150 |
| Netherlands | -.830**  | .121** | .712*   | 1.795   | .040     | .131    | -.662** | .517    | 1061 | .052 |
| Portugal    | -1.484** | .068** | .114    | .253    | -.696**  | .035    | -.143   | .433**  | 2842 | .031 |
| Spain       | -.661**  | .096** | .109    | .765    | -1.068** | -.871** | -.359** | .683**  | 1428 | .087 |
| UK          | -1.192** | .129** | .435*   | -.410   | -.232    | -.400   | -.170   | .412**  | 2827 | .063 |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%

Table 12: Estimated median regression models for the logarithm of wage and salary earnings divided by the months of employment for full-time employees (in thousands of purchasing power parities and 1998 prices).

| Country     | Intercept | Age     | Age <sup>2</sup> | Sex     | Tertiary | Second. | No spouse | Bad health | <i>n</i> | <i>R</i> <sup>2</sup> |
|-------------|-----------|---------|------------------|---------|----------|---------|-----------|------------|----------|-----------------------|
| Austria     | 7.133**   | -.049** | -.004**          | -.304** | .703**   | .252**  | .007      | -.131**    | 2003     | .150                  |
| Belgium     | 7.347**   | -.007   | -.001            | -.273** | .372**   | .166**  | -.014     | -.074      | 1486     | .119                  |
| Denmark     | 7.161**   | -.007** | -.001**          | -.205** | .302**   | .111**  | -.005     | -.090**    | 3060     | .163                  |
| Finland     | 7.566**   | -.014*  | -.001**          | -.334** | .431**   | .109**  | .000      | -.068**    | 2682     | .207                  |
| France      | 7.168**   | .001    | .000             | -.261** | .740**   | .250**  | -.027*    | -.128**    | 4791     | .204                  |
| Germany     | 7.273**   | .012**  | .001*            | -.271** | .334**   | .057**  | -.001     | -.027**    | 6554     | .111                  |
| Greece      | 6.875**   | -.009*  | .000             | -.285** | .524**   | .322**  | .015      | -.051      | 2380     | .204                  |
| Ireland     | 7.230**   | -.008   | .000             | -.364** | .690**   | .277**  | -.201**   | -.082      | 2123     | .249                  |
| Italy       | 7.058**   | -.005** | .000             | -.201** | .454**   | .245**  | -.006     | -.055**    | 5194     | .156                  |
| Netherlands | 7.442**   | -.014   | -.001**          | -.350** | .297**   | -.043** | -.029     | -.04       | 3117     | .127                  |
| Portugal    | 6.592**   | -.011** | .000             | -.236** | 1.210**  | .716**  | .007      | -.080**    | 4465     | .215                  |
| Spain       | 7.030**   | -.012** | -.001*           | -.262** | .697**   | .378**  | -.013     | -.106**    | 4163     | .231                  |
| UK          | 7.265**   | .000    | .001             | -.251** | .359**   | .126**  | -.064**   | .013       | 2968     | .119                  |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%



Table 13: Estimated median regression models for the logarithm of wage and salary earnings divided by the months of employment for full-time employees (in thousands of purchasing power parities and 1998 prices).

| Country     | Intercept | Experience | Experience <sup>2</sup> | Sex     | Tertiary | Second. | No spouse | Bad health | <i>n</i> | <i>R</i> <sup>2</sup> |
|-------------|-----------|------------|-------------------------|---------|----------|---------|-----------|------------|----------|-----------------------|
| Austria     | 7.261**   | .004       | -.000                   | -.307** | .678**   | .275**  | .011      | -.139**    | 2003     | .147                  |
| Belgium     | 7.322**   | .009**     | -.000**                 | -.282** | .339**   | .142**  | -.022     | -.013      | 1486     | .121                  |
| Denmark     | 7.315**   | -.002      | -.000                   | -.208** | .271**   | .093**  | -.007     | -.086**    | 3060     | .167                  |
| Finland     | 7.669**   | -.001      | -.000                   | -.333** | .408**   | .110**  | .001      | -.072**    | 2682     | .207                  |
| France      | 7.347**   | .009**     | -.000**                 | -.272** | .630**   | .203**  | -.031*    | -.133**    | 4791     | .216                  |
| Germany     | 7.236**   | .007**     | -.000**                 | -.291** | .323**   | .053**  | -.014     | -.022*     | 6554     | .113                  |
| Greece      | 6.920**   | .010**     | -.000**                 | -.313** | .485**   | .287**  | .012      | -.036      | 2380     | .209                  |
| Ireland     | 7.214**   | .009*      | -.000**                 | -.367** | .661**   | .266**  | -.199**   | -.091      | 2123     | .250                  |
| Italy       | 7.010**   | .007**     | -.000**                 | -.201** | .441**   | .240**  | -.01      | -.049**    | 5194     | .157                  |
| Netherlands | 7.460**   | .012**     | -.000**                 | -.348** | .252**   | -.043** | -.017     | -.086*     | 3117     | .138                  |
| Portugal    | 6.331**   | .031**     | -.001**                 | -.239** | 1.121**  | .634**  | -.000     | -.058**    | 4465     | .236                  |
| Spain       | 7.045**   | .009**     | -.000**                 | -.271** | .657**   | .355**  | -.019     | -.107**    | 4163     | .234                  |
| UK          | 7.301**   | .015**     | -.000**                 | -.263** | .332**   | .107**  | -.079**   | .013       | 2968     | .126                  |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%

Table 14: Estimated median regression models for the logarithm of old-age pension benefits divided by the number of months out of labor force for people retired for at least one year (in thousands of purchasing power parities and 1998 prices).

| Country     | Intercept | Yrs ret. | Career  | Tertiary | Second. | Sex     | No spouse | Bad health | <i>n</i> | <i>R</i> <sup>2</sup> |
|-------------|-----------|----------|---------|----------|---------|---------|-----------|------------|----------|-----------------------|
| Austria     | 6.910**   | -.012**  | -.000   | 1.006**  | .314**  | -.471** | -.016     | -.123**    | 2837     | .237                  |
| Belgium     | 6.890**   | .022     | -.002   | .409**   | .135**  | -.372** | .003      | -.091**    | 1744     | .132                  |
| Denmark     | 6.760**   | -.029**  | -.001   | .245**   | .002    | -.143** | .015      | -.143**    | 1634     | .090                  |
| Finland     | 6.285**   | .026**   | .012**  | 1.021**  | .233**  | -.282** | -.004     | -.054      | 1766     | .111                  |
| France      | 6.965**   | -.004**  | -.012** | .779**   | .354**  | -.503** | .050**    | -.181**    | 5583     | .185                  |
| Germany     | 6.442**   | .        | .013*   | .608**   | .212*   | -.607** | .139      | -.126      | 273      | .149                  |
| Greece      | 6.260**   | .008**   | -.023** | .773**   | .589**  | -.617** | .150**    | -.174**    | 4306     | .224                  |
| Ireland     | 6.685**   | -.013**  | -.001   | .754**   | .395**  | -.285** | -.319**   | -.081      | 1395     | .189                  |
| Italy       | 6.856**   | -.012**  | -.003** | .698**   | .383**  | -.501** | -.019     | -.152**    | 6310     | .200                  |
| Netherlands | 7.151**   | -.005*   | .000    | .541**   | .011    | -.766** | .108**    | -.032      | 2376     | .150                  |
| Portugal    | 6.342**   | -.018**  | -.011** | 1.753**  | 1.106** | -.465** | -.04      | -.152**    | 3289     | .214                  |
| Spain       | 6.837**   | -.023**  | -.020** | .780**   | .483**  | -.284** | -.089**   | -.060**    | 3836     | .188                  |
| UK          | 6.335**   | .008**   | .010**  | .713**   | .309**  | -.655** | .396**    | -.108**    | 2191     | .158                  |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%

Table 15: Estimated regression model for the logarithm of the replacement rate.

| Country  | Intercept | Sex     | Age     | Career | Tertiary | Second. | No spouse | Earnings | <i>n</i> | <i>R</i> <sup>2</sup> |
|----------|-----------|---------|---------|--------|----------|---------|-----------|----------|----------|-----------------------|
| Austria  | -.039     | -.385** | .023    | .003   | .132     | -.144   | .131      | -.368**  | 96       | .191                  |
| Denmark  | -.422     | -.166   | -.013   | .008   | .325     | .083    | .054      | -1.007** | 86       | .312                  |
| France   | -.415     | .155    | .007    | .008   | .093     | -.049   | -.113     | -.182**  | 108      | .151                  |
| Germany  | -.607     | -.547** | -.023   | .007   | .304     | .106    | .453**    | -.567**  | 75       | .221                  |
| Greece   | -.102     | -.059   | -.020   | .001   | .160     | .200    | .122      | -.191**  | 129      | .103                  |
| Italy    | -.267     | -.165** | -.006   | .004   | .444**   | .132**  | .085      | -.313**  | 257      | .042                  |
| Portugal | -.205     | .147    | -.024** | .001   | .361*    | .173    | .087      | -.046    | 127      | .057                  |
| Spain    | -.091     | -.113   | -.007   | .004   | .615**   | .128    | -.010     | -.733**  | 175      | .213                  |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%

Table 16: Estimated logit model for the probability to socialize

| Country     | Intercept | Age     | Age <sup>2</sup> | Sex     | Tertiary | Secondary | No spouse | Bad health | Hh. income | n     | R <sup>2</sup> |
|-------------|-----------|---------|------------------|---------|----------|-----------|-----------|------------|------------|-------|----------------|
| Austria     | 2.404**   | -.010   | -.001            | -.024   | .662**   | .494**    | -.339**   | -.721**    | .023**     | 9666  | .036           |
| Belgium     | 2.015**   | .036**  | .001             | .196**  | .517**   | .309**    | -.013     | -.070      | .007*      | 7891  | .011           |
| Denmark     | 3.753**   | .012    | .000             | .276**  | .165     | -.073     | -.821**   | -.463**    | .037**     | 7601  | .035           |
| Finland     | 3.099**   | .028*   | .002             | .351**  | -.174    | -.171     | -.207*    | -.481**    | .018**     | 8397  | .012           |
| France      | 2.300**   | -.011** | -.001*           | -.067   | .536**   | .182**    | -.608**   | -.721**    | .020**     | 19283 | .038           |
| Germany     | 2.124**   | .010*   | .000             | .081*   | -.179**  | -.159**   | -.121**   | -.333**    | .017**     | 21169 | .007           |
| Greece      | 3.755**   | -.006   | .000             | -.136   | .198     | -.110     | -.361**   | -.891**    | .011       | 20271 | .021           |
| Ireland     | 4.463**   | .034    | .006*            | .231    | .713*    | -.186     | -.653**   | -.880**    | .000       | 11517 | .022           |
| Italy       | 2.147**   | -.011** | .001             | -.260** | .285**   | .345**    | -.382**   | -.533**    | .009**     | 28003 | .024           |
| Netherlands | 3.119**   | .000    | -.001            | .557**  | -.077    | .202**    | -.263**   | -.849**    | .033**     | 13883 | .023           |
| Portugal    | 1.991**   | -.007   | .000             | -.024   | -.052    | .530**    | -.324**   | -.186**    | .030**     | 20518 | .013           |
| Spain       | 3.952**   | .005    | .000             | .005    | -.515**  | -.046     | -.535**   | -.799**    | .010       | 23908 | .021           |
| UK          | 1.475**   | -.015** | -.002**          | .151**  | -.457**  | -.301**   | .318**    | .163**     | -.003*     | 12417 | .015           |
| Austria     | 2.404**   | -.010   | -.001            | -.024   | .662**   | .494**    | -.339**   | -.721**    | .023**     | 9666  | .036           |

\*\*denotes an observed significance level below 5%, \* denotes an observed significance level below 5 and 10%

Figure 1: Fraction of people in poor health by country, sex and age.

