Dipartimento di Statistica "Giuseppe Parenti"

W O R K I N G P A P E R 2005/02

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The economic well being of older Europeans

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Summary

Population ageing is a wide reaching phenomenon, with implications both at the macro and at the micro level, both considered here, albeit briefly, for selected European countries (Belgium, Germany, Spain, France, Italy, the Netherlands, Portugal, and the United-Kingdom).

Personal incomes are lower for a few groups (e.g. the elderly and the young, women, etc.), but most comparative disadvantages virtually disappear when household incomes are considered instead.

Social protection systems are very pervasive in Europe, but not everywhere as effective in sheltering from poverty: differences between social groups, and between countries, are considered descriptively in the initial part of this paper, and highlighted with multiple regressions at the end of it.

1. Introduction

Ageing is considered with growing concern in the industrialised nations (MacKellar 2000), especially where it is already in an advanced phase, or projected to accelerate in the near future, or both, as in the selected European countries that we will consider in this paper, that is Belgium, Germany, Spain, France, Italy, the Netherlands, Portugal, and the United-Kingdom[1].

Ageing has an impact both at the macro and at the micro level. Micro analysis typically considers whether the older are worse off than the rest of the population in specific respects, like health, housing, economic conditions, etc. In this line of reasoning, however, one is normally led to forget how relevant the public intervention is in the overall good performance that the European countries register in this respect. But this intervention is costly, and if a proper balance between outlays and revenues is not guaranteed, the whole social security system will have to be scaled down, sooner or later. Whether this will actually happen, how soon, how abruptly and by how much, is unpredictable at this stage, but the consequences of such an event on the well-being of the entire population, and of its older segment in particular, would surely be substantial.

It seems therefore important to try to keep both dimensions, micro and macro, under control when examining the conditions of the elderly. This, however, happens only rarely: in part, probably, because it is difficult to encompass the two dimensions within a unique statistical framework. Multilevel models are an exception, of course, but they require the presence of several second-stage units (countries, in our case), and this is impossible in comparative studies, if relative homogeneity among countries is to be preserved.

What follows is our first step in a more ambitious research project that tries to keep both levels of analysis under control, in a comparative perspective. The focus is on the economic well being of the elderly, and on its correlates. These are introduced only descriptively at the macro level, where we will try to summarise the main economic variables (e.g. GDP per head, public debt and deficit, social expenditure by category, etc.), and more in detail at the micro level.

The basic research question that we address here is: how well do the European elderly fare in economic terms, when compared to the rest of the population in each country? What micro (and, partially, macro) variables most affect this outcome?

2. A view of the literature

The economic condition of the older population forms the object of several national studies, and, more recently, a few publications attempting cross-country comparison. Among the latter, a particular impulse in Europe has derived from the availability of

[1] These are the countries that form the bulk of the FELICIE project (see http://www.felicie.org), in which we took part. We gratefully acknowledge financial support from the EU (Contract No. QLRT-2001-02310; FELICIE - 5th European Research Framework; cf.). ECHP data accessed through contract No. ECHP/2003/14. The authors are the sole responsible for the elaborations and the comments presented here.

internationally comparable databases, like the *European Community Household Panel* (*ECHP*) (e.g. Avramov, 2002), the *Luxembourg Income Study* (LIS) (e.g. Smeeding, 2003; Behrendt 2004), and the project "Dynamics of Population Ageing", of the Population Activities Unit of the Economic Commission for Europe (PAU-UNECE; e.g. Légaré, Martel 2002). The general conclusion is that, within the developed countries, the elderly no longer form a group at particular disadvantage, although they still fare slightly worse than the rest of the population, on average. Most importantly, however, they are a heterogeneous group, within which the most diverse situations can be found, ranging from affluence to deprivation.

The quest for the causes, or simply the correlates, of such diverse outcomes is hampered by the multidimensional nature of the interrelations, by their bi-directional relations of cause and effect, and by the lack of fully satisfactory data. But let us briefly consider the main issues.

One is linked to the presence of children, and, separately, to the fact of *living* with one's (adult) children. Children surviving to adulthood are frequently seen as a potential source of support for their aged parents: they provide emotional help (Friedman, Hetcher, Kanazawa 1994), constitute a sort of insurance against dependency (Wenger, 2001), protect from economic hardship (Nugent 1985), and frequently play more than just one part (Legrand et al. 2003; Lillard, Willis 1997). Indeed, their potentially protecting role has frequently been used as an explanation of fertility itself.

In practice, empirical research does not provide unique indications. Caldwell (1982) thought that the wealth would flow upwards, from the young to the elderly. But both generations (the elderly and their adult children) seem to prefer to live independently (McGarry, Schoeni 2000; Tomassini et alii 2004), and this generally translates into lower exchanges. Co-residence of several generations, including the elderly, may be on the rise again at least in the Mediterranean countries (Reher 1998), where home leaving takes places at ever later ages, and where, even when an independent household is set up, proximity with parents is appreciated (for Italy, cf. Tomassini, Wolf, Rosina 2003). In all cases (with or without coresidence), the exchange of help is normally on a mutual basis (e.g. Couch, Daly, Wolf 1999), but the prevalent direction is apparently downwards: the elderly seem to give more than they receive (although see Rendall, Bachieva 1998, for a different view). This happens both in the developing societies (e.g. Stecklov 1997; Lee, Kramer 2002) and, privately, in modern settings, although in the latter case the existence of extensive social security system (with income flowing upwards, towards the elderly) more than compensate for the private downwards transfers (Lee 2000, 2003).

Let us open a brief parenthesis here. In several modern societies, pension and health assistance systems are financed on a pay-as-you-go basis, which is not actuarially equitable: the average individual receives more (especially in old age), than he or she has paid for (almost exclusively in his or her adult years), and the system proves sustainable only if the age pyramid remains favourable. This means that childless elderly benefit from social security services for which they have not paid their fair share, either as direct contributions, or in terms of the formation of the next generation (Demeny 1986; Sartor 2004). The costs of raising up a child, from conception to economic independency, are a subject of great controversy, and despite the huge literature that has developed, estimates fluctuate considerably, also because they seem to depend on age (of parents and children), birth order, economic status of the household, etc. (De Santis 2004). However, to give a rough idea, direct costs can be

estimated at about 20% of the budget of a childless couple, per child, per year of economic dependency. On top of this, there is also a substantial amount of unearned income to consider, possibly about 20 to 30% of the potential lifetime earning of the woman (Davies, Joshi, Peronaci 2000; Joshi 2002; Di Pino 2004). All this suggests that, from the economic point of view, childless elderly, who escaped all of these costs, should be much better off than parents.

However, there are also possible routes leading to the opposite outcome. Childless people are usually found to spend more and save less during their working lives (Bloom and Pebley 1982). Besides, childless men are probably less motivated to increase their labour supply, as fathers usually do when their child is born (Palomba, Sabbadini 1994). Further, the absence of kin support may force childless elderly to purchase assistance on the market, and this is expensive, even if, sometimes, publicly subsidized. Finally, childless elderly may be forced to live in smaller households, with higher unitary costs, and cannot rely on economic support from their adult children in case of need. In short, among the elderly, the relative economic well being of parents versus non parents is not self evident. In short, the impact of adult children on the economic well-being of the elderly is far from clear, and may be far less important than other variables, like education, past working history, current living arrangement, etc. (Bardasi, Jenkins 2002),

While the available databases only rarely permit one to know whether the elderly ever had children, or whether they still have some surviving, they almost always give details on the household composition at the time of the interview, and the living arrangements of the elderly are considered with ever greater attention at both national and international level (e.g. UN 2001). This simplest synthesis of this variable is household dimension, which is, once again, a potentially controversial variable. On the one hand, living in larger households reduces costs: an exact estimate of this reduction is probably impossible (De Santis 2004), and the existing equivalence scales are largely conventional (like the OECD modified one), or based on very simple and possibly untenable assumptions (like the Carbonaro one, for Italy)[2]. This suggests that larger households have more chances of being economically better off. On the other hand, if privacy is valued, and costly, it is mainly the best off who can afford to buy it: we should therefore find a concentration of the richest in smaller households. The point can be further complicated in several ways, introducing additional variables (e.g. age and sex of additional members), and, among this, the relations that additional member have with the person of reference in the household. Does it make any difference whether it is a child, a more distant relative, or a third party?

There are several issues at stake here. One is theoretical: is household composition a choice variable? If yes, it might be incorrect to study standards of living by household type, because, in the choice of the preferred type, a person (including an elderly) is also

[2] The equivalent income is a sort of per-capita adjusted income of each member in the household, allowing for household size and composition. It is obtained by dividing the total household income by an appropriate equivalence scale E. The OECD modified equivalence scale gives a weight of: 1.0 to the first adult, 0.5 to any other adult household member (aged 14+) and 0.3 to each child below age 14. In formula this gives E=1+0.5(A-1)+0.3(N-A), where N is the total number of household members, of whom A are adults. The Carbonaro (1986) scale, in its original version, increases with the number with a constant elasticity of scale of .67. It goes like [1 - 1.67 - 2.23 - 2.73 - ...], and results from an empirical application on Italian data of the Engel principle (same food share = same standard of living in different households). Later versions, used for the Italian ISEE - *Indicatore della Stituazione economica equivalente* - consider a flatter curve when the additional member is a child.

implicitly choosing his or her standard of living (Pollak, Wales 1979; Lloyd 1998). In all cases, inferences on the causal relationship between household size and standards of living should be drawn with extreme care. Another point regards the choice of the equivalence scale: since the correct one is unknown, the answer to the question on who is relatively better off (if those in large or small households) is in part implicit in the very steepness of the scale (Anand, Morduch 1998). Finally: cross sectional observations may fail to capture the true economic standard of a household, because income may vary, and because some households may willingly undergo periods of relative economic hardship with a longer-term prospects of improvements later on. This could be the case of children, who do not produce anything when they are young by definition (at least, not in modern societies), but who might become economically productive in the long run.

