

The Purchasing Power of the Elderly in Six EU Member States.

Report prepared for the project 'Home Sweet Home'

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1 Introduction¹

In this report I present some basic information on the level and distribution of the elderly persons' incomes in Belgium (BE), Germany (DE), Spain (ES), Ireland (IE), Italy (IT) and the United Kingdom (UK). The elderly are defined as all persons aged 65 and over. In section 2, I discuss the data sources and provide some methodological background. In the next section I present background information on cross-national demographic differences as well as differences in tenure status and housing costs. Both types of information are crucial to correctly interpret cross-national differences in income levels, which I discuss in section 4. The latter section is organised in four subsections which explain step by step how cross-national variations in disposable income can be made comparable taking account of household composition, currencies, income reference years and price level differences. Each of these elements is explained in detail. Additionally, I present some statistics which show how disposable household income is distributed among the elderly.

2 Data and method

All descriptive statistics in this report are based on Eurostat data. Some are extracted directly from the Eurostat website², others are computed on the basis of the EU-SILC 2008 micro dataset. The European Union Statistics on Income and Living Conditions (EU-SILC) is currently the most important data source for cross-national, comparable data on income and living conditions in the European Union. It consists of large-scale household surveys in all EU member states and some non-EU members. For the countries discussed in this report, the number of surveyed households ranges between 5,250 in Ireland and nearly 21,000 in Italy. More detailed information on the sample design, sampling frames and response rates can be found in Eurostat (2010), Goedemé (2010) and Atkinson and Marlier (2010).

Given the fact that EU-SILC contains only a selection of households, one must take account of random sampling errors. For the entire report, 95% confidence intervals have been calculated, taking as much as possible the sample design into account. In order to do so, we have followed the method developed by Goedemé (2010). 95% confidence intervals indicate the range in which the population value can be expected to lie 95% if the time when the same sample would be re-drawn an infinite number of times. In other words, they indicate the interval which can be expected to include the population value with 95% certainty.

Unfortunately, survey estimates are also subject to other types of errors. For instance, one should interpret the German data with caution as the sample frame consists of another sample including households which have previously indicated that they are willing to participate in other surveys (Goedemé, 2010), leading probably to a sample selection bias of healthy, high-skilled, high income persons. German data are therefore included for indicative purposes only. The main income measure discussed in this report is the total net disposable household income. It consists of the total income of all household members added together (assuming that income is fully shared within the household). It refers to all current incomes, but excludes assets (e.g. savings are excluded, but income from savings is included). Income is recorded after income

¹ I am grateful to Aaron Van den Heede who commented on an earlier version of this report.

² <http://epp.eurostat.ec.europa.eu/>.

taxes and social security contributions. Income has been top- and bottom coded at the 1st and 99th country percentile (cf. Van Kerm, 2007 for a discussion of various approaches).

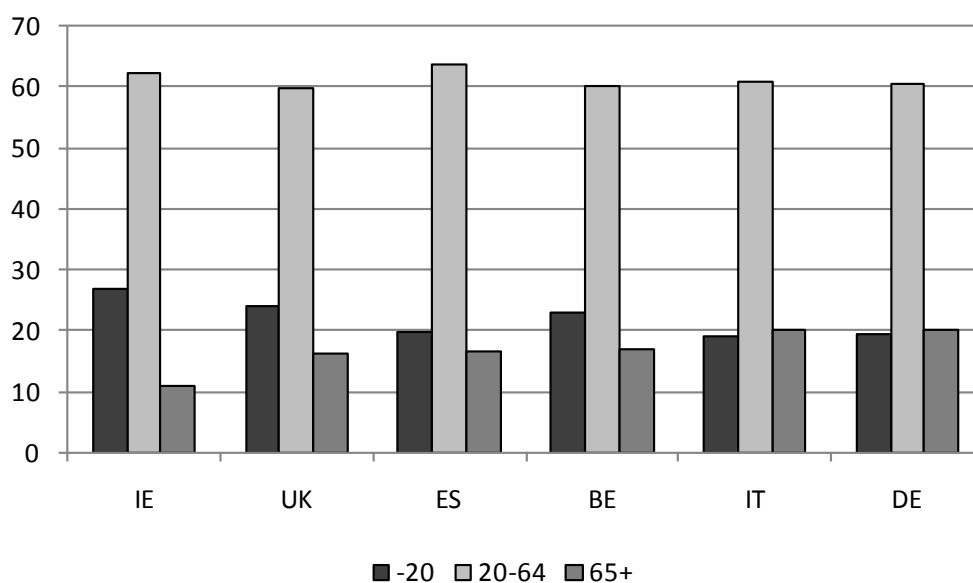
3 Background statistics

Two types of background statistics are discussed. In section 3.1 I discuss some demographic cross-national differences. In section 3.2 I discuss cross-national differences in tenure status and housing costs, as this is important for interpreting differences in disposable household income.

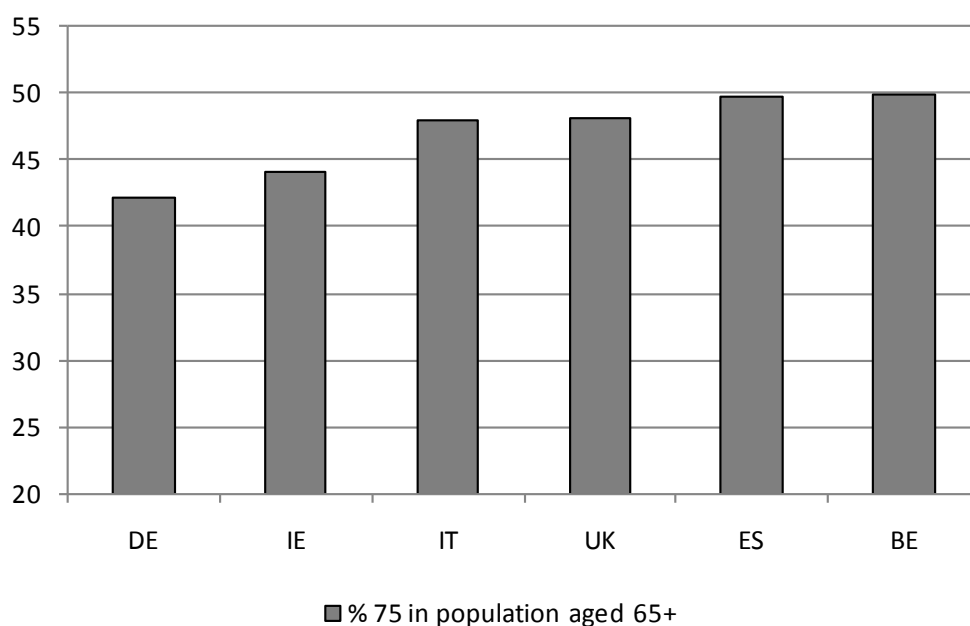
3.1 Demographics

In the countries under consideration, the proportion of the elderly ranges from little above 10% of the total population in Ireland to twice that amount in Italy and Germany. In the latter two countries the elderly constitute a slightly larger group than the population aged less than 20 years. However, although the total share of the elderly is largest in Germany, the elderly population in Germany is the youngest of the six countries: little over 40 per cent of those aged 65 and over are older than 75. In Belgium, in contrast, close to 50 per cent of the elderly population is aged 75 and over.