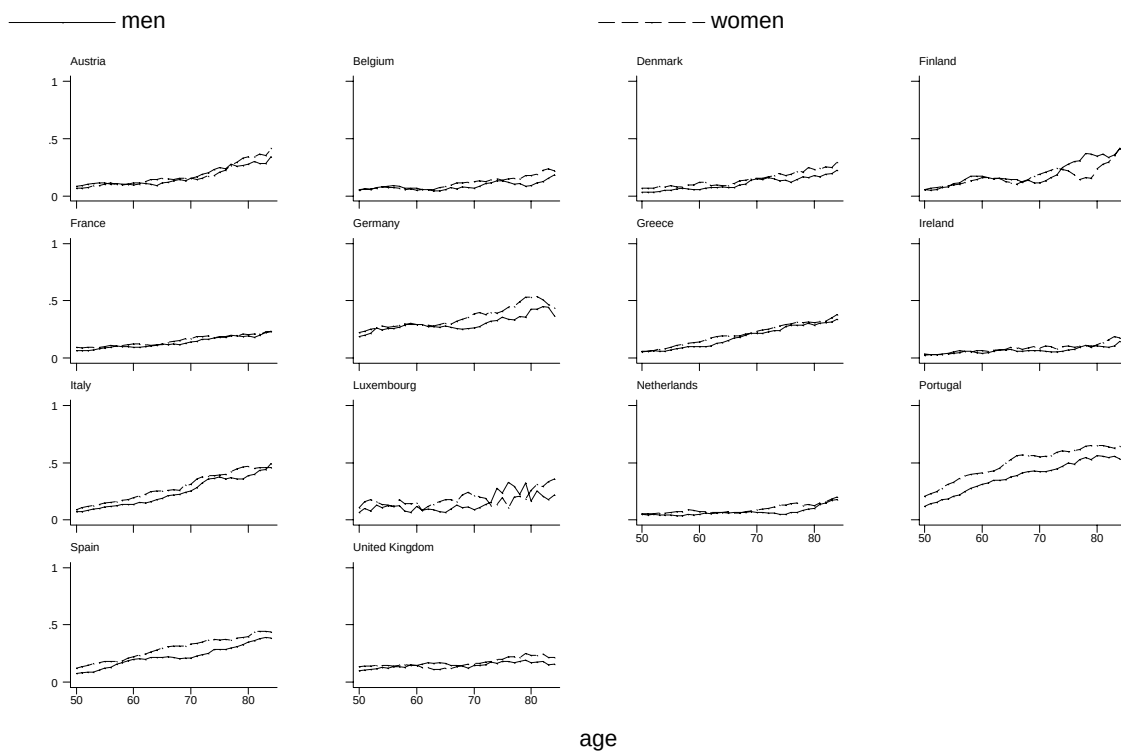


Figure 2: Fraction of people affected by health-related limitation, by country sex and age.

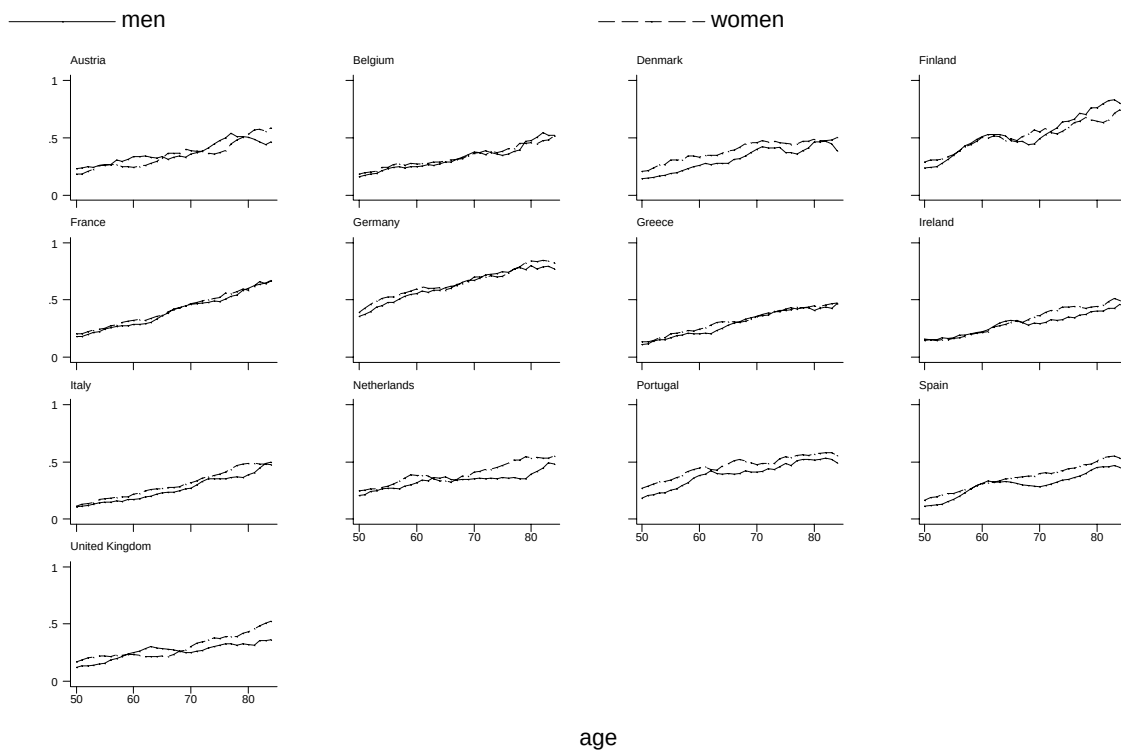


Figure 3: Fraction of people affected by chronic conditions by country, sex and age.

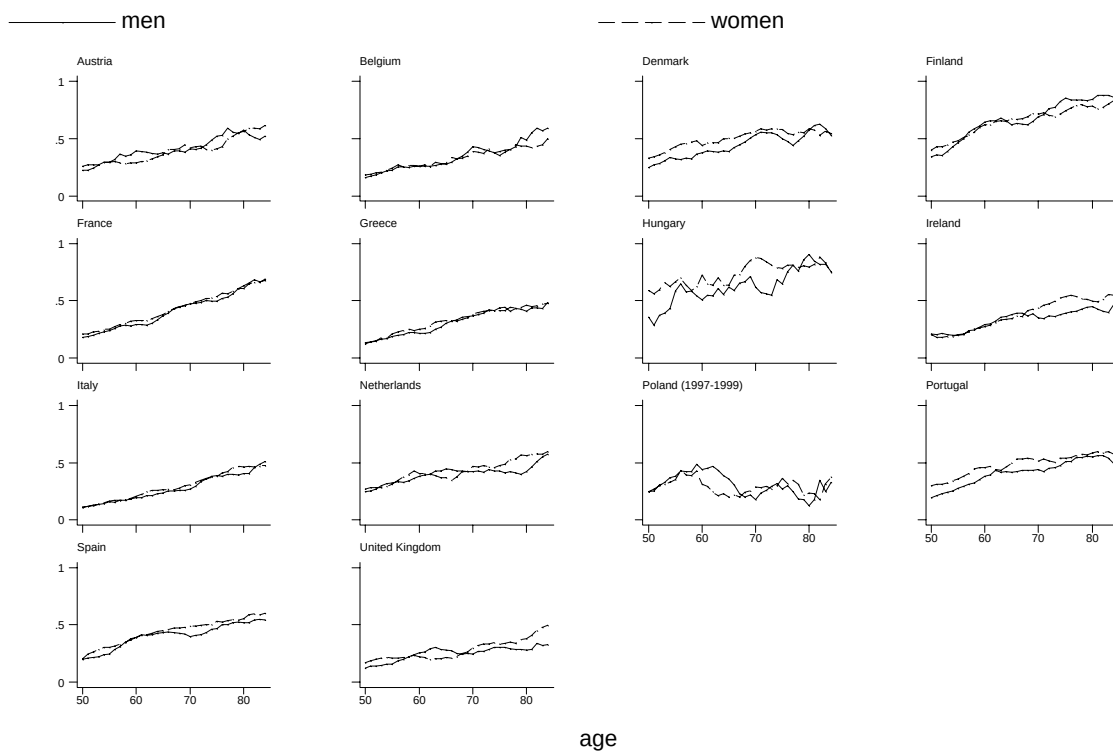


Figure 4: Fraction of people hospitalized in the last year by country, sex and age.