The living arrangement is closely correlated with marital status, and it is sometimes difficult to separate the effect of the two variables. Marital status, in turn, acts on personal income in a gender-specific way: in adult ages married men typically earn more than others; married women typically earn less[3]. Later on, in retirement, this work history leaves a trace, which gets more and more confused as life events intervene, like a divorces, a widowhood, a late marriage, etc.

Personal work history, in turn related to education, is clearly a powerful factor in determining an elderly's current personal income. More debatable is its impact on one standard of living as measured by the household's equivalent income. This depends, in part, on strategies. In the past, for instance, men typically invested in the labour market, and women in the marriage market, and both have an impact (e.g. through survival pensions) on the current economic situation of the elderly.

Finally, health status also matters. This is most frequently studied for its own sake (e.g. Egidi, 2003) but it can have an impact on income (especially if poor health in old age is the consequence of poor health at younger ages, as it frequently happens), on expenses, and, in short, on the standard of living also in economic terms.

3. The macro economic frame

The 8 countries that we are considering in our study are all affluent societies, with a very high gross domestic product (*GDP*) per head, both by historical and international standards (Table 3.1).

[3] Besides, this is also country-specific: in "traditional" countries, like the Mediterranean countries in Europe, married women and mothers typically work less, or withdraw from the labour market, and have lower labour incomes.

Table 3.1 - Gross domestic product at market prices. Current series in PPS per head

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
EU-15	15 720	16 300	16 280	17 010	17 640	18 470	19 400	20 270	21 270	22 570	23 180
B	16 840	17 880	18 500	19 390	19 860	20 580	21 630	22 440	22 650	24 090	24 690
D	16 770	17 740	17 670	18 730	19 420	19 910	20 920	21 520	22 630	23 800	24 140
F	17 290	17 690	17 370	17 780	18 320	18 700	19 210	20 050	21 200	22 690	23 620
I	16 590	17 130	16 660	17 530	18 250	19 300	19 800	20 980	21 980	23 580	24 270
NL	16 410	16 980	17 260	18 050	19 280	20 160	21 820	23 380	24 340	25 560	26 020
P	10 210	10 720	11 090	11 830	12 310	12 950	14 240	14 630	15 310	16 190	16 920
FIN	15 060	14 230	14 900	15 530	17 110	17 900	19 270	20 520	21 490	23 500	24 280
UK	15 260	16 010	16 150	16 810	17 020	18 550	19 890	20 970	21 400	22 540	23 160
Group(*)	*15 554*	*16 048*	*16 200*	*16 956*	*17 696*	*18 506*	*19 598*	*20 561*	*21 375*	*22 744*	*23 388*

Source: Eurostat Yearbook, 2003
(*) unweighted

In terms of income per head, with over 23 thousand Euros in *PPP*, in 2001 (unweighted average), these countries constitute a fairly homogeneous group. The only partial exception is Portugal, which lags somewhat behind, but is catching up: in the 90's, while the group as a whole has experienced a nominal income increase of about 50%, Portugal has outperformed the others, with a nominal income increase of about 66%.

Real per capita income has increased less than this, because of inflation. Its growth rate has averaged around 2% in the 90s in the countries considered, with Germany and Italy in the rear group (about +1.5%), and Finland and the Netherlands in the forefront (+2.8%; table 3.2). Portugal has been just above average: this corroborates the view that it is catching up with the rest, although slowly.

Table 3.2 - Growth rate of GDP at constant prices (base year 1995. % change on previous year)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	*Average 92-01*
EU-15	1.3	-0.4	2.8	2.4	1.6	2.5	2.9	2.8	3.4	1.5	*2.1*
B	1.5	-1.0	3.2	2.4	1.2	3.6	2.0	3.2	3.7	0.8	*2.1*
D	2.2	-1.1	2.3	1.7	0.8	1.4	2.0	2.0	2.9	0.6	*1.5*
F	1.5	-0.9	2.1	1.7	1.1	1.9	3.4	3.2	3.8	1.8	*2.0*
I	0.8	-0.9	2.2	2.9	1.1	2.0	1.8	1.6	2.9	1.8	*1.6*
NL	1.7	0.9	2.6	3.0	3.0	3.8	4.3	4.0	3.3	1.3	*2.8*
P	1.1	-2.0	1.0	4.3	3.5	3.9	4.5	3.5	3.5	1.7	*2.5*
FIN	-3.3	-1.1	4.0	3.8	4.0	6.3	5.3	4.1	6.1	0.7	*2.9*
UK	0.2	2.5	4.7	2.9	2.6	3.4	2.9	2.4	3.1	2.0	*2.7*
Group(*)	*0.7*	*-0.5*	*2.8*	*2.8*	*2.2*	*3.3*	*3.3*	*3.0*	*3.7*	*1.3*	*2.3*

Source: Eurostat Yearbook, 2003
(*) unweighted

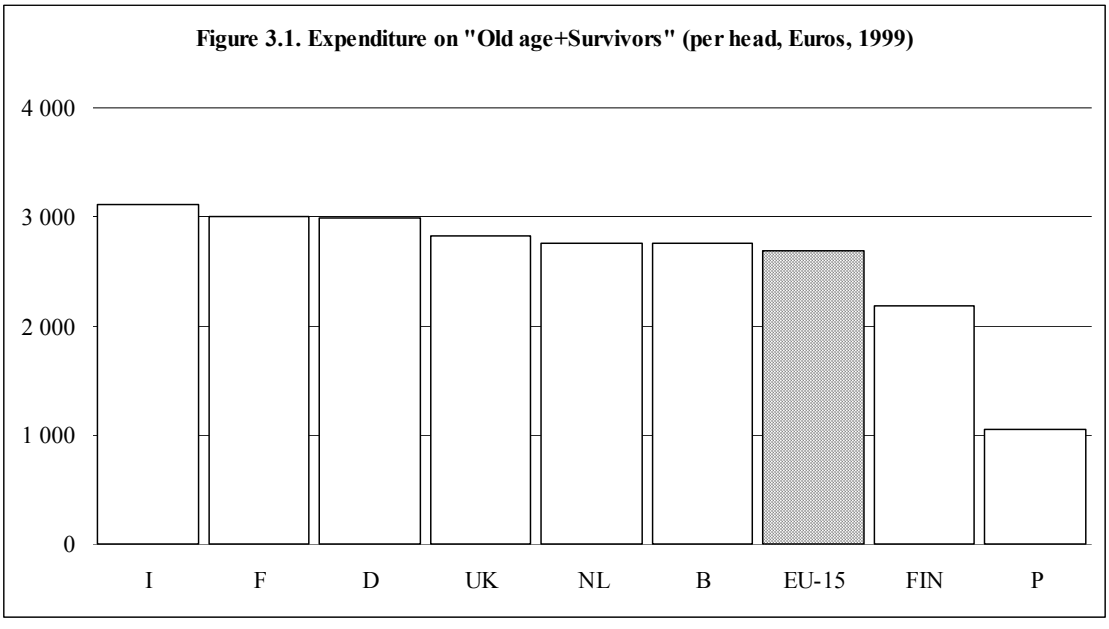
In these countries, social expenditure absorbs a considerable part of the *GDP*, slightly more than a fourth, on average (table 2.3), and more than 50% of total public expenses. Social expenditure peaked in year 1993, because of the economic recession (see table 2.2), but has been declining ever since, in relative terms, and is by now back to its 1991 level - except for Portugal which, once again, is a sort of an outlier: its social expenditure, low at the beginning of the period, is rapidly getting in line with the rest.

Table 3.3 - Total expenditure on social protection at current prices as % of GDP

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
EU-15	26.4	27.7	28.8	28.5	28.2	28.4	28.0	27.6	27.5	:
B	27.1	27.4	29.3	28.7	28.1	28.6	27.9	27.6	27.4	26.7
D	26.1	27.6	28.4	28.3	28.9	29.9	29.5	29.3	29.6	29.5
F	28.4	29.3	30.7	30.5	30.7	31.0	30.8	30.5	30.2	:
I	25.2	26.2	26.4	26.0	24.8	24.8	25.5	25.0	25.3	25.2
NL	32.6	33.2	33.6	31.7	30.9	30.1	29.4	28.4	28.0	27.4
P	16.5	18.2	20.7	20.8	20.8	21.4	21.6	22.2	22.7	:
FIN	29.8	33.6	34.6	33.8	31.8	31.6	29.3	27.3	26.7	25.2
UK	25.7	27.9	29.0	28.6	28.2	28.1	27.5	26.9	26.6	:
Group(*)	*26.4*	*27.9*	*29.1*	*28.6*	*28.0*	*28.2*	*27.7*	*27.2*	*27.1*	:

: Not available
(*) unweighted
Source: Eurostat Yearbook, 2003

In absolute levels, yearly social expenditure in Europe amounts to almost 6000 Euros per head (1999 prices), with Italy and Portugal below average (Figure 3.1).