Figure 1: Proportion of various age categories in total population, 2008



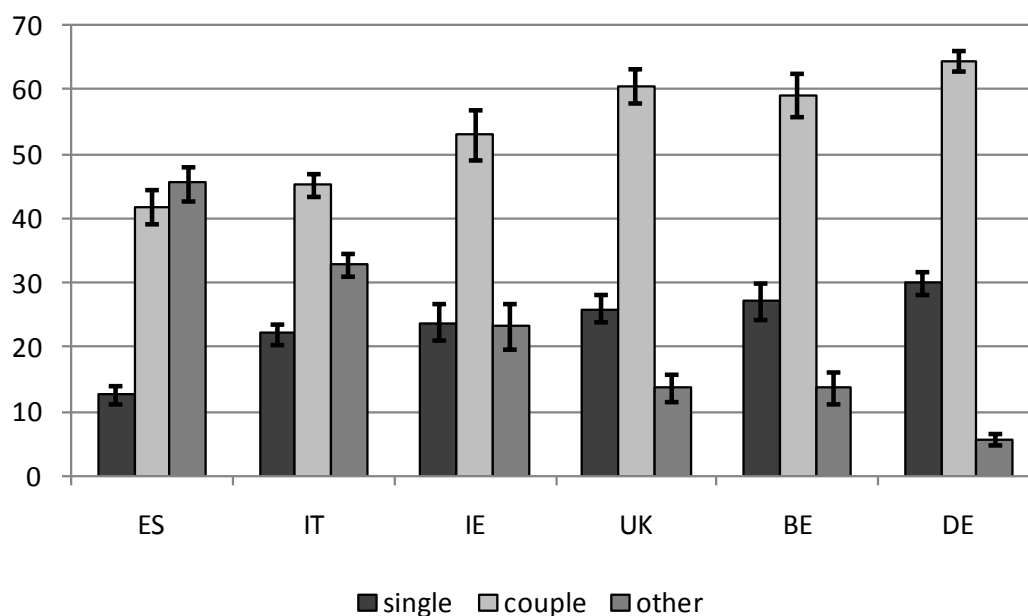
Source: Eurostat online database (last accessed February 2011)

Figure 2: Proportion of elderly aged 75 and over, 2008

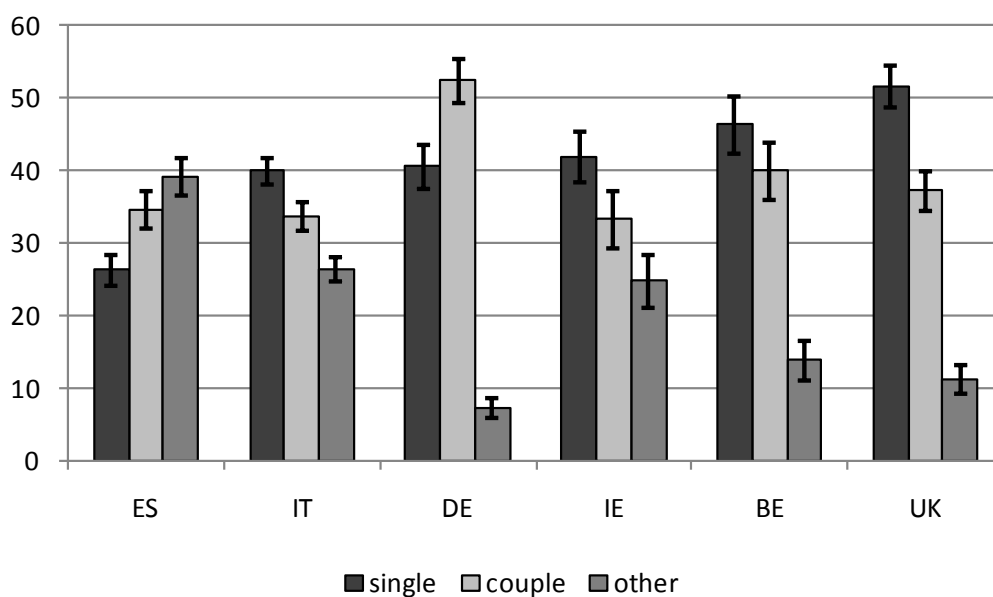
Source: Eurostat online database (last accessed February 2011)

Larger cross-national differences are found with regard to the household composition and living arrangements of the elderly. In Figures 3 and 4, three different household types are considered: persons living alone, persons living with their partner (married or consensual union) and others. Persons living in a couple do not necessarily have a partner in the same age category. Although in all countries the majority of elderly persons live as a single or with their partner, a substantial number live with others (which could be their siblings, but also any other person including children and grand-children as well as their partner). Living together with others is most common in Spain and Italy (over a quarter of the elderly) and rather uncommon in the UK, Belgium and Germany (around 10 per cent of the elderly).

The percentage of living alone is of particular interest, not only in terms of potential available help in case of need, but also in terms of income that can be pooled to cover fixed costs (in particular with regard to housing). Unsurprisingly, the percentage of elderly living alone is for all countries particularly high among those aged 75 and over. However, there are important cross-national differences. Over a quarter of persons aged between 65 and 74 live alone in the UK, Belgium and Germany. This percentage increases to between 40 and 52 per cent for persons aged 75 and over.

Figure 3: Household composition of persons aged 65-74 years, 2008³

Source: EU-SILC UDB 2008, own calculations

Figure 4: Household composition of persons aged 75 and over, 2008

Source: EU-SILC UDB 2008, own calculations

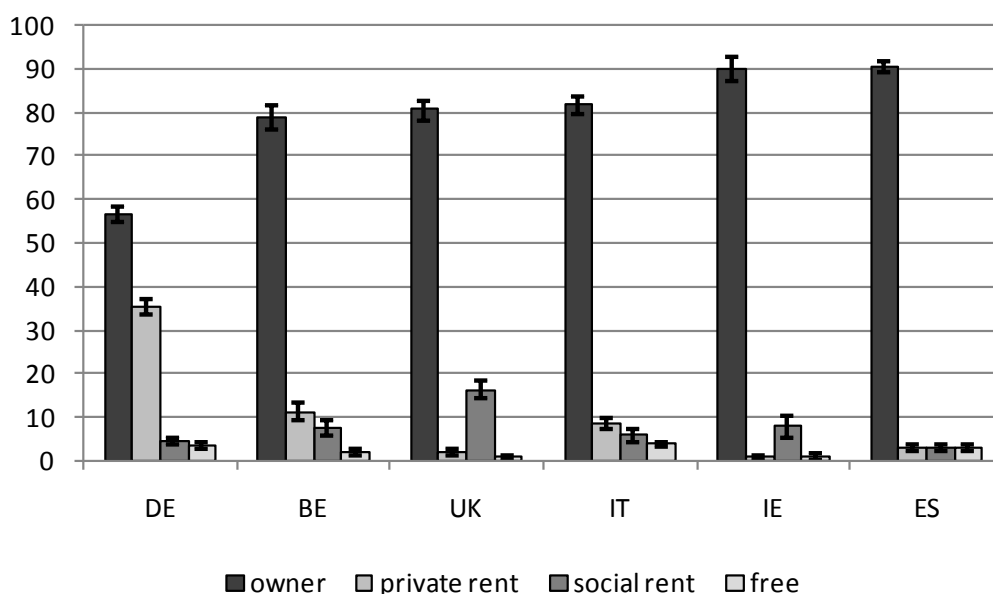
³ Please note that confidence intervals of two estimates cannot be compared directly to see whether the difference between two estimates is statistically (in)significant, especially not when dependence is involved. Usually, one can be quite sure when confidence intervals do NOT overlap that the difference is significant. However, when they do overlap this does not automatically mean the difference is not statistically significant – especially not when samples are dependent.