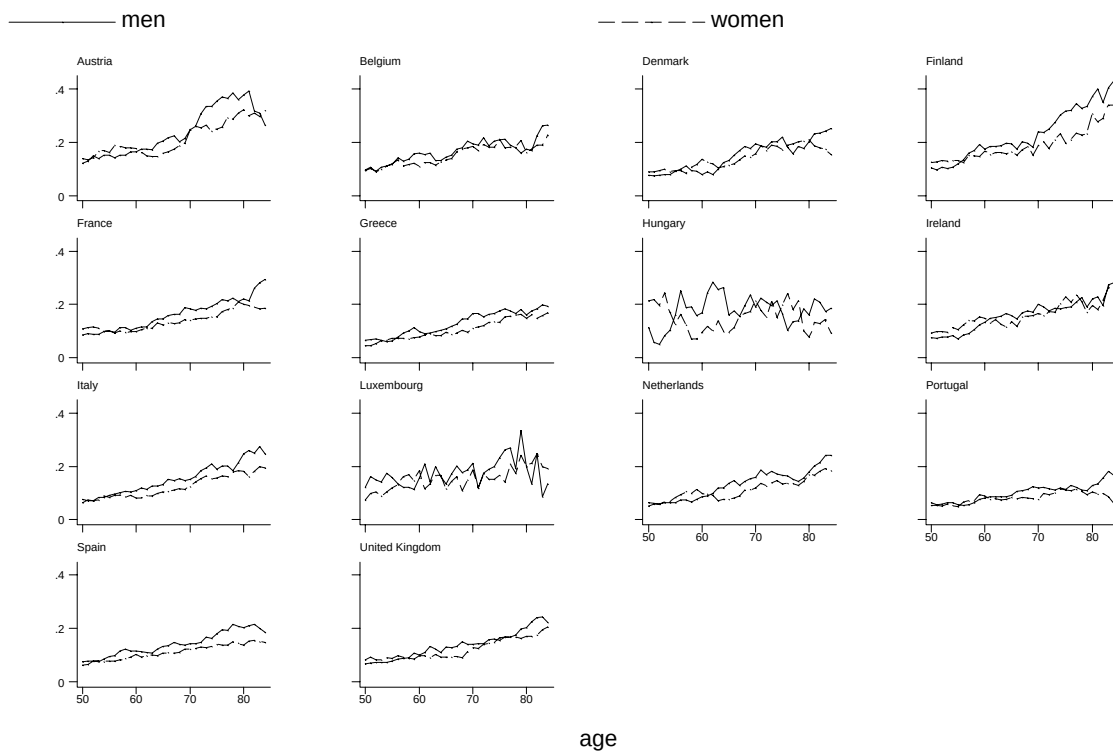


Figure 5: Fraction of people who went to the doctor in the last year by country, sex and age.

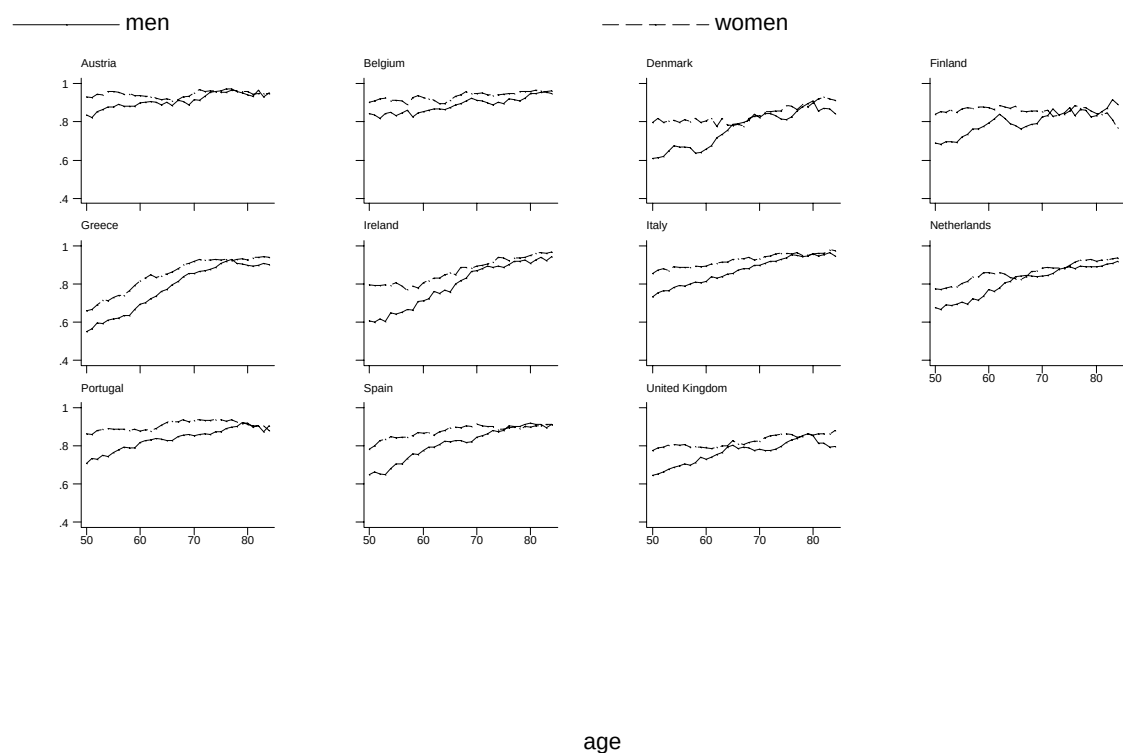


Figure 6: Fraction of people who went to the dentist in the last year by country, sex and age.

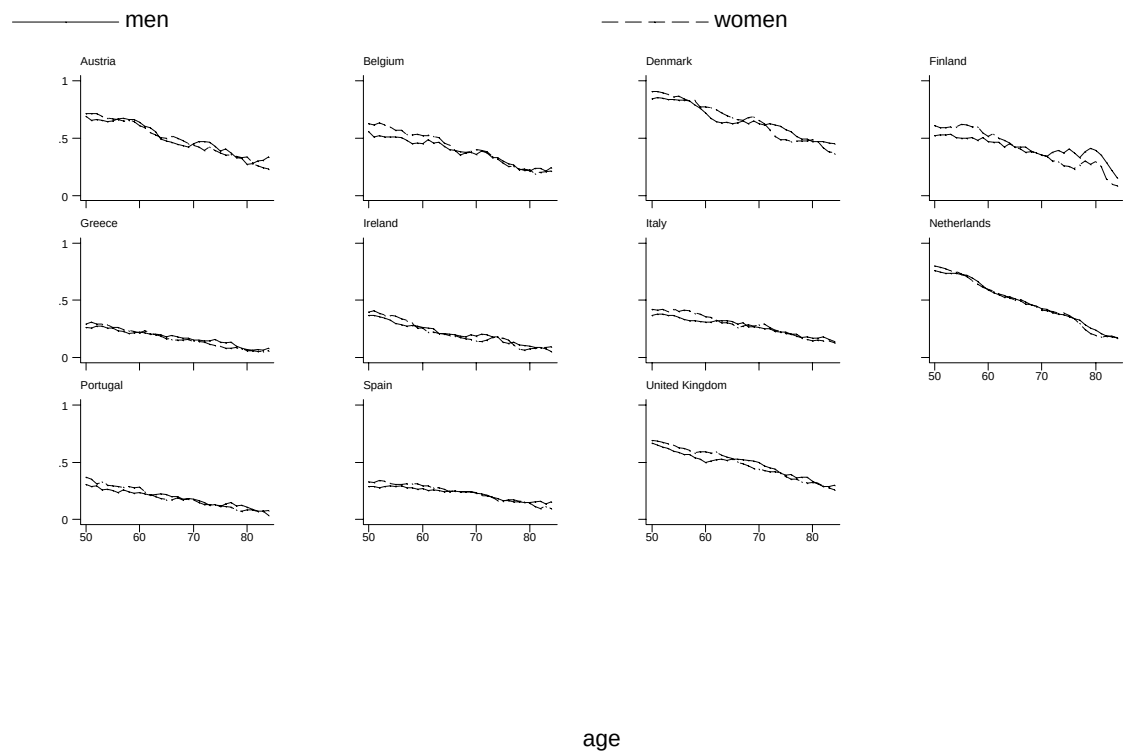


Figure 7: Average household size and average number of adults in a household, by country and age. Men.

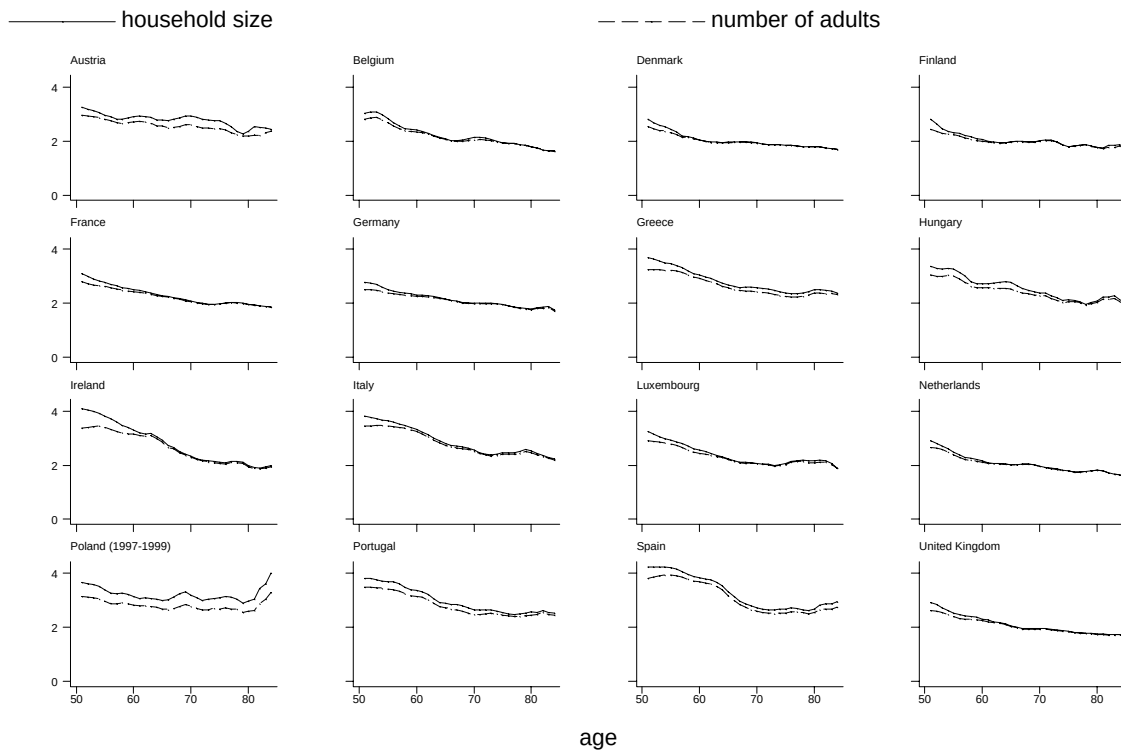


Figure 8: Average household size and average number of adults in a household, by country and age. Women.