Social protection expenditure can be broken down into the following eight categories

1. sickness and healthcare,
2. disability,
3. old age,
4. survivors,
5. family and children,
6. unemployment,
7. housing,
8. social exclusion not elsewhere classified.

Among these, one is targeted especially towards the elder (old age), while others, although in principle aimed at the general population, in practice benefit principally the older population: survivors and health.

Table 3.4 shows that the protection of the elderly through the combined functions "Old age" and "Survivors" absorbs almost 50% of total social protection expenditure in Europe, and also in the eight countries considered here. There are two remarkable exceptions: Finland, where the share of these functions combined is markedly lower (36%), and Italy, where it is much higher than average (64%)

Table 3.4 - Social benefits for Old Age + Survivors as % of total benefits

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
EU-15	44.6	44.4	43.9	44.4	44.8	45.0	45.9	45.9	46.0	:
B	41.8	42.0	42.6	43.1	43.1	42.5	43.4	43.8	43.6	43.8
D	42.9	41.3	41.8	42.2	42.7	41.6	42.0	42.3	42.0	42.2
F	42.8	43.0	42.7	43.2	43.5	43.6	43.8	43.9	44.2	:
I	58.7	60.4	61.1	62.2	63.4	63.2	63.9	64.0	64.0	63.4
NL	37.3	37.3	37.3	36.9	38.0	39.5	40.6	41.0	41.7	42.4
P	41.6	40.6	40.0	39.2	43.2	43.5	42.7	42.7	43.7	:
FIN	32.8	32.1	32.2	32.0	32.8	33.8	33.9	34.5	35.1	35.8
UK	43.7	43.3	42.6	42.8	43.2	44.0	45.9	45.1	46.1	:
Group(*)	*42.7*	*42.5*	*42.5*	*42.7*	*43.7*	*44.0*	*44.5*	*44.7*	*45.1*	:

: Not available
(*) unweighted
Source: Eurostat Yearbook, 2003

Health absorbs another 27% of social protection expenditure as of 1999, as always with ups (Portugal, 33%) and downs (Finland, 23%). Thus, summing all of these figures up (old age + survivors + health) one can get an idea of the proportion of social expenditure that benefits mainly or exclusively the older population. This proportion amounts to about 72%, on average, with a low of 58% in Finland and a high of 88% in Italy (Table 3.5).

Table 3.5 - Social benefits for Old Age, Survivors and Health as % of total benefits

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
EU-15	72.7	72.5	71.2	71.5	72.0	71.7	72.1	72.5	72.7	:
B	68.3	70.1	67.6	68.0	66.7	67.2	67.3	67.9	68.3	68.9
D	74.4	73.1	72.1	73.0	73.7	71.3	70.4	70.5	70.3	70.5
F	71.1	71.5	70.9	71.4	71.8	71.8	71.7	72.1	72.4	:
I	86.6	86.7	86.3	86.3	86.6	86.4	87.2	87.6	87.6	88.3
NL	65.8	66.7	66.8	65.4	66.5	67.1	68.0	69.2	70.9	71.7
P	73.2	74.3	73.5	73.4	75.4	75.9	75.9	75.9	77.2	:
FIN	59.5	55.5	53.5	52.3	53.7	55.2	55.8	57.2	58.1	59.6
UK	68.9	68.0	66.9	67.1	67.2	68.0	69.9	70.4	70.9	:
Group(*)	*71.0*	*70.7*	*69.7*	*69.6*	*70.2*	*70.4*	*70.8*	*71.4*	*72.0*	*:*

: Not available
(*) unweighted
Source: Eurostat Yearbook, 2003

In short: social expenditure is mainly targeted towards the elder who, on the one hand, derive most of their incomes from pensions (see section 5), and, on the other, receive for free, or at subsidised prices, a considerable amount of resources in the form of medical assistance.

We will shortly see that the elder are not a group with particular financial distress, on average. But this introductory chapter serves to remind us that their relative good standard of living - a novelty in the history of mankind (Bengtsson, Fridlizius 1994; McGarry, Schoeni 2000) - depends largely on public transfers and public social expenditure. All the inferences for the future that one can derive from the analysis of the current situation, or from the trends of the past few years, rely on the assumption that the current level of social protection expenditure can be not only maintained, but also increased, to remain in line with the mounting proportion of the old. This does not seem to be likely, because most European countries currently face budget constraints, as shown for instance in table 3.6: public debt is high (about 67% of GDP); net borrowing or lending is basically in equilibrium, on average, but the most populous countries are currently in deficit; and fiscal pressure is already very high, over 47% on average, which reduces the prospects for further tax increases.

Table 3.6 - General government: a) consolidated gross debt; b) net borrowing or lending, and c) total revenues , as % of GDP - Average 1999-2001.

	a) Debt	b) Borrowing or Lending	c) Revenues
EU-15	64.9	-0.2	46.7
B	110.6	0.0	49.5
D	60.3	-1.1	46.6
F	57.7	-1.4	51.5
I	111.6	-1.5	46.5
NL	57.2	1.0	47.2
P	54.4	-3.1	42.6
FIN	44.7	4.6	54.6
UK	42.1	1.9	40.9
Group(*)	*67.3*	*0.1*	*47.4*

(*) unweighted
Source: Eurostat Yearbook, 2003

If raising taxes substantially is not going to be a viable option for the future, possible future imbalances brought about by population ageing will have to be met by cutting expenses, and those falling under the heading of "social protection" are perhaps the prime candidates, because of their relevance.

The decisions that European countries in general, and in particular the eight countries considered here, will take on these crucial issues - and on related issues, like age at retirement, immigration, women's participation in the labour market, etc. - will have a substantial impact on the economic well being of the elder in the future, and will likely also affect their behaviour in terms of, say living arrangements (including institutionalisation), health conditions, etc.

4. Micro data

It is difficult to find convenient synthetic indicators of the economic situation of a person, or a household. Theoretically speaking, several possible candidates can be listed, each with its merits and shortcomings, but, in practical terms, the choice is limited by the availability of suitable data.

For this paper, we will use data coming from the European Community Household Panel, or *ECHP*, which is an *ex-ante* harmonised cross-national longitudinal survey, focusing on several subjects, including household income and composition, housing and living conditions, etc. We use data from six waves of the *ECHP*, spanning the years 1994 to 1999.

The *ECHP* is a harmonised and internationally comparable data set, providing information on a wide range of topics both at the individual and at the household level, which permits one to analyse cross-dependencies between variables. Note, however, that the survey refers exclusively to private households, and excludes institutionalised

older people, who are still a minority, but are becoming more and more important in Europe, and may have social and economic characteristics distinct from those of the rest of the population.

The *ECHP* is a panel: individuals who were members of a household in the first wave ('sample persons') are followed over time. For this study, however, we decided to disregard the longitudinal structure of the survey: instead, we pooled the data from the various waves, so as to increase the size of our sample[4]. Apart from various technical issues (e.g. sample size dimension, degree of confidence of the estimates, attrition; etc.), the basic reason why we decided to proceed like this is that the interval covered is, in all cases, too short to permit us to appreciate the changes that may affect individuals and families as the get progressively older. A few descriptive statistics of our elaborations can be found in the tables 4.1 and 4.2.

Table 4.1 - Median incomes, by country (yearly, Euros 1999, in

	Nominal	Equivalent
Germany	10 694	12 893
UK	9 678	12 494
Netherlands	10 214	12 281
Belgium	11 962	13 822
France	9 924	11 930
Italy	6 578	9 477
Portugal	3 807	5 900
Finland	9 748	11 413

Source: Own elaborations on ECHP data, 1994-2001

Table 4.2 - Proportions poor, by gender and age class

	Men			Women		
	16-64	65-74	75+	16-64	65-74	75+
NL	9.6	10.2	12.1	11.9	11.9	15.9
D	10.2	9.6	6.9	12.8	13.1	16.1
I	19.1	17.9	13.6	20.6	18.1	21.0
F	14.5	13.3	19.4	15.9	16.1	23.7
FIN	10.3	8.9	6.1	10.4	12.4	24.3
B	11.1	21.6	27.5	14.1	25.3	26.6
UK	15.0	18.8	28.0	19.2	28.4	36.4
P	16.9	29.3	40.7	19.1	32.6	42.5

Source: Own elaborations on ECHP data, 1994-2001

[4] We made incomes comparable by converting them into Euro/Ecu, keeping into account their Purchasing Power Parities (*PPP*), i.e. the rates of currency conversion that equalize the purchasing power of different currencies by eliminating inter-country differences in price levels. Moreover, since we are pooling data from different waves, we deflate incomes using the year 1996 as a base: this guarantees that all monetary values are comparable geographically and temporally.

ECHP data also suffer from a few shortcomings. In the first place, this is micro-level information, which cannot keep into account several potentially important macro variables: for instance, several important services are provided for free, or at subsidised prices, by the public hand in the countries that we will consider, like education, public transport, and health. This affects the life and the economic well being of individuals and households, but goes unnoticed in the data.