3.2 Tenure status and housing costs

For persons at active age, one of the largest fixed costs is housing. This may change when people grow older because mortgage is largely paid off. Nevertheless, the evolution of housing costs over the life cycle heavily depends on the housing situation. Especially when households have not been able to buy a house, rent costs can remain high. Housing costs can become particularly high when persons have to move to elderly care centres. Unfortunately, the EU-SILC database covers only persons living in private households. Therefore, it excludes all (elderly) persons living in so-called collective households or institutions, including elderly care centres.

Figure 5 shows how tenure status varies across countries for persons aged 65 to 74 and Figure 6 for persons aged 75 and over. A difference is made between four housing situations: owners are persons who are living in a house or apartment owned by the household (or the household head), private renters are people living in a house or apartment rented at market prices. 'Social' renters are people living in a dwelling which is rented at a reduced, below-market, rate. The latter includes both social housing provided by the (local) government, but also housing provided by a relative or acquaintance at a rent below the normal market price. The last category "free renters" includes persons who are not owning the dwelling they are living in, but who do not have to pay rent. In all countries, the latter category is relatively uncommon (around 5 per cent) although the oldest among the elderly tend to live somewhat more frequently in this kind of housing situation.

Figure 5: Tenure status of persons aged between 65 and 74, 2008

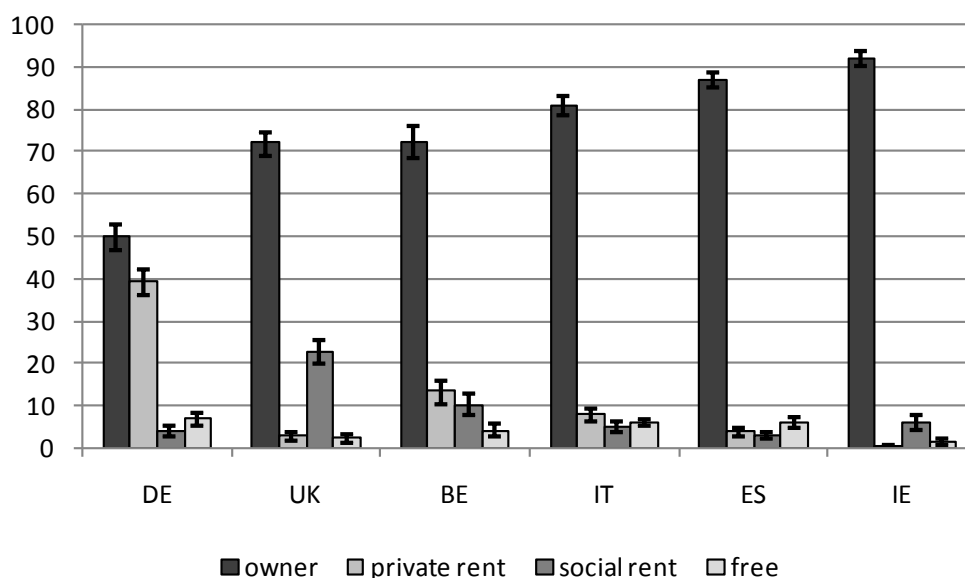


Source: EU-SILC UDB 2008, own calculations

In Ireland, Spain and Italy, owning-occupying is particularly widespread in both age categories: over 80 per cent of the elderly own the dwelling they are living in, with only minor differences between people aged 65-74 and those aged 75 and over. Among these countries, especially in Ireland renting at a reduced rate is the most common alternative to home ownership. A different pattern is observable in Belgium and the UK. Although home ownership is widespread in both age categories, it is more common among the younger cohort than among the cohort aged 75 and over (roughly 80 per cent vs. 70 per cent). In Belgium both private rent and social

housing act as an important alternative to home ownership, whereas in the UK social housing is more widespread, and particularly important for people aged 75 and over (around 20 per cent). Compared to the other countries, EU-SILC data suggest that home ownership is much less common among German elderly. Only 50 per cent of persons aged 75 and over live in the dwelling they own, with private renting as a particularly widespread alternative. Broadly speaking, these patterns correspond to findings on the basis of other survey data such as SHARE (cf. Angelini and Laferrère, 2008).

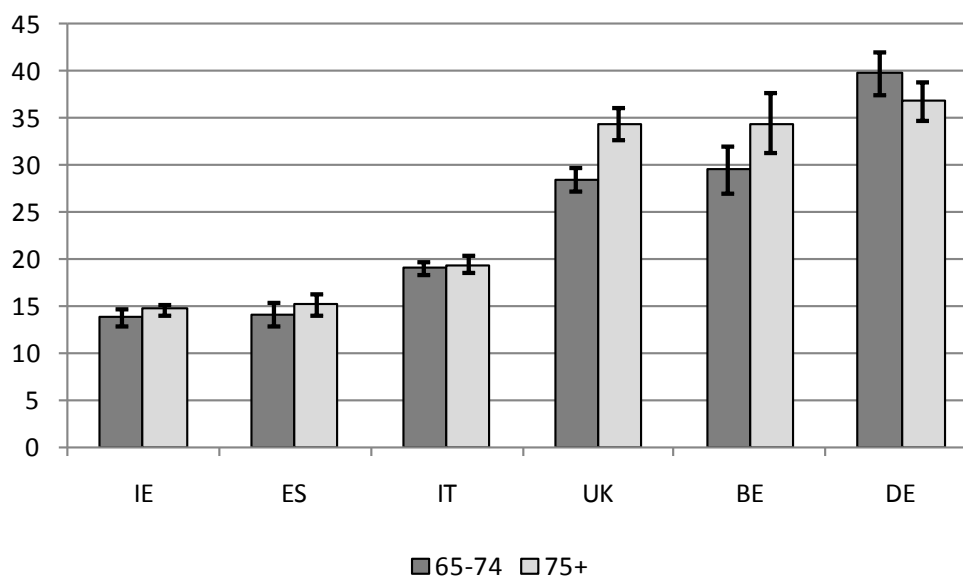
Figure 6: Tenure states of persons aged 75 and over, 2008



Source: EU-SILC UDB 2008, own calculations

As can be observed from Figure 7, housing costs as a share of net total disposable household income, largely reflect the cross-national variation in tenure status. Housing costs include mortgage to be paid (rather limited in the case of elderly), rent, structural insurance, maintenance and repairs, the cost of utilities, mandatory services and charges (e.g. for sewage removal) as well as taxes to be paid on the dwelling. Net total disposable household income includes all income from all sources of all household members. The share of housing costs will be somewhat over-estimated in Germany, Belgium, Italy and Spain as housing costs refer to the period of the interview, whereas income refers to the calendar year preceding the interview. Nevertheless, substantial cross-national variation can be observed. The Irish and Spanish elderly spend on average more or less 15 per cent of their income on housing, and the Italian more or less 20 per cent. In contrast, in the UK and Belgium the elderly spend on average around a third of their income on housing. The share of housing costs is estimated to be even somewhat higher in Germany.