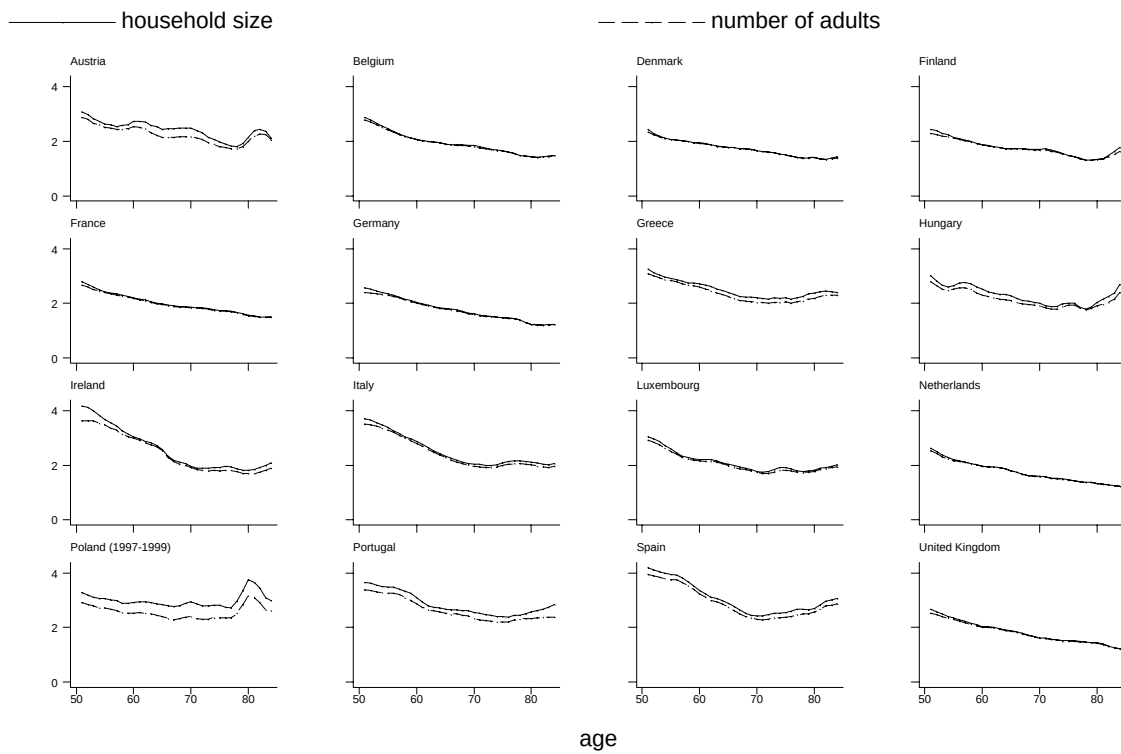


Figure 9: Tenure by country and age. Men.

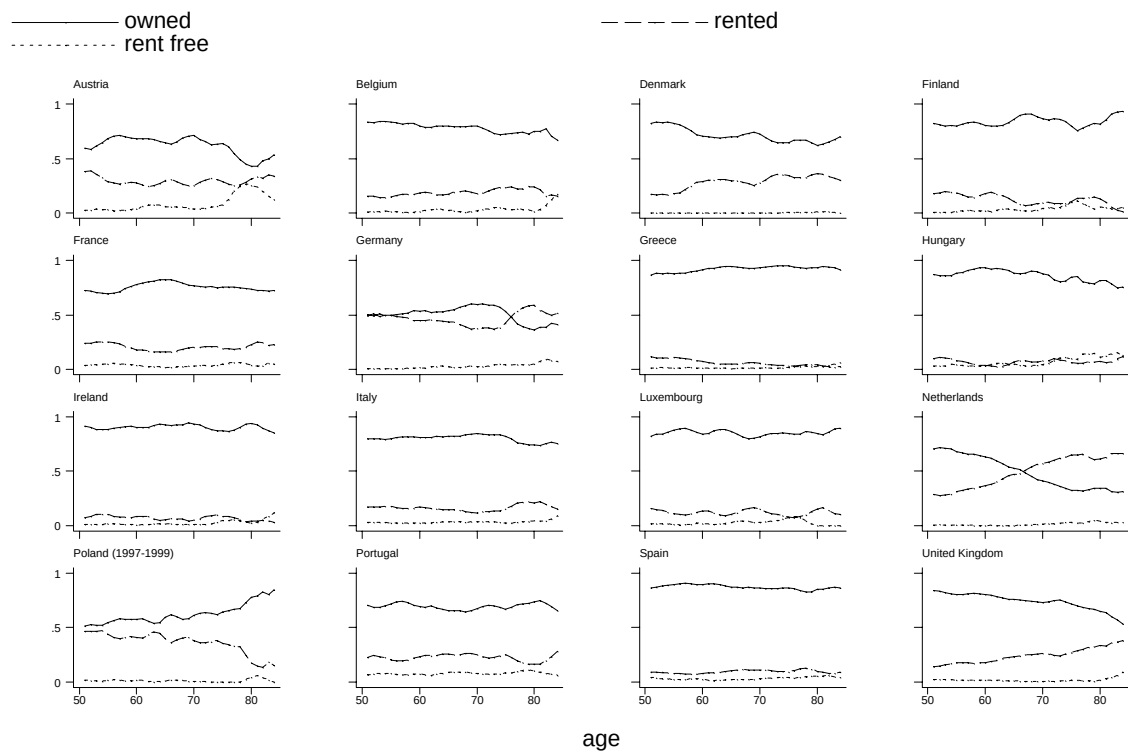


Figure 10: Tenure by country and age. Women.

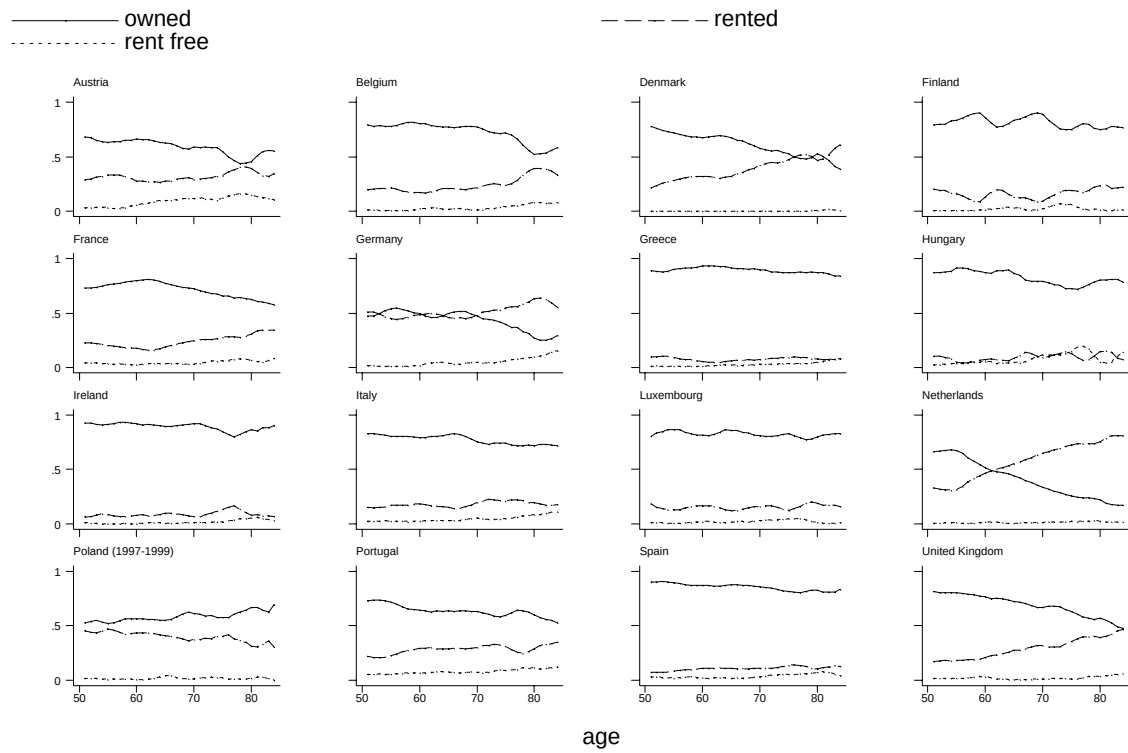




Figure 11: Distribution of labor force status by country and age. Men.

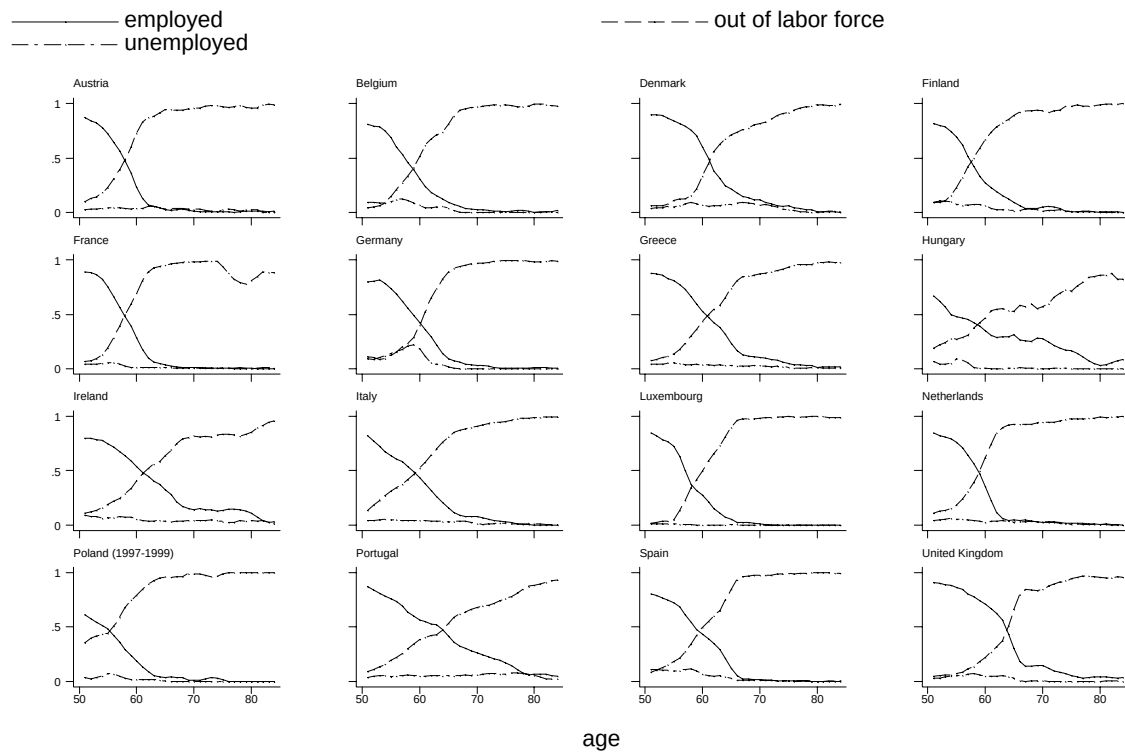


Figure 12: Distribution of labor force status by country and age. Women.