Secondly, the respondents' answers on their economic situation may be inaccurate, because people may forget to mention some sources of income (interests, for instance), or deliberately omit part of them, for fear, shyness, or other reasons. Besides, some kinds of income are not directly observable and must be imputed (rents of own homes, for instance), and this is partly arbitrary. Finally, income may be highly variable for some sub-groups of individuals, for whom periods of low and high earnings may alternate: depending on what period happens to be surveyed, the resulting image may be above or below average.

Indeed, some analysts prefer to refer to expenditure, instead of income, judging it a more reliable indicator of the "true", long term economic situation of respondents. The assumption here is that people realise that certain periods may be abnormally fortunate (or unfortunate), and try to maintain a consumption profile that is more or less flat, and in line with what they think will be their "normal" income. The theoretical debate is still unsettled[5]: in all cases, we have no choice with *ECHP* data, because they do no deal with consumption.

There are several other ways, with the ECHP, to assess one's economic situation: subjective feeling of adequacy of means; lack of conditions of deprivation (e.g. absence of heating in the household); presence of household amenities; assets, and still others. After careful consideration, we finally decided to refer exclusively to income, in this paper, because of its preliminary character, and because the selection and synthesis of other indicators would have involved more subjective judgment than we deemed apt for our first steps[6].

However, since we know, from ECHP data, how much individual income derives from capital and whether respondents are home owners, we will discuss both aspects below, but with some limitations: capital income is customarily underreported, and, as for home tenure, we do not know who, within the household, is the owner (i.e. it is considered a household, not an individual variable) nor do we know how valuable the house is.

5. A general look at personal and household income

Personal income is very strictly dependent on age and gender. In order to show this in a comparative perspective, we decided to eliminate inter country differences, by

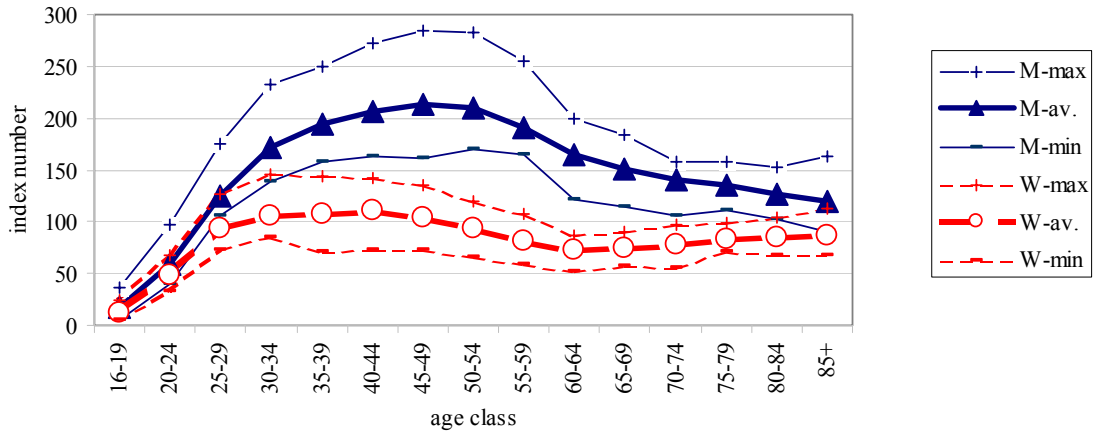
[5] Citro and Michael (1995), and Trivellato (1998), for instance, are among those who prefer to use income for assessing one's well-being.

[6] A good and recent example can be found in Avramov (2002) In her case, the principle is that each indicator of deprivation has a weight that is directly proportional to the diffusion of that specific item in the community. E.g. not having a bath in one's house denotes more poverty if virtually everybody else has one than if very few have it. More on such weighting system in Cerioli and Zani (1990), or Cheli and Lemmi A. (1995). On the importance of the housing conditions in general, and for the elderly in particular, see Gaymu (2003).

normalising the median income of all countries to 100, and to present but three lines in our figures: average, minimum and maximum.

From Figure 5.1, for instance, one can clearly see that men earn more than women do, slightly less than twice as much, and that income typically has an inverted-U shape: the central years of one's life are characterised by a peak[7], although this pattern is less clearly defined for women, whose age profile is much flatter.

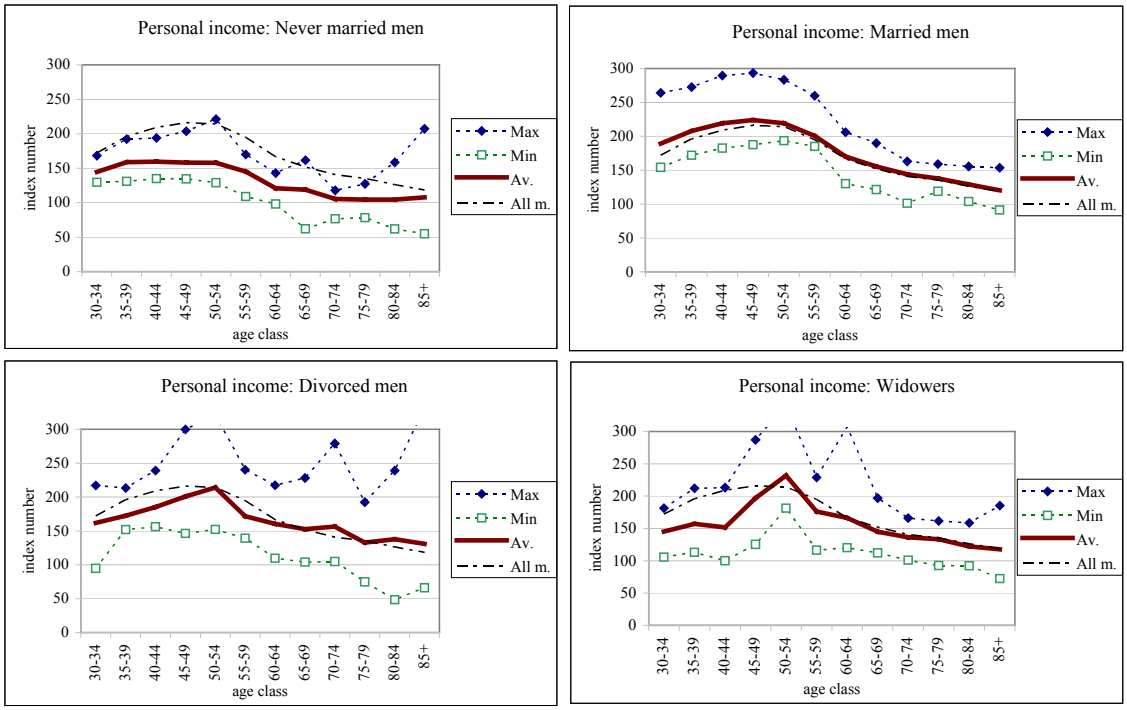
Figure 5.1 - Personal income for men and women (index numbers; median for each country=100)



Several elements should be taken into account in considering these data. One is that, with cross sectional data, age and cohort effects cannot be disentangled: in other words, we cannot say whether people aged 80 are relatively poorer than people aged 60 because they are older or because they were born 20 years before, and went through a life experience (e.g. in terms of education and labour productivity) which eventually resulted in lower life-time incomes. This could be particularly relevant for the future: in, say, twenty years, will the age profile still be the same, or will it change in any relevant way, as new and qualitatively different generations take the place of the preceding ones?

[7] All the figures of this section report, separately for each age class, the maximum, the minimum and the unweighted average of the 8 countries considered in this paper: Belgium, Germany, Spain, France, Italy, The Netherlands, Portugal, and the United-Kingdom. These are index numbers: the general average of each country is set to 100. The data are provided in the statistical appendix.

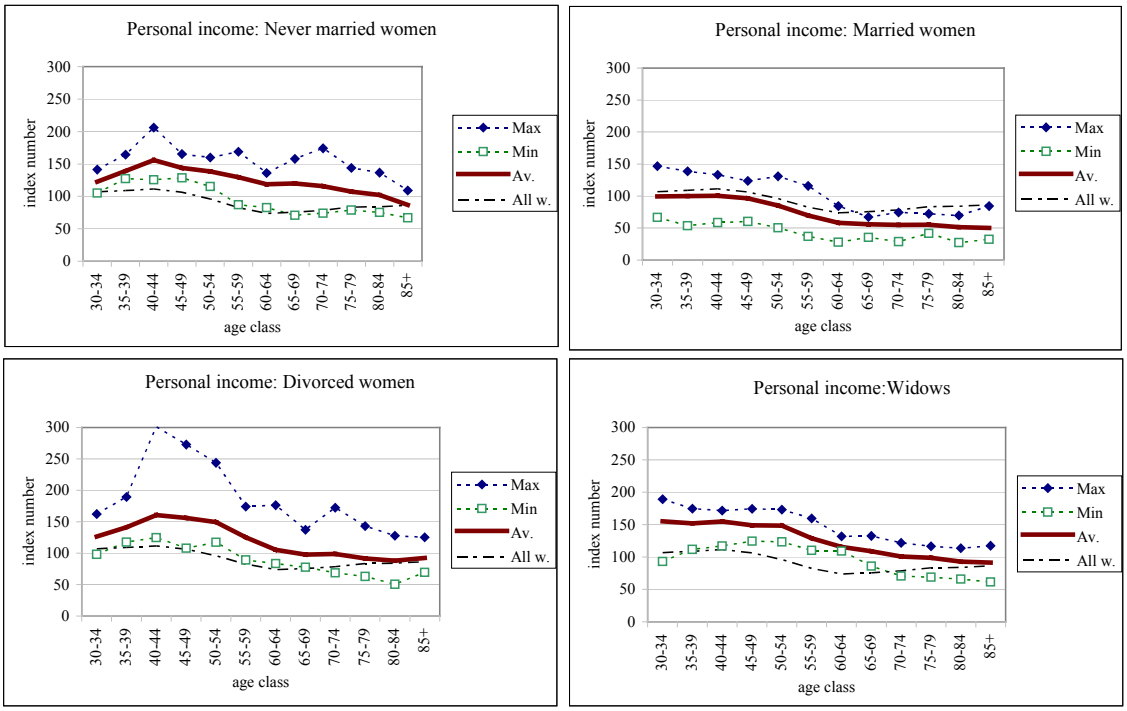
Figure 5.2 Personal income for men, by age and marital status