Figure 7: Average total housing cost as a share of the total monthly disposable household income, 2008



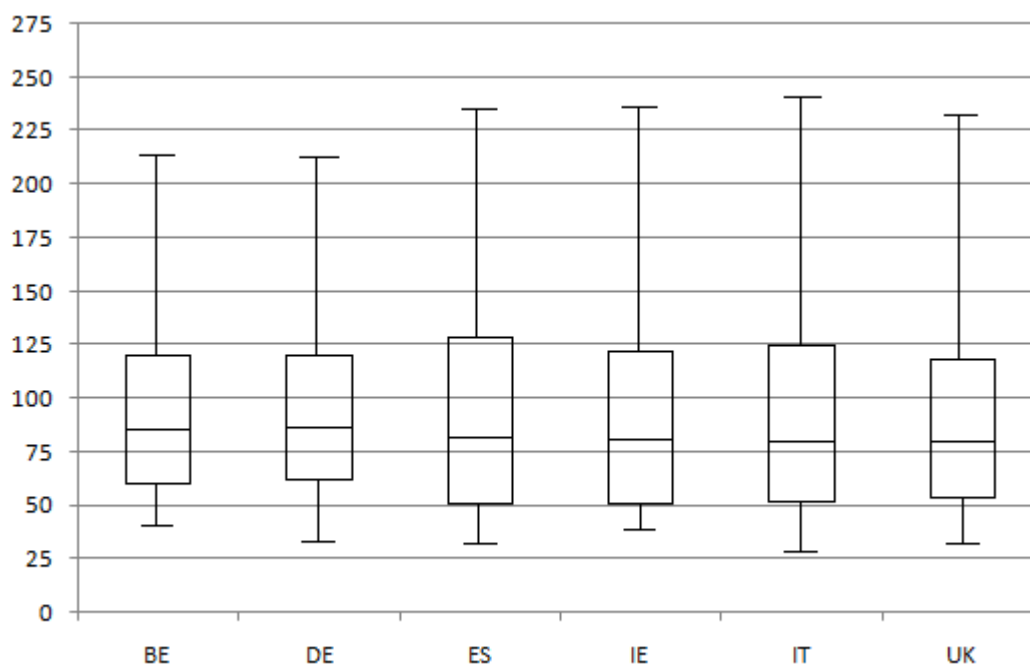
Source: EU-SILC UDB 2008, own calculations

4 The disposable income of the elderly

4.1 Average incomes and the wider income distribution

Figure 9 displays the average monthly total disposable household income of the elderly, expressed in national currencies (i.e. EUR, GBP for the UK). The amounts are expressed in prices of the income reference year. Recall that income refers to 2007 in Belgium, Ireland, Italy and Spain, to the year preceding the date of interview in Ireland and to 2008 in the United Kingdom. As incomes are skewed towards the richer part of the income distribution, average income does not correspond to the middle of the income distribution. Taken all persons aged 65 and over together, the median income (i.e. the income level in the middle of the income distribution) is between 15 per cent (Germany) and 26 per cent (Italy and the UK) lower than average income (see Figure 8).

Figure 8: Boxplots of the income of the elderly as a percentage of mean elderly income, 2007-2008

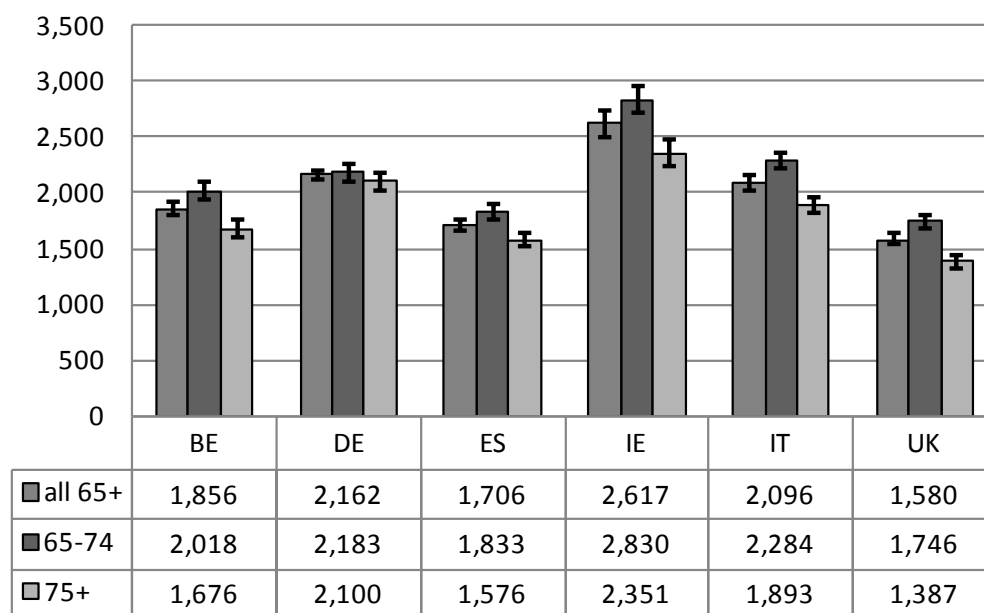


Note: box displays the 25th, 50th and 75th percentiles, whiskers display the 5th and 95th percentile; outside values not shown.