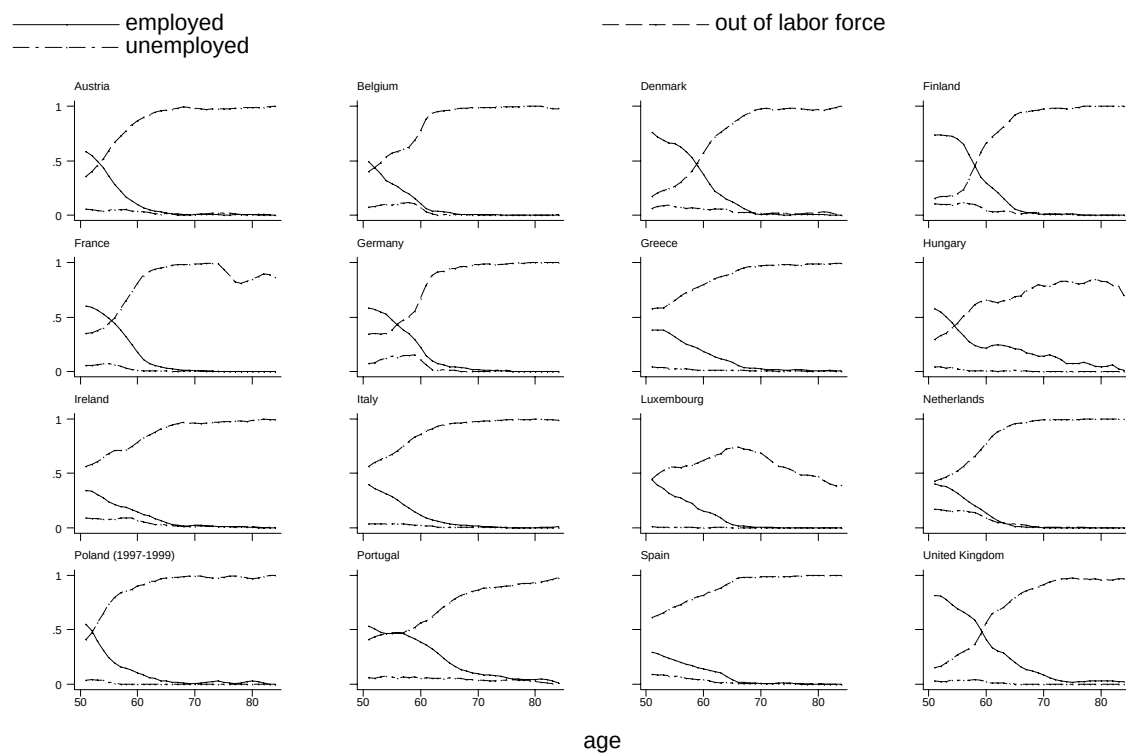


Figure 13: Age profile of exit rates from employment by country, sex and age.

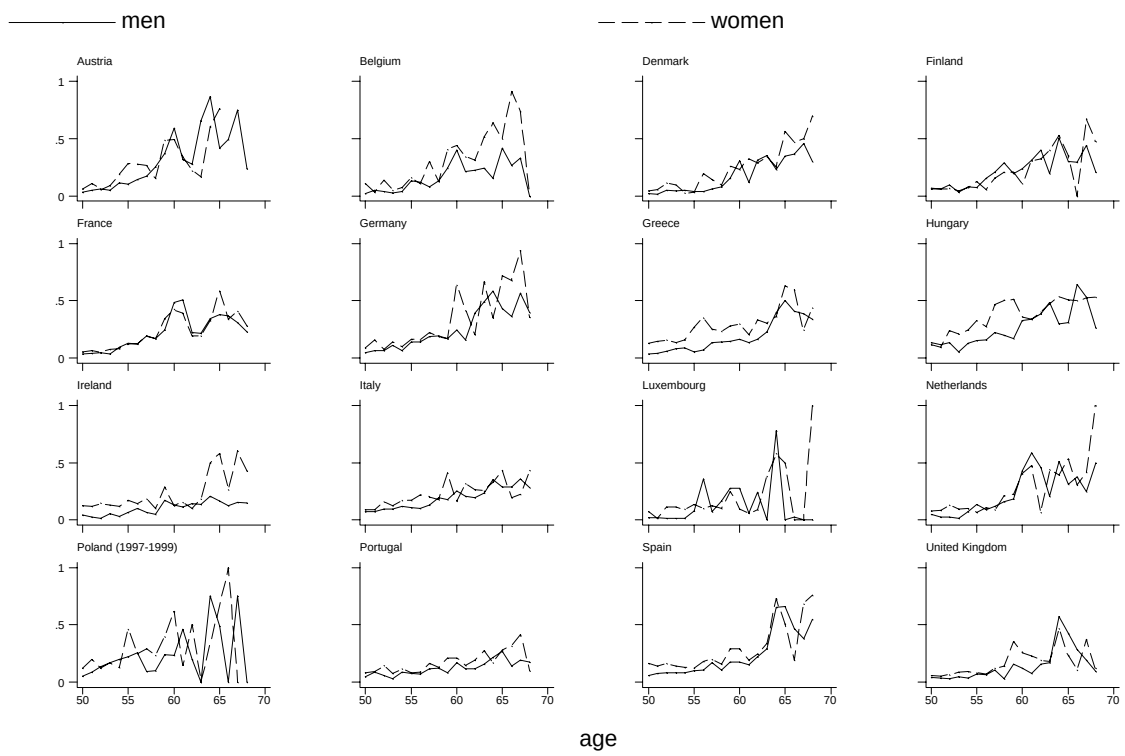


Figure 14: Composition of personal income by country and age. Men.

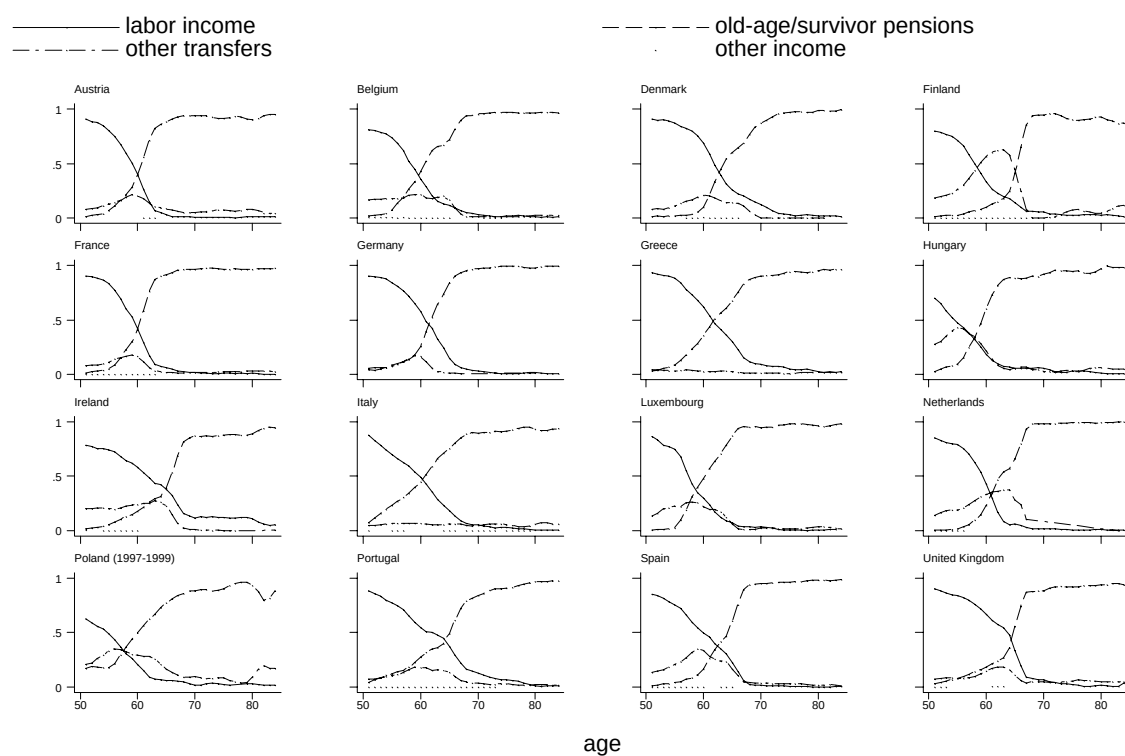


Figure 15: Composition of personal income by country and age. Women.

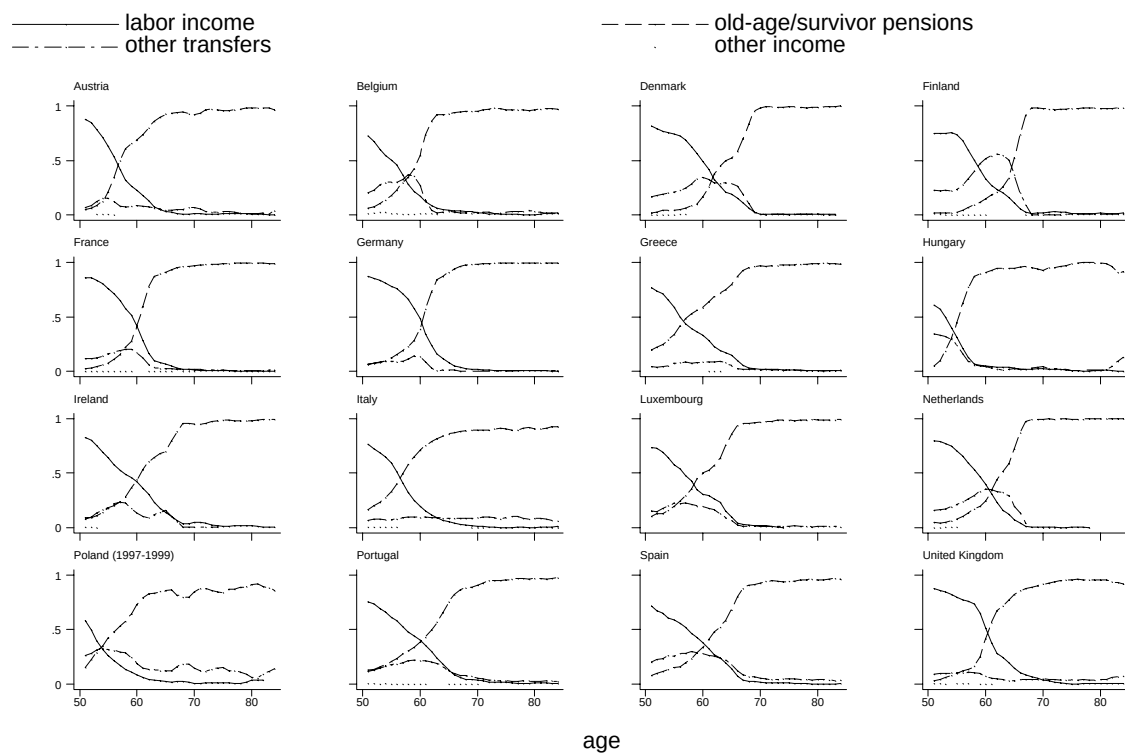


Figure 16: Incidence of poverty by country and age under three alternative cut-offs, 40%, 50% and 60% of median equivalized household income. Men.