Marital status, excluded from figure 5.1, but detailed in figures 5.2 and 5.3, appears to be a relevant covariate, especially for the never married, who are relatively poorer among men, and richer among women.

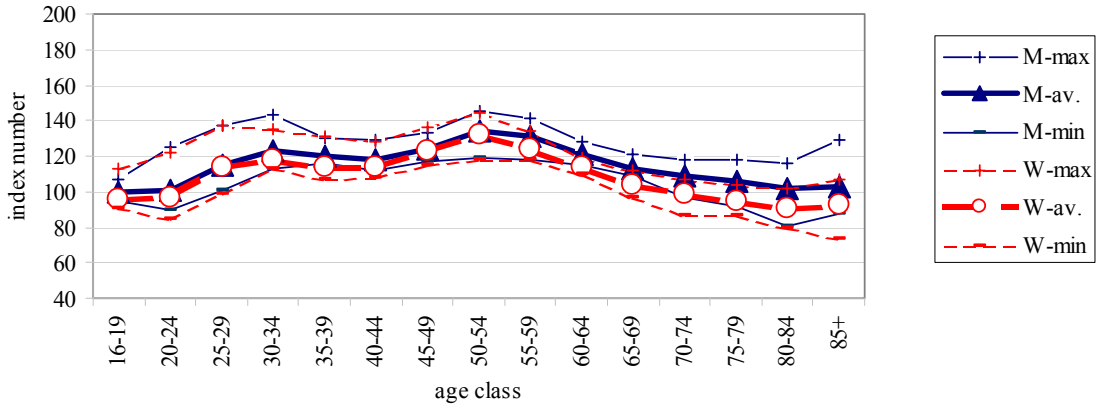
In all cases, although income declines steadily with age, it does not decline steeply, and, at a first glance, older people do not appear to be in economic hardship.

Figure 5.3 Personal income for women, by age and marital status



But perhaps the most important reason why confining one's attention to personal income may bias the picture is that people live in households and, assuming that they pool their income, and that they the benefit from economies of scale according to what foreseen in the OECD modified equivalence scale, the "true" economic profile changes substantially (figure 5.4)

Figure 5.4 - Equivalent income for men and women (index numbers; median for each country=100)



Notice that if we kept the scale of the preceding figures, ranging from 0 to 300, all the lines in figure 5.4 would appear basically even more flat and overlapping than the already do: in practice, virtually all differences by gender and age would disappear. With the scale we adopted (the same that will be used shortly, in the figures 5.5. and 5.6), for reasons of clarity, one can remark that the young and the old are still relatively worse off than the adults, and that women are relatively disadvantaged, especially at older ages. But the basic message is: income differences linked to age and gender are not relevant, *on average*.

Besides, very few differences emerge from breaking these data down by marital status (Figures 5.5 and 5.6), except that divorced men are (economically) better off at all ages. But the basic impression that one can draw from these pictures is that households are very effective channels of income redistribution among genders and age, and that, on average, no gender or age class is in conditions of particular economic hardship.

Figure 5.5 Equivalent income for men, by age and marital status

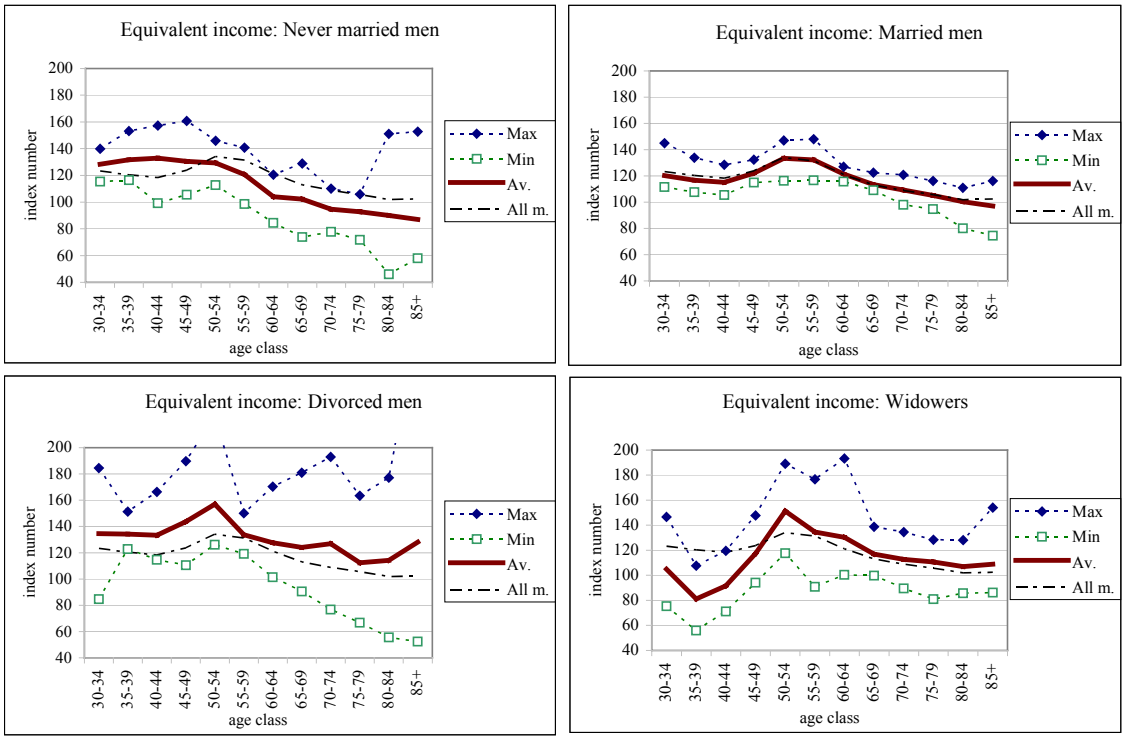
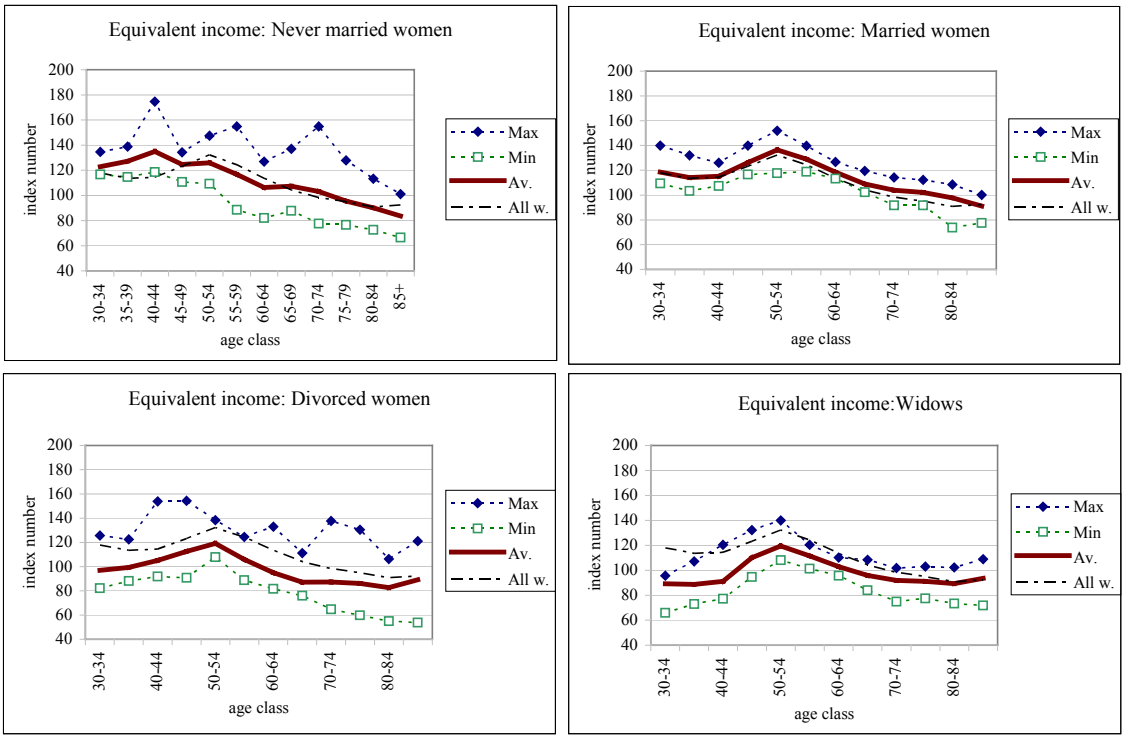