Source: EU-SILC UDB 2008, own calculations

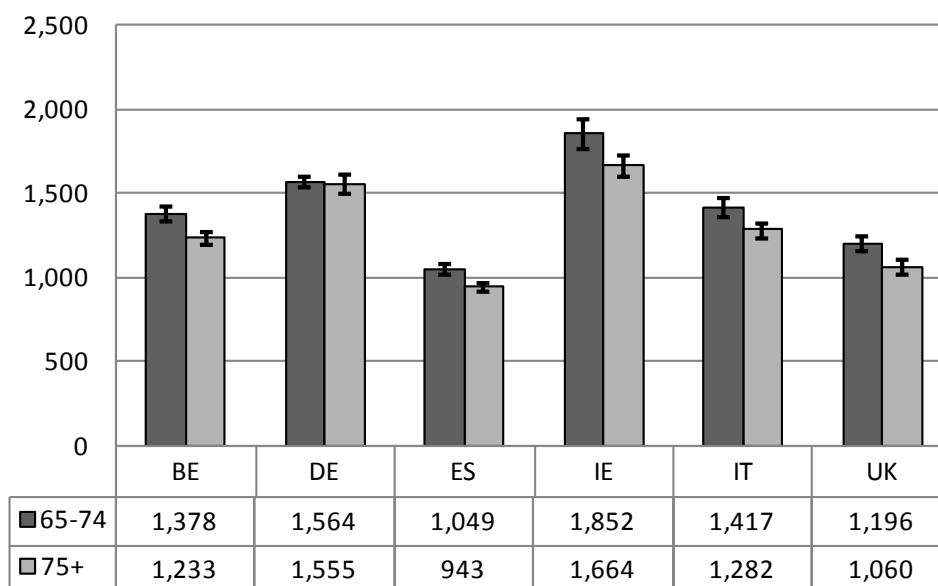
In all countries except Germany, EU-SILC data suggest that the oldest among the elderly dispose on average of about 20 per cent less income than the cohort aged between 65 and 74. This can be explained by at least two different factors: First, as shown earlier, people aged 75 and over are more likely to live alone than the younger age group. Therefore, they are less likely to pool their income with others. Second, in many cases, pensions are indexed only to prices. Younger cohorts, however, can usually embark on retirement with a more favourable starting position due to recent increases in wages. As far as the first explanation is concerned, Figure 10 shows indeed, that household composition plays an important role. In this figure, household incomes are 'equivalised', i.e. they are adapted to take the household composition into account in order to reflect differences in living standards. Because persons living together can share some fixed costs (most notably housing), two persons do not need exactly twice the income of a single person in order to reach the same living standard. Therefore, in research with regard to poverty and inequality, income is equivalised to take these economies of scale into account. In order to do so, other household members receive a weight of 0.5 if they are aged 14 and over and 0.3 if they are below the age of 14. As shown in Figure 10, once these differences in household composition are accounted for, the difference between the oldest cohort and those aged 65 and 74 is much less pronounced (around 10 per cent).

Figure 9: Average monthly total disposable household income in national currencies, 2007-2008



Source: EU-SILC UDB 2008, own calculations

Figure 10: Average monthly total equivalised disposable household income in national currencies, 2007-2008

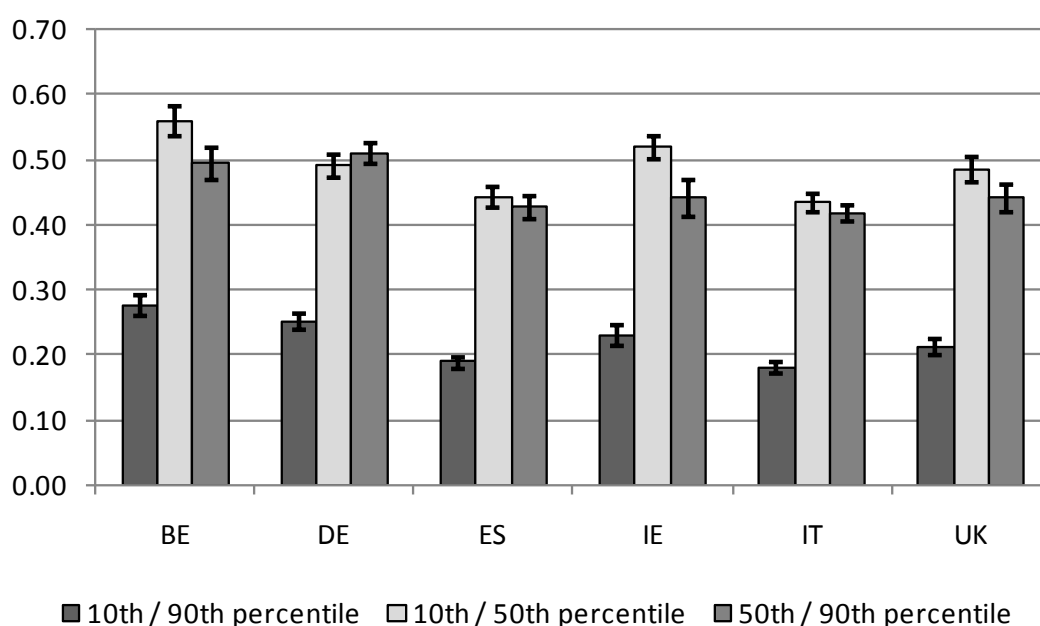


Source: EU-SILC UDB 2008, own calculations

As incomes are distributed fairly unequally among the population, average incomes must be interpreted jointly with some measure of inequality. Figure 11 presents three different measures of inequality. The first compares the income at the 10th percentile with the income of the 90th percentile (i.e., if all incomes are ranked from low to high the 10th percentile

corresponds to the income below which 10 per cent of all incomes fall and the 90th percentile corresponds to the income below which 90 per cent of all incomes fall). The second compares the income at the 10th percentile to the 50th percentile (i.e. the median) and the third expresses the 50th percentile as a share of the 90th percentile. As explained earlier, in inequality research incomes are first equivalised in order to take account of differences in household composition. However, for this report it has been asked to primarily sketch the situation in case of the unequivalised disposable household income. When interpreting the results of Figure 11, it must be kept in mind that most probably persons at the lower end of the income distribution are primarily elderly people living alone, whereas at the upper end of the income distribution primarily larger households (probably including people at working age) can be found.

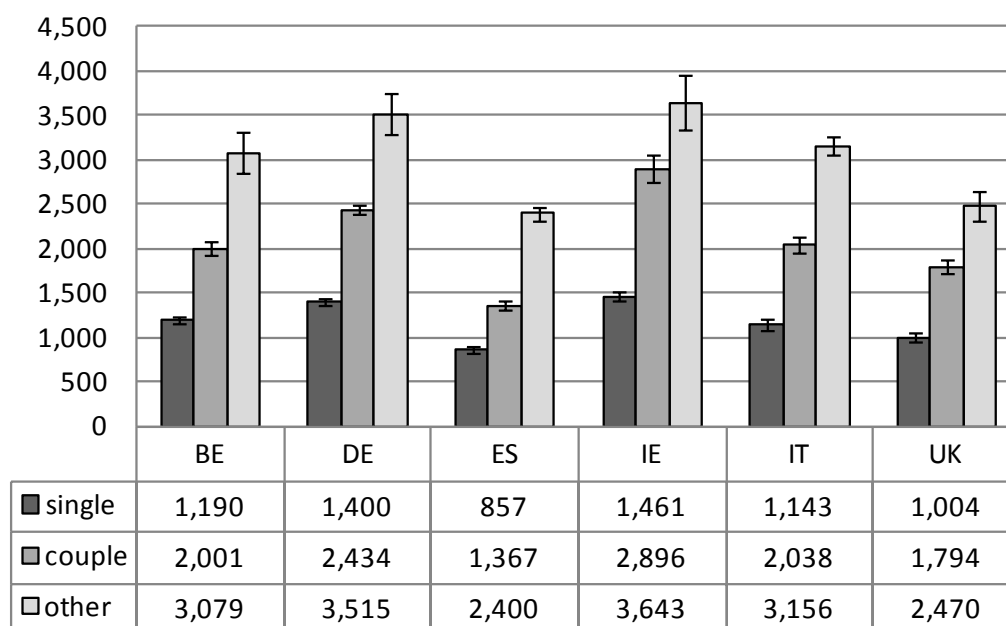
Figure 11: Several quantile ratios of total disposable household income of the elderly aged 65 and over, 2007-2008