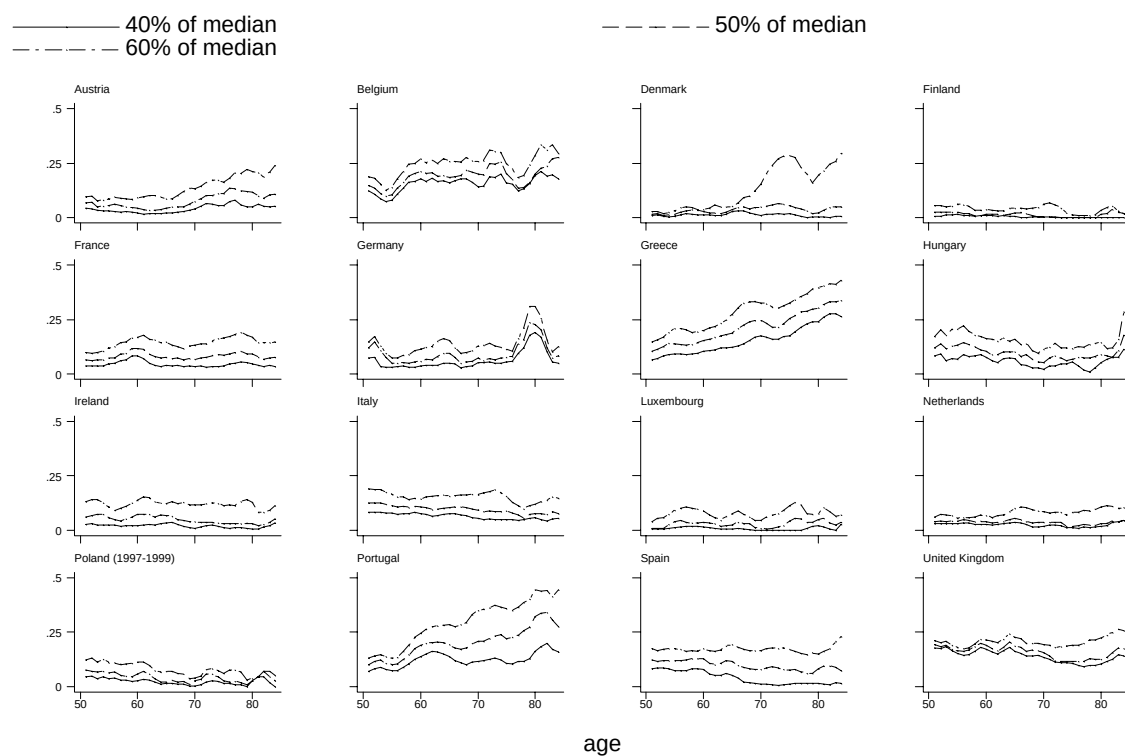


Figure 17: Incidence of poverty by country and age under three alternative cut-offs, 40%, 50% and 60% of median equivalized household income. Women.

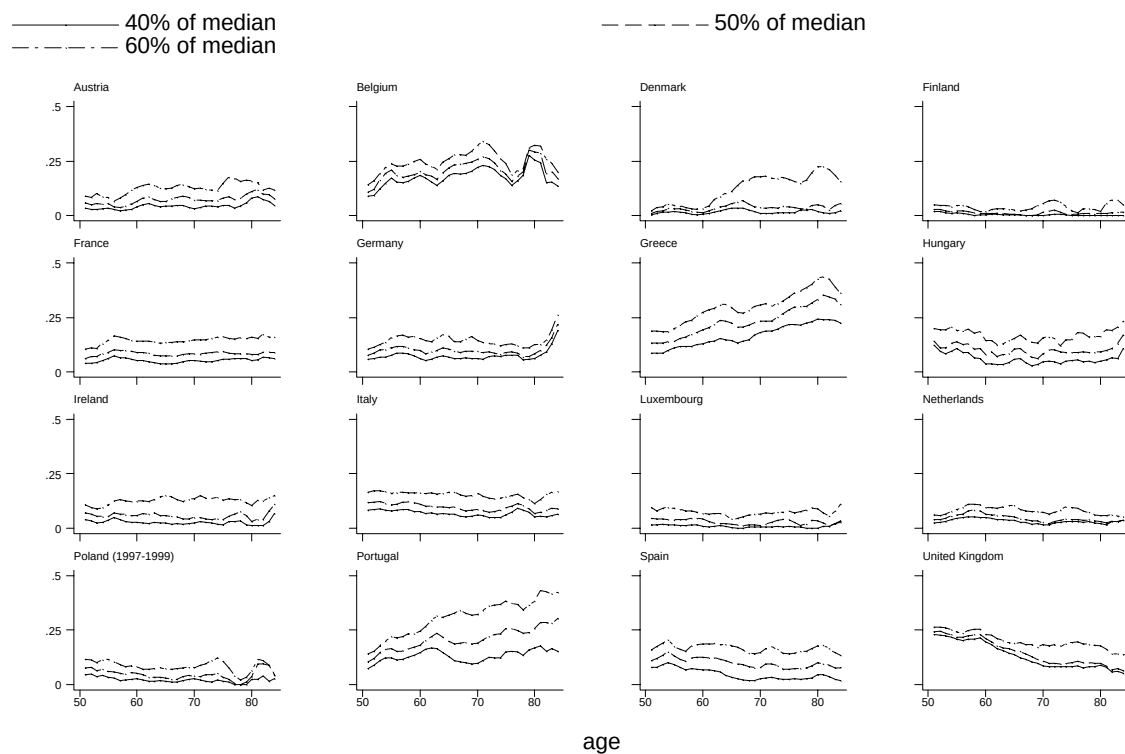


Figure 18: Fraction of people satisfied with work or main activity by country, sex and age.

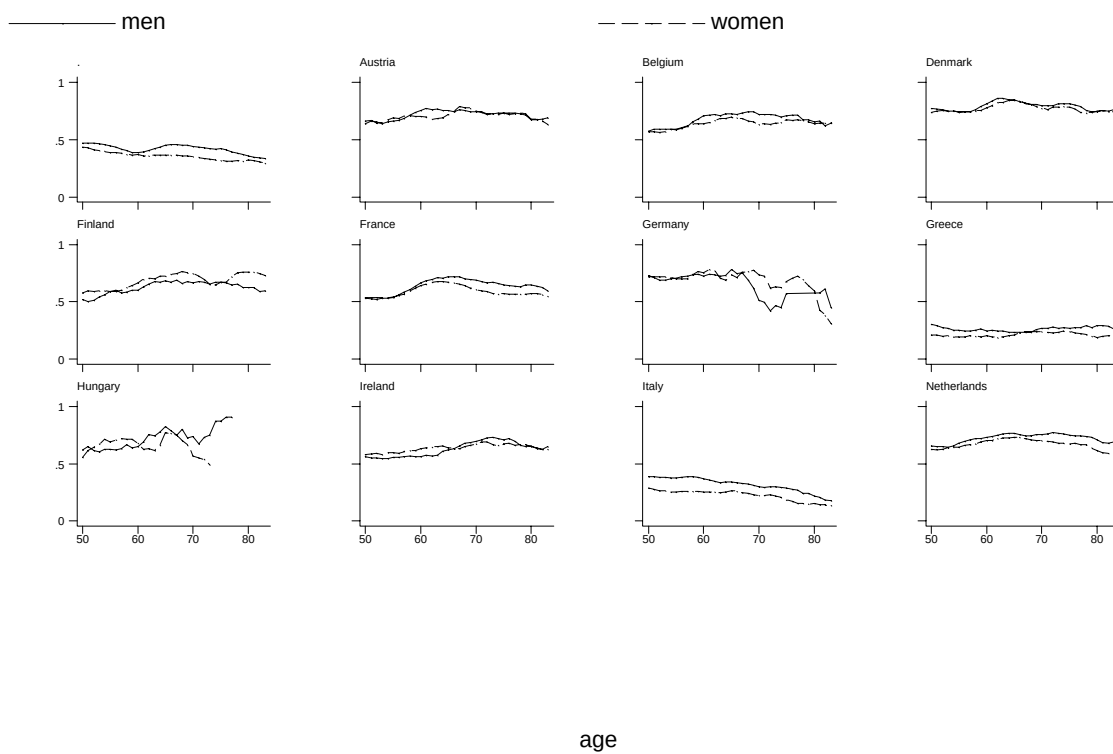


Figure 19: Fraction of people satisfied with income or financial situation by country, sex and age.