Figure 5.6 Equivalent income for women, by age and marital status



Similarly, as far as the average equivalent income is concerned, the dimension of the household appears to be a relevant covariate only for relatively young people, who are on average better off in small households. But after the age of 65, the average equivalent income remains in the 80-120% range (100% = country median) for all

household dimensions (figures 5.7 and 5.8). At older ages, however, there seems to be a sort of dichotomisation: the average equivalent income is higher in 3- and 4-person households, but lower in smaller households, and lower still in the large ones (5 members or more)

Figure 5.7 - Equivalent income by household size: men

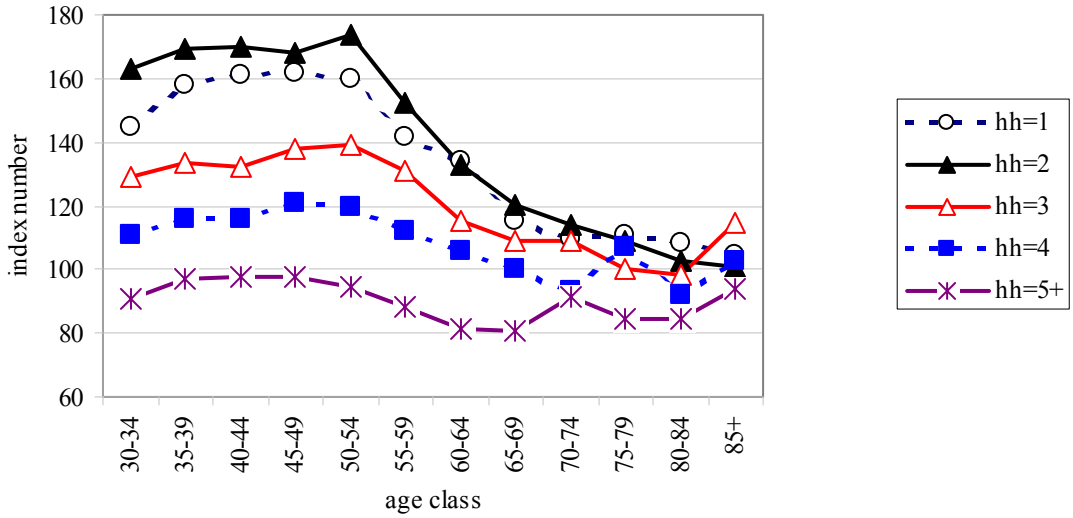
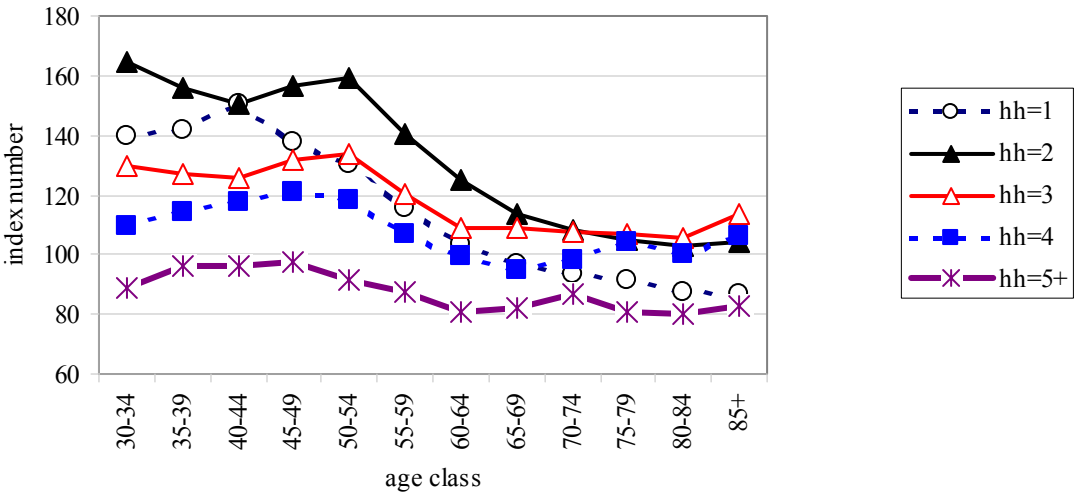


Figure 5.8 - Equivalent income by household size: women



A closer look, however, reveals a more nuanced reality. In terms of income poverty, for instance, defined as the chance of earning less than 60% of the median equivalent income, several differences emerge (figures 5.9 and 5.10). One is between countries:

some are very effective in combating income inequality (Germany, Finland and Holland, for instance), while for others income differences are more pronounced (UK and Portugal). Another is between genders: in all countries and at all ages, women are always more at risk of poverty than men. Finally, age matters: the oldest segment of the population (75+) is generally (or, for women, systematically) more at risk of poverty than the younger are: from a low of 6% for Finnish men to a high of 42% for Portuguese women.

Figure 5.9 - Proportions poor among men
(poverty line: 60% of median equivalent HH income)

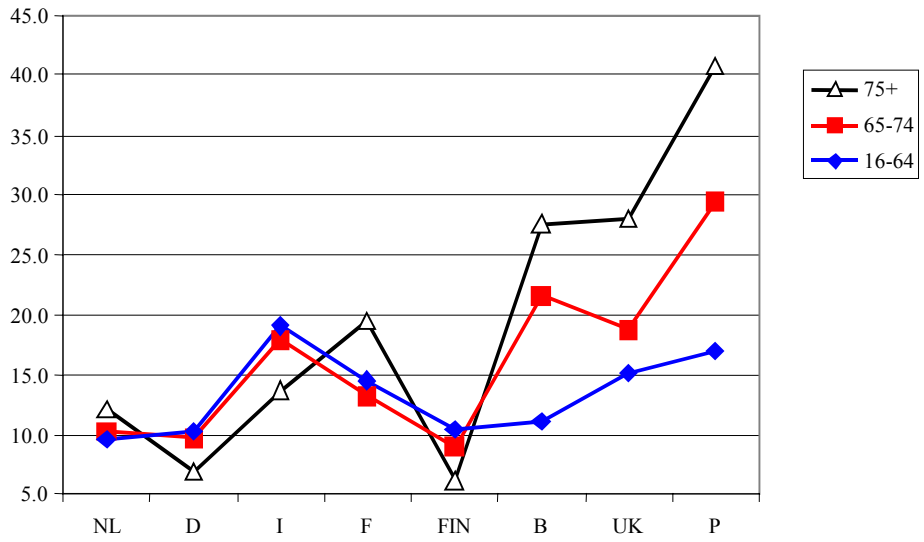
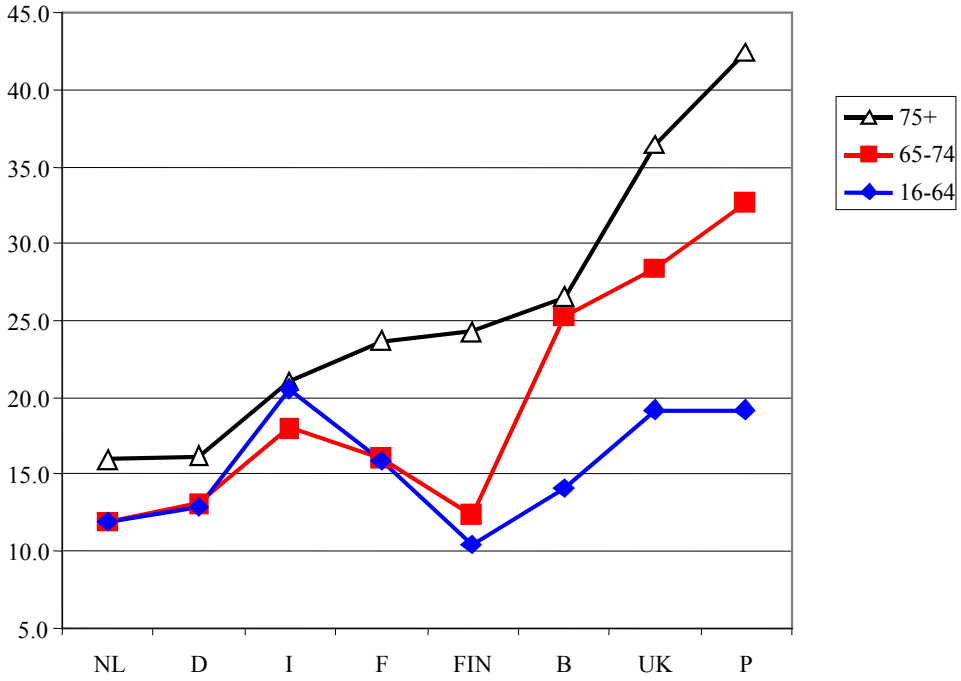
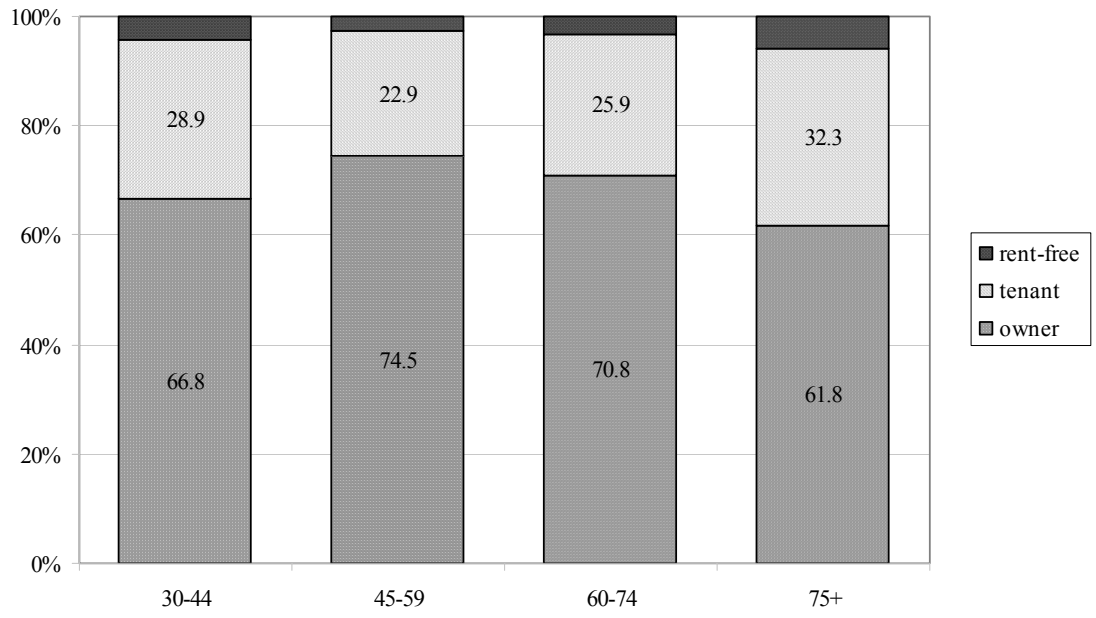