Source: EU-SILC UDB 2008, own calculations

Income among the elderly is most equally distributed in Belgium, with persons at the 10th percentile living on a disposable income at around 28 per cent of those at the 90th percentile. The same observation can be made when looking at the ratio of the 10th percentile and the median, or when one takes account of differences in household composition (see Figure 13). However, differences with Germany and Ireland are not very large and in some cases not significant at the 95% confidence level. In Italy and Spain disposable income is much less equally distributed with those at the 90th percentile having an income more than five times as high as those at the 10th percentile. However, once accounted for household composition, cross-national differences are much less outspoken, especially compared to the UK and to a lesser extent also compared to Germany.

Figure 12: Average monthly total disposable household income in national currencies by household type, persons aged 65 and over, 2007-2008

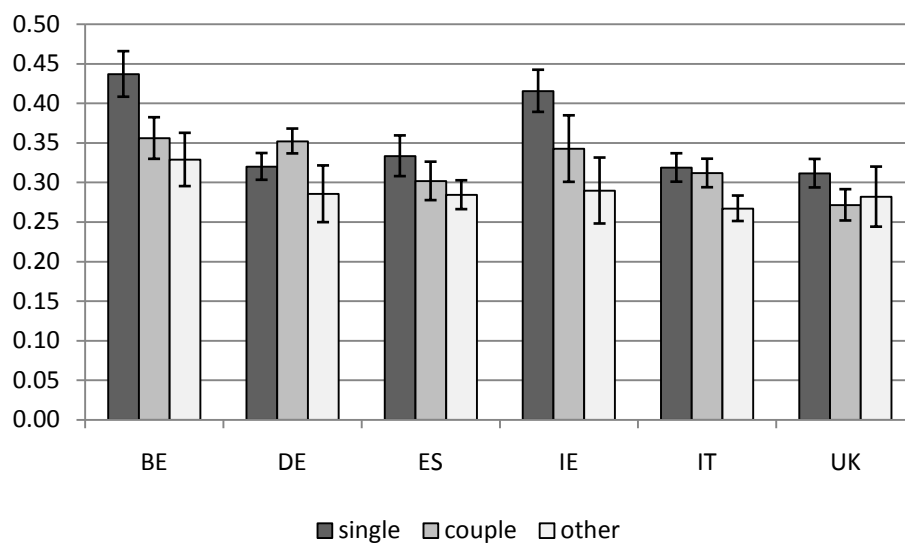


Source: EU-SILC UDB 2008, own calculations

The household composition is one of the main determinants of the total disposable household income. Therefore, we also present average income for three household types, as well as the level of income inequality for each household type. As can be seen from Figure 12, average monthly income of single elderly is way below that of couples and other households ranging between 50 per cent (Ireland) and 63 per cent (Spain) of the average income of couples. Compared to the overall inequality figures for the population aged 65 and over, Figure 13 shows that inequality is substantially lower when looking at various household types separately. Income inequality is remarkably lower for singles in Belgium and Ireland. However, even in these cases singles at the 90th percentile (of all singles) have a disposable income more than twice as much as those at the 10th percentile. In the other countries, the richest ten per cent has at least three times the income of the poorest ten per cent at its disposal. For persons living in a couple or other household type, income inequality tends to be somewhat higher.

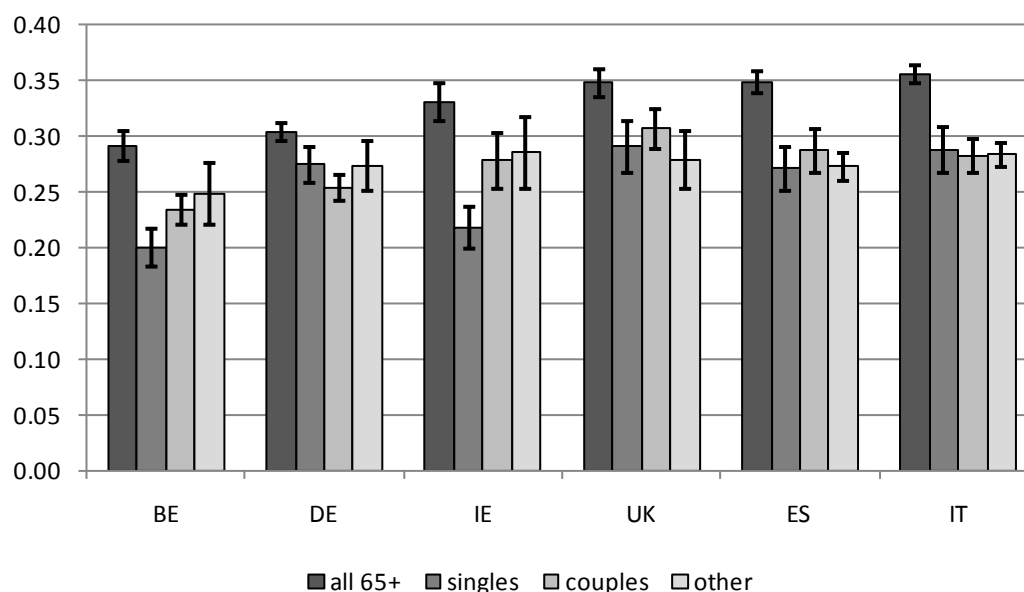
Quantile ratios can be easily criticised because they are based on only two points in the income distribution. Therefore, Figure 14 displays gini coefficients for the elderly by household composition. The gini coefficient takes account of the entire income distribution and is equal to 0 when all persons have the same income and equal to 1 if all income is possessed by just one person (please note that in the case of the quantile ratio a higher bar indicates less inequality and in the case of the gini coefficient more inequality). From Figure 14 it can be observed that the same conclusions can be reached with this refined measure of income inequality. Inequality for all elderly persons taken together is lowest in Belgium and not statistically significantly different from Germany. When indices are computed separately for the three household types, inequality is much lower, and especially so in the case of elderly people living alone in Belgium and Ireland.

Figure 13: The income at the 10th percentile as a percentage of the income at the 90th percentile, by household composition, 2007-2008



Source: EU-SILC UDB 2008, own calculations

Figure 14: Gini coefficients of total disposable household income by household type, all persons aged 65 and over, 2007-2008



Source: EU-SILC UDB 2008, own calculations

4.2 Price level differences

When evaluating the purchasing power of the elderly, average income levels cannot be directly compared cross-nationally for several reasons: 1/ differences in income reference year (Ireland, UK); 2/ differences in national currency (EUR, GBP); 3/ differences in household composition; 4/ cross-national price level differences and economies of scale.