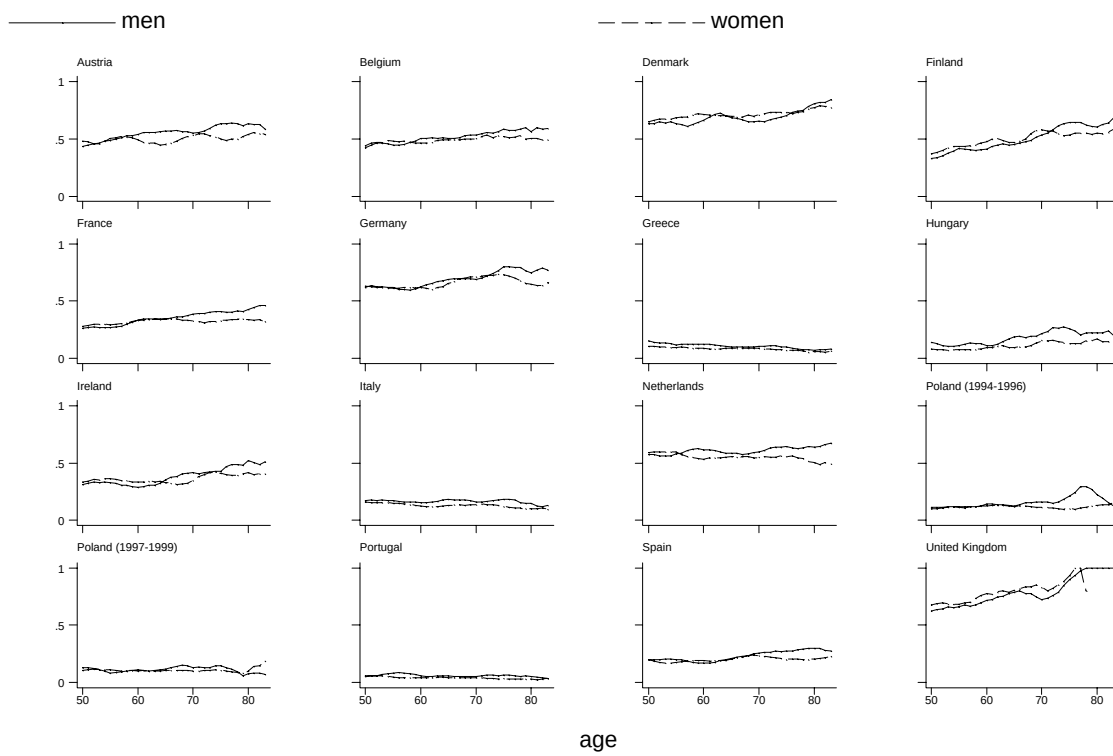


Figure 20: Fraction of people satisfied with housing by country, sex and age.

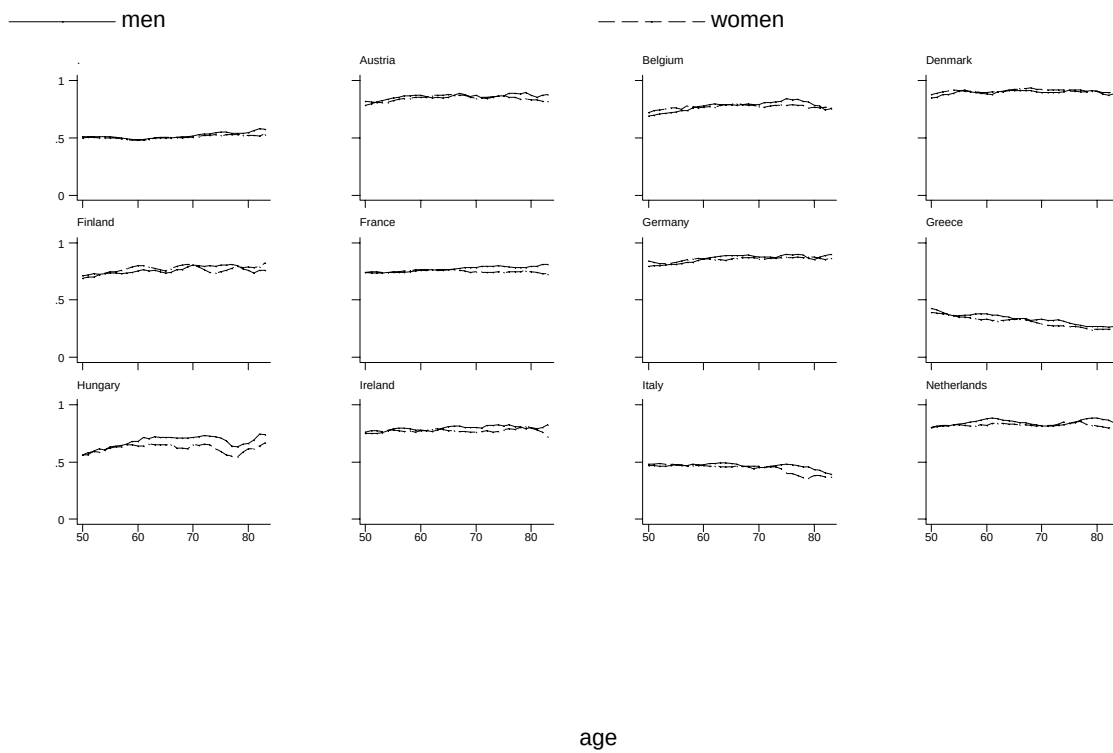


Figure 21: Fraction of people satisfied with work or main activity before and after the retirement age by country, sex and age.

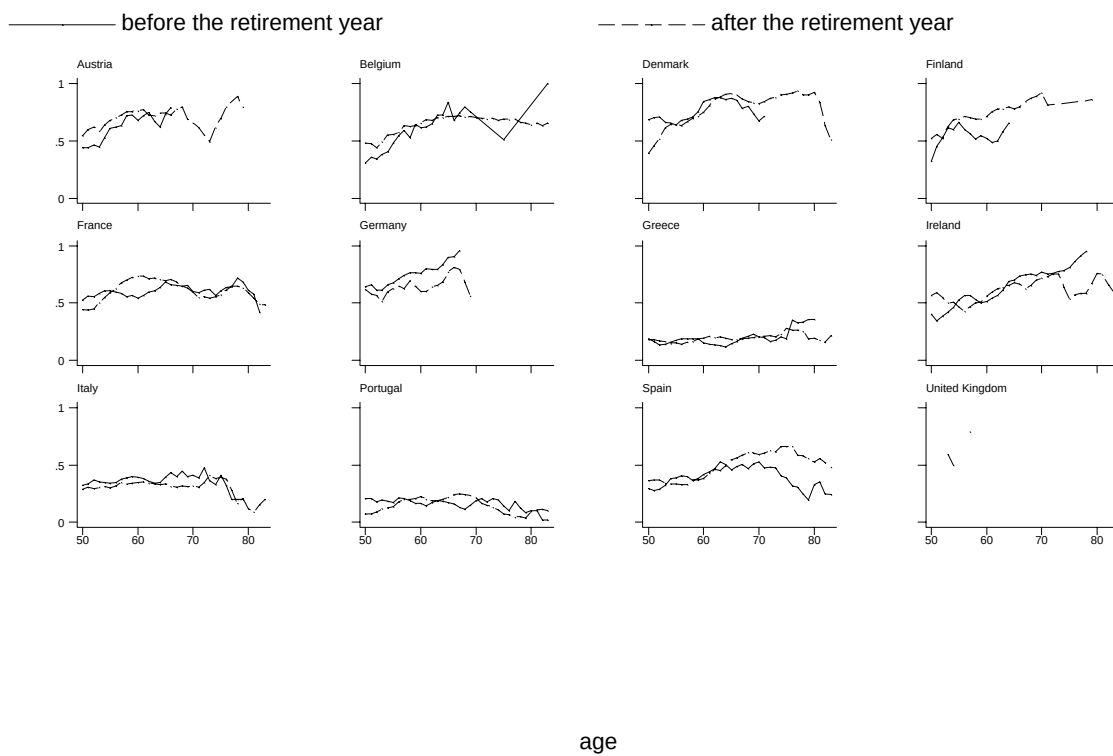


Figure 22: Fraction of people satisfied with income or financial situation before and after retirement by country, sex and age.

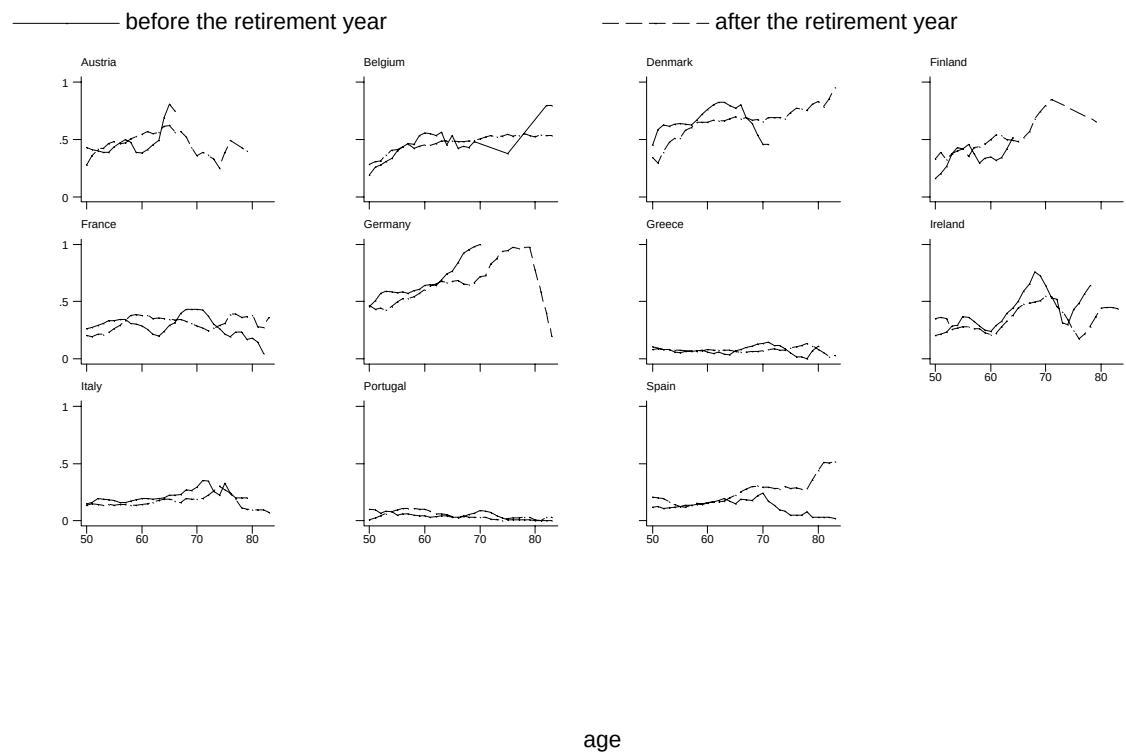


Figure 23: Fraction of people satisfied with housing before and after retirement by country, sex and age.