Figure 5.10 - Proportions poor among women
(poverty line: 60% of median equivalent HH income)



Let us consider home tenure, now. The majority of the population, in these eight European countries, live in their own home. This holds also for the oldest segment, and although the prevalence of landlords is slightly lower at older ages, it still stands at 62%, plus another 6% of people aged 75+ living in rent-free accommodations (figure 5.11). Apparently, therefore, only less than a third of the older population is potentially exposed to risks linked to the place of living, like becoming incapable of paying the rent, for instance. True: several potentially important pieces of information are still missing: further analysis might be dedicated to the characteristics of the home, which may be unsatisfactory. However, the general picture is not worrying, in this respect.

Figure 5.11 - Home tenure



Rather, what is potentially worrying is the fact that the income share that the older population derives from capital is relatively low, especially past the age of 75 (table 4.1). Again, this is not necessarily an age effect, and may at least partly depend on the generation: capital income is (slightly) higher in the age range 65-74, which may mean that the more recent generations have more accumulated capital, or can exploit it better.

Table 5.1 - Share of income deriving from capital

	16-64	65-74	75+	16-64	65-74	75+	16-64	65-74	75+	16-64	65-74	75+
	All men			*All women*			*Never married men*			*Never married women*		
Germany	3.2	4.8	4.0	4.6	3.4	3.3	3.4	2.7	1.2	4.1	4.2	4.9
UK	4.1	7.7	7.6	5.8	10.1	7.2	5.9	11.3	9.1	5.2	11.1	7.8
Netherlands	2.0	4.3	6.7	4.7	3.8	2.8	3.7	6.2	2.7	4.1	7.5	2.0
Belgium	2.5	6.4	5.8	2.9	8.2	6.6	3.0	3.9	6.2	2.3	5.8	11.6
France	2.5	5.2	6.1	0.6	1.7	3.3	1.4	4.0	4.5	0.9	3.9	5.1
Italy	1.5	2.6	2.0	1.5	1.7	0.9	1.2	1.8	2.4	0.9	2.2	0.3
Portugal	1.0	2.2	1.9	0.5	0.6	0.7	0.4	1.0	1.0	0.5	1.0	1.0
Finland	2.4	3.7	3.1	1.4	2.3	2.4	1.6	4.8	13.5	1.0	3.9	3.1
	Married men			*Married women*			*Separated men (*)*			*Separated women (*)*		
Germany	3.2	5.1	4.5	5.2	3.2	4.9	1.9	3.3	0.8	2.1	2.1	1.0
UK	3.1	7.7	8.1	6.9	13.2	13.8	2.7	6.7	1.9	1.8	5.5	3.3
Netherlands	1.3	4.3	7.4	5.4	3.8	2.6	0.8	1.8	5.7	1.0	2.2	1.7
Belgium	2.4	6.6	6.1	3.4	10.9	10.5	1.8	4.3	9.2	1.5	3.3	2.6
France	3.2	5.6	7.0	0.1	0.1	0.2	2.9	3.4	7.4	1.5	2.0	2.8
Italy	1.7	2.6	2.2	1.9	1.8	1.2	1.8	2.4	0.0	0.7	0.4	0.5
Portugal	1.3	2.5	2.1	0.4	0.4	0.4	1.0	2.9	3.1	1.2	0.9	0.2
Finland	2.9	3.4	3.0	1.6	2.2	3.3	2.5	5.6	0.1	1.5	3.2	0.4
	Widowers			*Widows*								
Germany	3.5	2.9	2.8	3.8	3.9	2.8						
UK	3.7	4.7	7.0	5.8	6.0	5.1						
Netherlands	3.3	5.2	5.2	3.5	3.4	3.1						
Belgium	3.9	6.3	4.7	3.1	4.4	4.8						
France	2.8	3.1	3.5	4.5	4.3	4.4						
Italy	2.5	3.3	1.4	1.8	1.6	0.8						
Portugal	0.4	0.4	1.6	1.0	1.0	0.8						
Finland	2.1	5.9	1.8	1.2	2.0	2.0						

Source: Authors' elaborations on the ECHP (*) or divorced

Since work is virtually excluded past a certain age, and capital income is low, what remains is basically pension transfers, which derive almost exclusively from the public sphere, especially at older ages (Table 5.2).

Table 5.2 - Share of income deriving from the public hand (pension or other old age benefits)

	16-64	65-74	75+	16-64	65-74	75+	16-64	65-74	75+	16-64	65-74	75+
	All men			*All women*			*Never married men*			*Never married women*		
Germany	4.3	87.3	92.2	5.0	86.2	91.1	1.3	83.3	98.8	1.7	92.3	90.4
UK	3.0	72.5	82.1	4.5	75.4	79.1	0.4	65.5	81.2	1.0	76.1	79.3
Netherlands	3.2	86.7	91.5	2.4	86.5	95.0	0.6	81.8	93.9	0.5	82.9	97.4
Belgium	5.4	82.6	86.8	6.1	60.1	77.7	1.1	70.1	83.7	1.8	89.1	82.0
France	6.4	88.1	88.2	5.3	81.3	86.2	0.9	81.4	89.6	0.9	86.9	87.3
Italy	7.9	81.0	88.0	7.7	72.2	82.1	1.5	77.2	85.7	1.6	76.0	82.3
Portugal	5.0	74.1	90.9	6.8	76.3	90.0	1.9	65.0	92.5	2.4	75.2	87.7
Finland	2.4	75.8	85.9	3.0	85.0	92.2	1.2	70.7	72.0	1.2	84.8	92.4
		84.6			82.3							
	Married men			*Married women*			*Separated men (*)*			*Separated women (*)*		
Germany	5.6	87.1	91.8	3.8	82.2	83.6	2.8	83.1	93.2	5.4	87.8	91.1
UK	4.6	73.3	83.8	4.3	72.0	76.8	2.5	65.6	80.7	3.3	75.7	79.0
Netherlands	3.9	86.8	91.3	0.8	84.2	96.1	4.2	85.0	89.7	3.4	76.9	96.9
Belgium	7.1	84.1	87.2	4.6	40.3	46.0	6.3	73.0	78.5	6.6	80.7	90.5
France	9.9	88.0	87.7	5.6	77.3	79.5	5.9	93.1	81.3	4.5	74.6	89.0
Italy	11.7	80.7	87.3	7.5	61.8	70.2	5.7	73.5	89.5	5.0	66.0	62.2
Portugal	6.3	74.5	90.3	5.2	69.5	83.4	6.1	64.9	93.4	3.2	70.3	89.7
Finland	3.1	76.4	84.4	3.1	84.0	90.9	2.3	64.8	95.8	1.4	75.0	91.2
	Widowers			*Widows*								
Germany	24.3	91.0	92.8	51.2	91.3	93.6						
UK	9.3	79.0	79.4	48.2	80.2	79.9						
Netherlands	36.2	89.7	92.0	69.5	93.6	93.9						
Belgium	24.2	80.2	87.8	63.4	88.4	89.1						
France	24.6	92.6	90.5	38.8	88.6	88.5						
Italy	41.5	89.6	90.6	67.3	87.9	86.7						
Portugal	30.9	77.3	92.1	50.7	88.6	93.2						
Finland	8.5	82.0	92.4	31.3	89.4	93.0						

Source: Authors' elaborations on the ECHP (*) or divorced

This is a potentially fragile situation: the economic well being of the older population depends very strictly on the capability of the governments to keep their social protection expenditure in line with the foreseen growth in the share of the older population. And this may prove difficult in the future.