As explained earlier, the year to which the figures on total disposable income refer differs across countries. Such differences could be overcome by downrating the income levels of Ireland and the United Kingdom in line with changes in income levels between 2007 and the income reference period for both countries (see discussion under 4.4).

Second, figures for the UK should be expressed in euro. Because of differences in income reference year and fluctuations in exchange rates over time, various options could be considered. One option which could be considered is to downrate incomes first and apply the average exchange rate of 2007 afterwards. Please remark the big change in exchange rates of 2007 and 2008. Such large fluctuations emphasise the need to be careful with comparing incomes of various income reference years.

Table 1: Yearly average exchange rate of the euro against the Pound sterling, 2005-2010

	2005	2006	2007	2008	2009	2010
1 euro =	£0.68	£0.68	£0.68	£0.80	£0.89	£0.86

Source: Eurostat online database (last accessed February 2011).

Third, as emphasised in the previous section, whenever incomes are not equivalised, one should be cautious about interpreting income levels as differences in purchasing power and certainly as differences in living standards, not least because cross-national differences in average total disposable household income can be partly driven by differences in household composition (see section 3.1).

Fourth, a major restriction on the comparability of incomes expressed in a similar currency is the existence of important differences in price levels and price structures, as well as differences in habits and the composition of average household expenditures. Of course, when goods and services are more expensive in one country than another, this should be accounted for when comparing the purchasing power of incomes cross-nationally. Especially when comparing the income of households, differences in (the kind and amount of) publicly provided goods and services as well as VAT should be included in the computation of price level differences. The table below presents price level differences for all six countries since 2005. The price level indices refer to average household consumption expenditures. The EU average (all 27 member states) equals 100. In other words, a price level index of 126 in 2009 in Ireland means that an average basket of goods and services is 26 per cent more expensive in Ireland than on average in Europe. The price level indices can be directly compared across countries: on average, in 2009 prices in Belgium were 19 per cent higher than those in the UK (i.e. 113.3 / 95.1). Except for the UK and Spain, price levels have not changed very much over the past 5 years.

Table 2: Price level indices for final household consumption expenditure, 2005-2009

	2005	2006	2007	2008	2009
BE	106.4	107.7	107.4	110.4	113.3
DE	103.3	102.6	101.7	103.5	105.8
IE	123.5	124.5	124	129.1	126.0
ES	91.1	91.8	92.8	95.2	97.7
IT	104.7	104.2	102.5	102.9	105.4
UK	109.8	110.6	113.9	102.1	95.1

Source: Eurostat online database (last accessed February 2011).

Unfortunately, price level indices have some important drawbacks because they refer to the average consumption expenditures of European households (cf. The Canberra Group, 2001; Milanovic, 2005; European Commission and OECD, 2006). First of all, the structure of household consumption expenditures depends on many factors such as household composition, the main activity status of the household (working, education, retirement), region and income level. In other words, the price level indices may be more or less comparable for certain household types or people at various points in the income distribution than others. There may also be important differences between age groups. Second, the structure of household consumption expenditures varies across countries. Many factors are at play (cultural differences, geographical differences, market differences), but special attention should be paid to differences in large fixed costs (such as housing, cf. section 3.2) and differences in expenditures due to the different organisation of European welfare states in the provision of certain goods and services. As a result, for similar household types economies of scale may differ across countries. In spite of these important remarks, the average price level indices for final household consumption expenditure are the best estimates currently available. An alternative would be to study the average composition of household expenditures for the elderly at a certain point in the income distribution and use the more detailed price level indices for specific categories of goods and services. However, such an exercise would be rather time-consuming and would need extensive evaluation.

4.3 Variations in purchasing power

Leaving the shortcomings of average exchange rates and price level indices aside, one can compute so-called (average) purchasing power parities (PPPs). These are a kind of exchange rate which take account of both differences in currencies and price levels. Incomes expressed in the national currency divided by the purchasing power parities result in income levels expressed in purchasing power standards (PPS). Income in PPS gives a direct indication of the difference in purchasing power across countries in the same way as differences in incomes in national currencies give an indication of differences in purchasing power of people living in the same country. For the euro countries, the purchasing power parity is equal to the price level index divided by 100. For the United Kingdom, the purchasing power parity is equal to the price level index divided by 100 multiplied by the exchange rate. Table 3 gives an overview of the resulting purchasing power parities for final household consumption expenditure.

Table 3: Purchasing power parities for final household consumption expenditure, 2005-2009

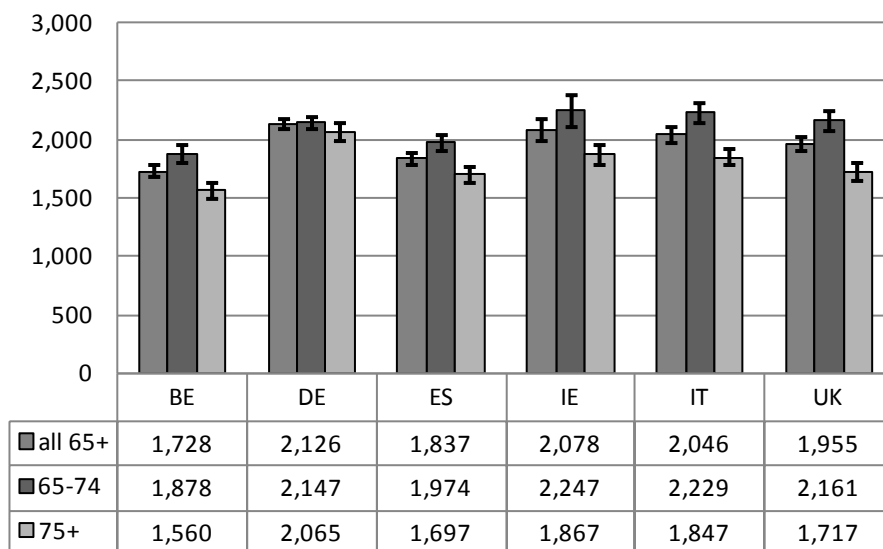
	2005	2006	2007	2008	2009
BE	1.06	1.08	1.07	1.10	1.13
DE	1.03	1.03	1.02	1.03	1.06
IE	1.23	1.24	1.24	1.29	1.26
ES	0.91	0.92	0.93	0.95	0.98
IT	1.05	1.04	1.02	1.03	1.05
UK	0.75	0.75	0.78	0.81	0.85

Source: Eurostat online database (last accessed February 2011).

The figures below present the average incomes of section 4.1 expressed in purchasing power standards. In order to tackle the differences in income reference year, incomes of Ireland have been downrated by the average consumer price index of 2007 and 2008 divided by the consumer price index of 2008 (see section 4.4). In the case of the United Kingdom incomes have been downrated by the ratio of the consumer price index of 2007 and the one of 2008. For all countries the purchasing power parity of 2007 has been used. As can be observed from Figure

15, cross-national differences are much less outspoken than when one does not take account of price level differences. Elderly in Belgium have on average the lowest purchasing power. Belgium is closely followed by Spain, but total housing costs as a share of disposable income are much lower. The German elderly have on average the highest purchasing power, although those aged 65-74 in Ireland and Italy seem to do even somewhat better.