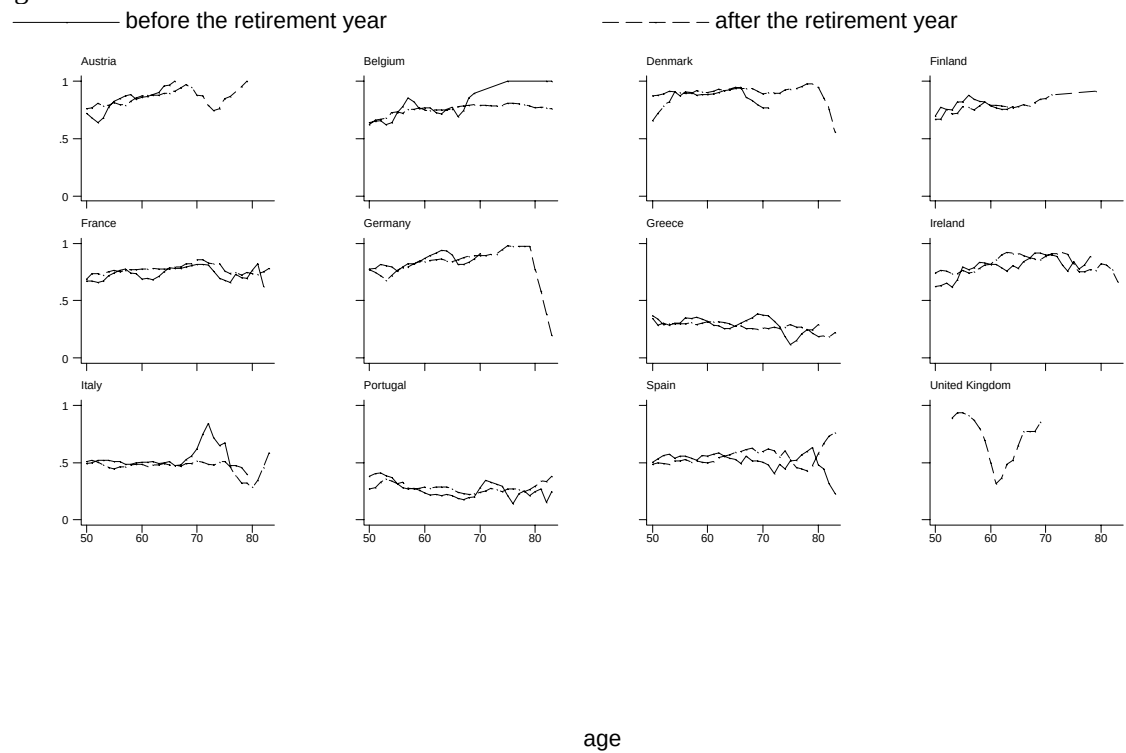


Figure 24: Fraction of people who talk to neighbors at least once per month by country, sex and age.

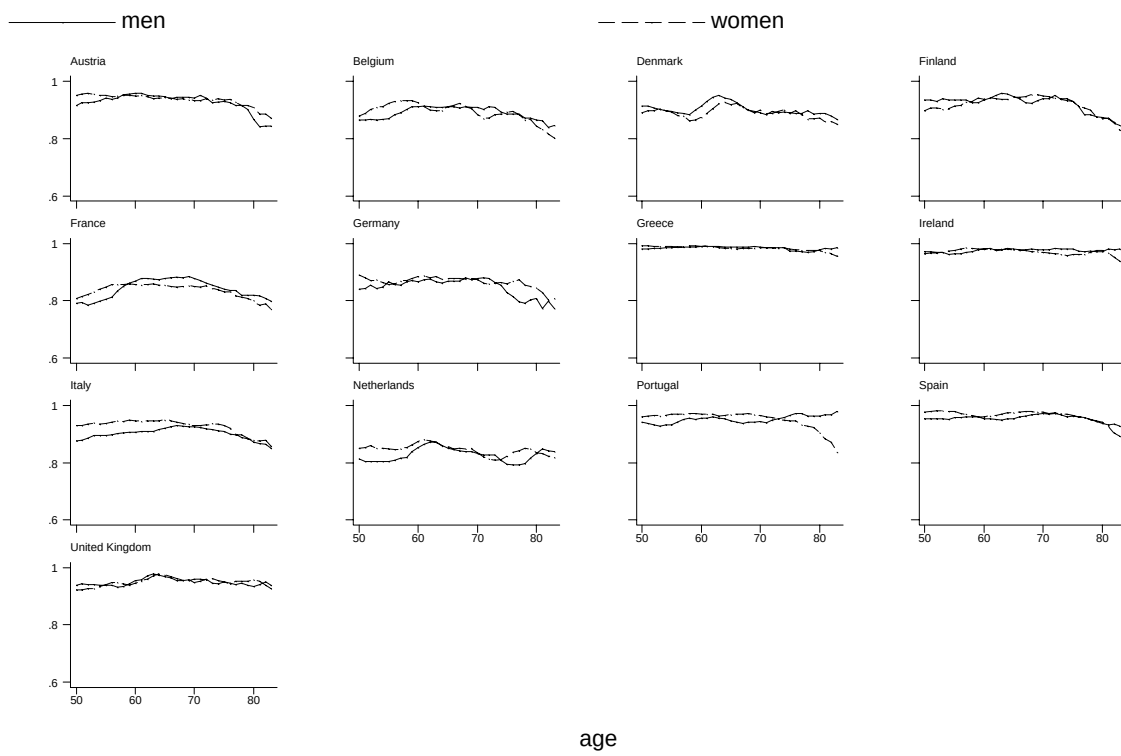


Figure 25: Fraction of people who see friends at least once per month by country, sex and age.

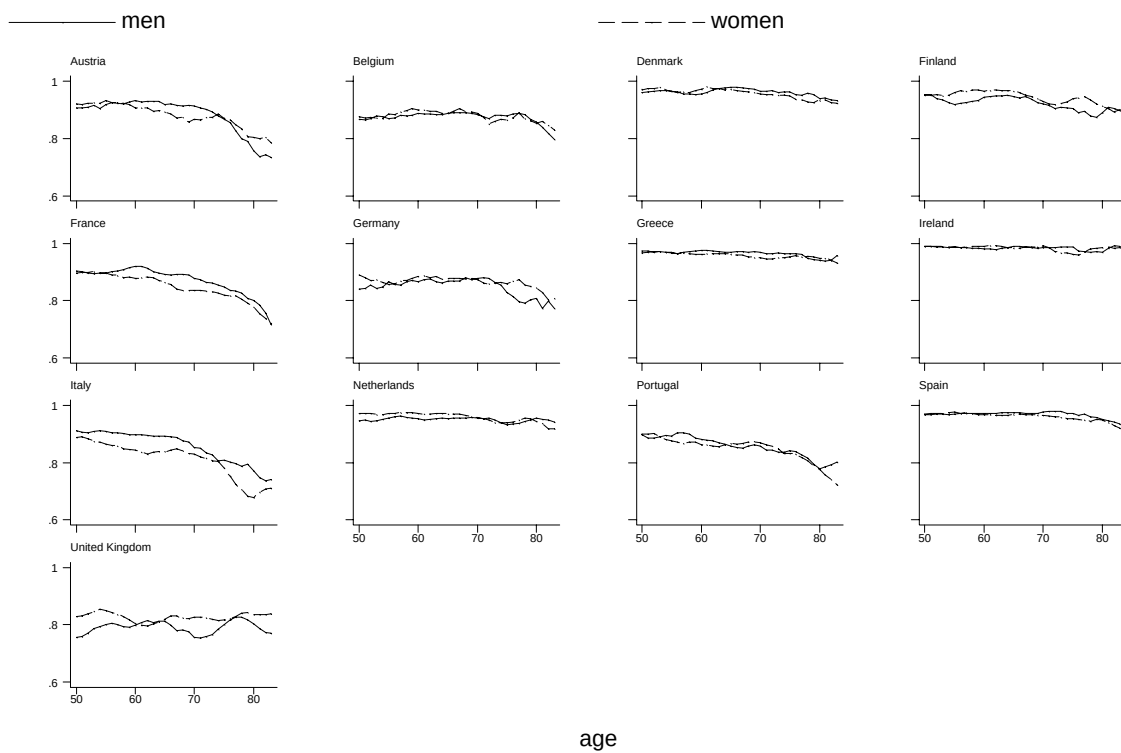




Figure 26: Fraction of people who talk to neighbors at least once per month before and after retirement by country, sex and age.

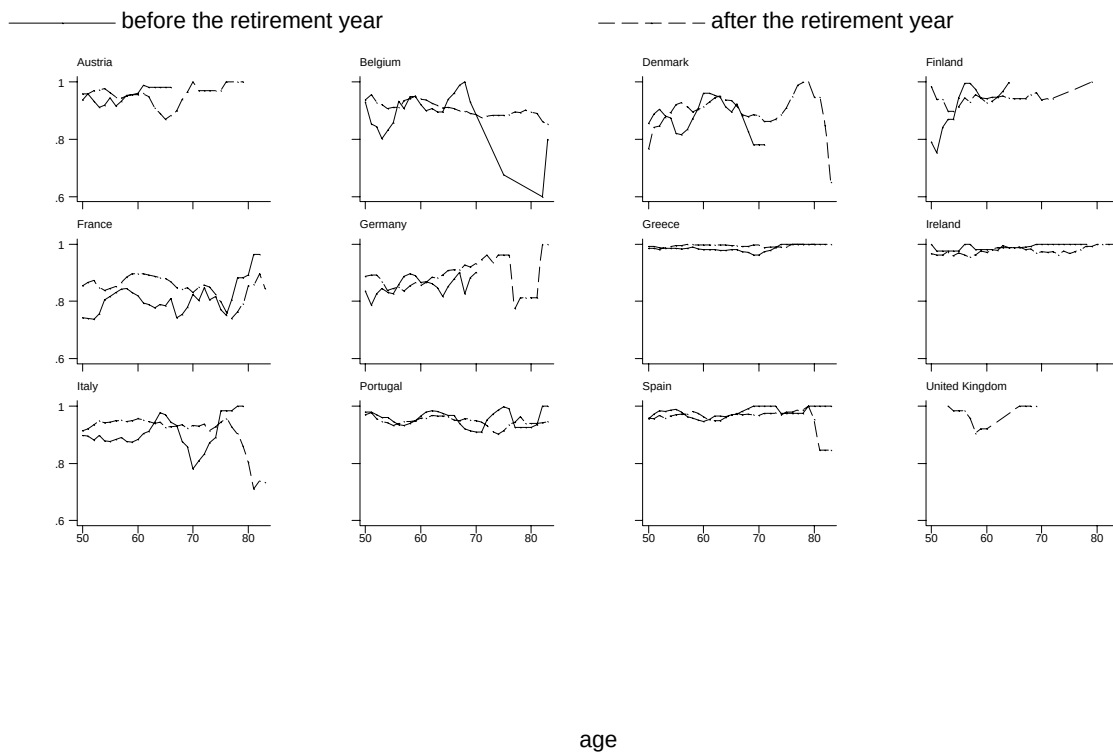


Figure 27: Fraction of people who see friends at least once per month before and after retirement by country, sex and age.