6. A comprehensive view

Let us now see the combined effect of all these variables together on the economic well being of households and elderly individuals (65+), starting from the risk of being relatively poor, which we will here take to mean below 60% of the median equivalent income within each country.

The logistic model, the odds-ratios, and the corresponding probabilities of being poor (calculated for an individual who is standard in all respects, except for the variable considered) are shown in table 6.1.

Tab. 6.1. - Odds-ratios of being poor (below 60% of median equivalent income)

						[95% Conf. interval]	
		Odds Ratio	Std. Err.	*P>|z|*	*p*	p(max)	p(min)
Sex (female)	male	0.9528	0.0186	*0.014*	*16.0%*	15.5%	16.6%
Age (65)	age	1.0088	0.0048	*0.067*			
	agesquare	1.0002	0.0002	*0.292*			
marital status (married)	sep/div	1.6424	0.0772	*0.000*	*24.8%*	23.1%	26.5%
	widowed	1.0566	0.0244	*0.017*	*17.5%*	16.8%	18.1%
	nevmarr	1.6347	0.0595	*0.000*	*24.7%*	23.4%	26.0%
Education (low)	high_edu	0.1968	0.0107	*0.000*	*3.8%*	3.4%	4.2%
	med_edu	0.4734	0.0150	*0.000*	*8.7%*	8.2%	9.2%
Social relations (high)	relsoc_low	1.0939	0.0287	*0.001*	*18.0%*	17.2%	18.8%
	relsoc_medium	0.9845	0.0242	*0.524*	*16.5%*	15.8%	17.2%
Health status (medium)	health_bad	1.1902	0.0254	*0.000*	*19.3%*	18.6%	19.9%
	health_good	0.8563	0.0201	*0.000*	*14.7%*	14.1%	15.2%
Home tenure (owner)	Non owner	0.9025	0.0184	*0.000*	*15.3%*	14.8%	15.8%
% publ. trasfer (87%)	Publ_trnsf	20.4768	3.8208	*0.000*			
Hh size (1)	hh_size	0.7740	0.0078	*0.000*	*13.4%*	13.2%	13.7%
Country (Italy)	D	0.8784	0.0363	*0.002*	*15.0%*	14.0%	16.0%
	NL	0.7521	0.0313	*0.000*	*13.1%*	12.2%	14.1%
	UK	2.0918	0.0709	*0.000*	*29.5%*	28.2%	30.9%
	B	1.9648	0.0737	*0.000*	*28.3%*	26.8%	29.8%
	F	0.9929	0.0321	*0.826*	*16.6%*	15.7%	17.5%
	P	2.3718	0.0648	*0.000*	*32.2%*	31.1%	33.4%
	FIN	0.7994	0.0448	*0.000*	*13.8%*	12.6%	15.2%

Log likelihood = -39239.489 Pseudo R2 = 0.0858

Baseline poverty risk=16.7%

Source: own elaborations on *ECHP* data.

Our reference individual is a woman, aged 65, married, with low education, high social relations[8], medium self-declared health status, home owner, 87% of whose income is made up of public transfers, who lives on her own (household size=1), and resides in Italy. For this woman, the risk of poverty is 16.7%.

Most of the variables that we considered are associated with (and possibly affect) this risk: for instance gender (men are slightly better off) and age (the older risk slightly more, but the corresponding parameter is not significant). The risk is definitely higher for the separated, divorced and never married (18% to 25%), for those with low social relations (18%), and with poor health status (19.3%). Conversely, the risk is lower for the elderly who live in larger households, for tenants (15.3%), for people in good health conditions (14.7%). As it could be imagined, the educational status is a very strong predictor of poverty, or non-poverty: elderly people with medium (8.7%) or, better still, high education (3.8%) have much lower risks of poverty in old age.

The country of residence matters, too: *ceteris paribus*, being old is particularly risky for those who live in Portugal (32%), in UK (29%), and in Belgium (28%). Conversely, the risk of poverty in old age is low in Germany (13%), in the Netherlands (13%), and in Finland (14%). It is interesting to note that this result shows scarce correlation (but with the expected sign) with general income (cf. table 3.1) or with social protection

[8] In the *ECHP*, the question on social relations is "How often do you meet friends or relatives not living with you, whether here at home or elsewhere?", and we classified the answers as follows: *High* (on most days, once/twice a week), *Medium* (once/twice a month), and *Low* (less often than once a month).

expenditure (table 3.3), and no correlation at all with the proportion of social protection expenditure that is somewhat directed towards the older segment (tables 3.4 and 3.5).

Much the same emerges if one runs a regression on the individuals' equivalent income (table 6.2). Basically, the same variables that put one at greater risk of poverty also reduce his or her average income. The only exception is home ownership, because non owners tend to have lower equivalent income - albeit, apparently, not so low as to be in poverty.

Tab. 6.2. - Multiple regression on equivalent income

		Coef.	Std. Err.	*t*
Sex (female)	male	80.70	60.30	*1.34*
Age (65)	age	-7.74	14.68	*-0.53*
	agesquare	-0.46	0.67	*-0.69*
marital status (married)	sep/div	-86.26	155.75	*-0.55*
	widowed	345.14	72.27	*4.78*
	nevmarr	-736.97	121.93	*-6.04*
Education (low)	high_edu	7534.19	107.80	*69.89*
	med_edu	2964.54	82.63	*35.88*
Social relations (high)	relsoc_low	-331.65	83.50	*-3.97*
	relsoc_medium	69.99	73.98	*0.95*
Health status (medium)	health_bad	-459.11	69.58	*-6.60*
	health_good	679.41	69.08	*9.84*
Home tenure (owner)	Non owner	-1348.39	64.03	*-21.06*
% publ. trasfer (87%)	Publ_trnsf	-24171.21	553.01	*-43.71*
Hh size (1)	hh_size	425.48	28.46	*14.95*
Country (Italy)	D	1812.65	113.45	*15.98*
	NL	2430.82	114.47	*21.24*
	UK	-348.52	109.91	*-3.17*
	B	1173.06	120.61	*9.73*
	F	2109.94	96.54	*21.86*
	P	-4039.76	90.33	*-44.72*
	FIN	-770.30	151.51	*-5.08*
	Constant	12094.23	120.56	*100.31*

Adj R-squared = 0.1992

Source: own elaborations on *ECHP* data.

Conclusion

In the history of mankind, reaching old and very old ages has never been so frequent and so economically advantageous as it is in nowadays industrialised countries, in general (Bengtsson, Fridlizius 1994), and in the eight countries considered for this analysis, in particular. In terms of *personal* income, not surprisingly, the age profile

appears as an inverted *U*, which means that the young and the old have relatively scarce own resources. Besides, men earn much more than women do, almost twice as much, on average.

However, in terms of *equivalent* income, the age and gender profile is much flatter. In short: keeping into account the dimension of the households, their global incomes, and the economies of scale the co-residence makes possible, the standards of living are not seriously differentiated by gender or age. True, in old age the risk of poverty is somewhat higher than in the general population, but the elder are frequently home owners and they may have fewer consumption necessities than the younger.

Although, in economic terms, standards of living have risen in the past few years, for the population in general and for the old in particular, a few elements of potential fragility should not be overlooked for the future. One is that inter-country differences are not trivial, and relative poverty in general - and among the older population in particular - is not uniformly spread: it is higher in UK, Portugal and Belgium, for instance, and lower in Germany, in the Netherlands and in Finland. This reveals in part a different attitude governments may have with regard to interfering with the working of the market but also their different ability of intervening effectively (cf. also Avramov, 2002: 121)

Another potentially relevant factor is that household dimensions tend to shrink, especially at older ages: since co-residence is one of the elements that alleviate the risk of poverty, this tendency may have a negative potential for the future economic well-being of the aged. True, as we mentioned before, the shrinking of household dimension is in part the result of choices and preferences; at older ages, however, it my also be a consequence of constraints, as the net of kin and relative gets progressively thinner.

But, as we mentioned at the start, perhaps the greatest element of uncertainty for the future regards the capability of social protection systems to maintain their standards and services in the face of the ageing process. There surely seems to be a great potential for improvements in efficiency: Finland, for instance, spends on the older population proportionally much less than the other countries, and, in spite of this, it succeeds better than others in sustaining their economic well-being, and in sheltering them from poverty.

But the fact remains that, in the course of the next 20 to 30 years, the growing proportion of older population will exert greater pressure on the public resources than ever before, and with scarce prospects for any further, substantial tax increase. The final outcome of this trend is hard to imagine at this stage: social protection systems, households and individuals will all be confronted with a totally new scenario, that will have to be faced with a variety of means, both at the macro level (e.g. later retirement; greater participation of women in the labour market) and at the micro level, affecting such variables as co-residence between generations; private exchange of help between the old and their grown-up children; etc.

7. References

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