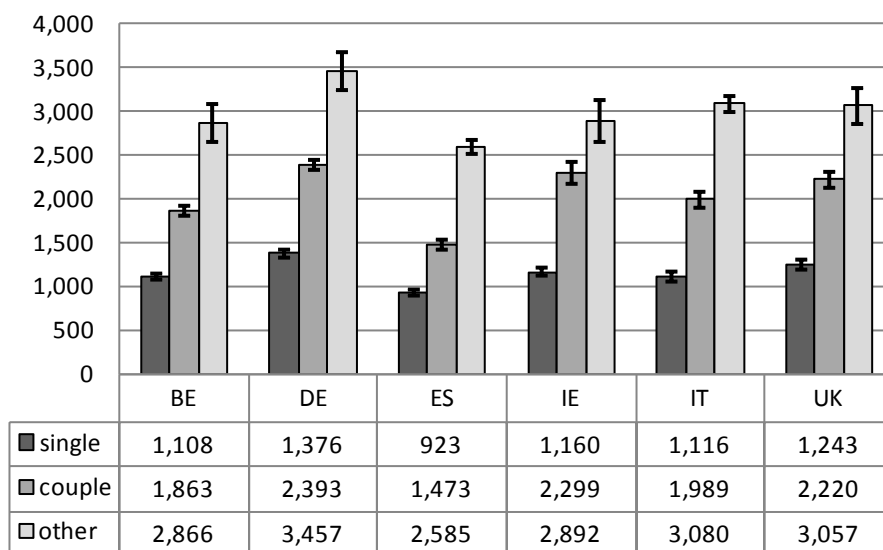
Figure 15: Average income of the elderly in PPS, 2007



Source: EU-SILC UDB 2008, own calculations.

As stressed before, household composition should be taken into account when comparing purchasing power across countries. Figure 16 shows again how important this is: once controlled for household composition, the purchasing power of Spanish elderly is lower than the purchasing power of Belgian elderly. The high purchasing power of German elderly is even more outspoken than in the case that household composition would be ignored.

Figure 16: Average elderly disposable household income in PPS by household composition, 2007



Source: EU-SILC UDB 2008, own calculations.

4.4 Updating income levels to current circumstances

Large-scale surveys such as EU-SILC are confronted with long lags between the collected information on income and the distribution of the data to the end users. In order to obtain up to date estimates, incomes could be adapted in several ways. However, none is very satisfactory, especially in times of big economic changes or crisis. However, the incomes of the elderly are usually more stable than those of other age groups as they largely depend on pensions. A common way to uprate incomes is to change them in accordance with changes in the index of consumer prices. In doing so, the purchasing power of the incomes is kept constant over time. This method has some drawbacks: First, it suffers from the same problems as price level indices as they are based on an average consumption basket. Second, especially in a period of economic turmoil, there is no guarantee that (average) income dynamics are similar to changes in price levels. When evaluating cross-national differences in purchasing power, it is advisable to first index the incomes in national currencies to the desired year, and afterwards to divide them by the purchasing power parity of that year.

Table 4: The evolution of the harmonised indices of consumer prices (HICP), 2005 = 100

	2005	2006	2007	2008	2009	2010
BE	100.0	102.3	104.2	108.9	108.9	111.4
DE	100.0	101.8	104.1	107.0	107.2	108.4
ES	100.0	103.6	106.5	110.9	110.6	112.6
IE	100.0	102.7	105.6	108.9	107.1	:
IT	100.0	102.2	104.3	108.0	108.8	110.6
UK	100.0	102.3	104.7	108.5	110.8	:

Source: Eurostat online database (last accessed February 2011).

5 Conclusion

The direct comparison of the purchasing power of elderly people across countries is not straightforward. Many factors undermine the direct comparability of household incomes. Most notably, average incomes may differ purely because of a different demographic composition, different currencies, because price structures and/or price levels differ and because consumption patterns differ. If one does not take account of these factors, differences in incomes cannot be simply interpreted as differences in purchasing power, and even less as differences in living standards.

On a step-by-step basis, this report has tried to show how these difficulties are overcome in the international research literature. In order to compare like with like, incomes should be compared by household type or at least be equalised. Furthermore, one could probe into differences in large fixed costs – such as those for housing – in order to account for differences in price structures. Purchasing power parities offer a tool for converting incomes into purchasing power standards, which directly display differences in purchasing power. Price level indices offer a tool for comparing the underlying differences in price levels. Nevertheless, as these conversion factors are always based on average consumption expenditures in the European Union, resulting figures should always be treated with some caution.

Keeping the necessary limitations in mind and controlling for household composition, EU-SILC data for 2007/2008 suggest that the purchasing power of the elderly was highest in Germany, followed by the UK and Ireland. The average purchasing power was lowest in Spain and somewhat higher in Belgium.

Although cross-national differences in purchasing power are non-negligible, differences in purchasing power within countries are much larger and a much more important factor to take into account. For instance, on average the purchasing power of elderly singles in the UK is more or less 35 per cent higher than the purchasing power of Spanish single elderly. However, the net disposable income of Spanish single elderly at the 90th percentile is about 3 times as high as the net disposable income of Spanish single elderly at the 10th percentile. Although there is some variation in this kind of inequalities between the countries under study, in all countries largely similar patterns can be found. In other words, for an effective comparison of the purchasing power across countries, within-country differences cannot be ignored.

References

- Angelini, V. and Laferrère, A. (2008) 'Home, Houses and Residential Mobility', in Börsch-Supan, A., Brugiavini, A., Jürges, H., Kapteyn, A., Mackenbach, J., Siegrist, J. and Weber, G. (eds.), *Health, Ageing and Retirement in Europe (2004-2007). Starting the Longitudinal Dimension*, Mannheim: Mannheim Research Institute for the Economics of Aging: 99-107
- Atkinson, A. B. and Marlier, E., Eds. (2010), *Income and Living Conditions in Europe*, Luxembourg: Publications Office of the European Union, 420p.
- European Commission and OECD (2006), *Eurostat-OECD Methodological Manual on Purchasing Power Parities*, Paris: OECD, www.oecd.org/std/ppp/manual, 267p.
- Eurostat (2010), *2008 Comparative EU Intermediate Quality Report. Version 2 - June 2010*, Luxembourg, Eurostat, 59p.
- Goedemé, T. (2010), *The standard error of estimates based on EU-SILC. An exploration through the Europe 2020 poverty indicators*, CSB Working Paper Series, WP 10/09, Antwerp, Herman Deleeck Centre for Social Policy, University of Antwerp, 36p.
- Milanovic, B. (2005), *Worlds Apart. Measuring International and Global Inequality*, Princeton and Oxford: Princeton University Press, 227p.
- The Canberra Group (2001), *Expert Group on Household Income Statistics. Final Report and Recommendations*, Ottawa, 200p.
- Van Kerm, P. (2007), *Extreme Incomes and the Estimation of Poverty and Inequality Indicators from EU-SILC*, IRISS Working Paper Series, NO. 2007-01, Luxembourg, CEPS-Instead, 51p.