6.1 Household Income
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Why Is Income Important?
Income is by no means the only way to support consumption in old age, as financial assets can be run down and real assets can also be used to generate liquidity (reverse mortgages, equity lines etc). Also, social and family support may be used to meet important requirements near the end of the life-cycle, such as nursing and long-term care.

However, social scientists and economists have always shown a keen interest in income, for instance in their studies of economic inequality and poverty, and in most health surveys containing questions on economic and social well-being, the only measure of access to economic resources is income. Indeed, income is an important (arguably, the most important) component of any measure of access to economic resources, thus deserving careful investigation on its own. For this reason, in this section we present statistics on household income as recorded in SHARE in a number of different dimensions.

This contribution describes the income available to households, and shows how careful one needs to be in defining it when comparing across countries. In almost all EU policy statements income per capita statistics are core indicators for public policy. But our analysis reveals that coarse income measures mask important differences that are due to differences in purchasing power, in household size, in taxation, in the services provided by owner-occupied housing. Only after allowance is made for all these factors, can we compare incomes across countries in a meaningful way.

![Average and median gross household income across SHARE countries](image)

In Figure 1 we summarise graphically some of the income differences found across SHARE countries by reporting the average and median gross household income in its basic definition (excluding imputed rent from owner occupation – current exchange rates have been used to translate national currencies in euros, where applicable). Average income exceeds €45,000 in three countries (Denmark, the Netherlands, Switzerland), it lies between €30,000 and €45,000 in Austria, France, Germany and Sweden, it is below
€30,000 in Italy as well as in Greece and Spain. However, median income may be a better indicator of access to economic resources, as averages are heavily affected by the right tail of the distribution. In fact, Figure 1 shows that for all countries median income is much lower than average income, and that the difference is by no means constant. So Sweden replaces the Netherlands among the top three countries in terms of median income; among the lower income countries, Spain and Greece median incomes are less than half of Italy’s, whereas Austria and Italy appear quite close (the complete data underlying this figure are presented in Tables 6A.1 and 6A.2).

In the rest of this section we shall provide more systematic evidence on ways in which income varies across countries, by looking at its various sources and by assessing the relevance of corrections for differences in purchasing power, in household size and in taxation. We shall also argue that some international differences appear less strong when owner-occupier housing is brought into the picture. All these adjustments can be implemented in the SHARE data in a consistent manner, and this makes this data set a particularly valuable source of information for policy analysis.

What Income Is in SHARE?

The SHARE questionnaire contains a number of questions on individual incomes, such as earnings, pensions and transfers, and a few questions on incomes that can only be recorded at the household level. The former are asked to all eligible individuals. The latter are asked to one particular respondent, and include items such as rents and housing benefits received, as well as an estimate of all individual incomes of non-eligible household members. Interest and dividend income is sometimes recorded at the individual level (when respondents keep their finances separate), but more often at the household level, and we therefore always treat it as a household level item (known as “capital income”). We should stress that household income does not include capital gains on financial or real assets.

Total household income is the sum of some incomes at the individual level and some at the household level. Lump-sum payments and financial support provided by parents, relatives or other people are excluded. The basic definition used here reflects money income before taxes on a yearly base (2003) and includes only regular payments. SHARE is the only European – wide data set that collects the gross amount for all income components in a consistent way.

The coarse income data require some adjustments before they can be used. First, imputations are needed for missing income items. Secondly, a correction must be made for differences in purchasing power across countries – to this end, we used OECD PPP exchange rates (that apply also within the Euro area) to turn nominal incomes into real incomes.

The issue of imputation is particularly relevant for income. In fact, household income is the sum of a very large number of items: for most of these, we have an exact record provided by the respondent, but for some others such amount is not available. However, when respondents refused or were not able to provide an exact answer to a question on a particular income or asset component, they were routinely asked unfolding brackets questions (was this income higher/lower than a certain threshold?). These answers place the income in a certain range, but an exact value needs to be imputed. Imputations were made using a conditional hot-deck procedure: missing income items were randomly replaced with income records from households from the same country, same income range (where available) or sex and age (where such range was not available).

Table 6A.3 presents average gross household income by country (after correcting for
differences in purchasing power) as the sum of its different components. For each item, it also reports the proportion that is imputed. So, for instance, we see that the mean of overall household income is €40,883 across all countries, with a minimum of €23,320 in Greece and a maximum of €56,856 in Switzerland. Over all SHARE countries, 19.2% of average income is the result of the imputations described above. Looking at the different columns, we see that the three largest income components are pension income (where imputations account for 15.2% of the average value), employment income (13.8% is imputed) and imputed rent. Imputed rent is defined in SHARE as a fixed proportion (4%) of the value of the home, net of mortgage interest payments; home value or mortgage interest imputations account for 25.9% of this item. Self-employment income, capital income, income from other household members and from other sources are much smaller items.

![Image: Income components across SHARE countries](image)

*Figure 2: Income components across SHARE countries*

In Figure 2 we show the importance of different income components. We look at average gross income, corrected for purchasing power differences, and inclusive of imputed rent from owner occupation. Imputed rent is a relatively small item in Nordic countries, as well as in Germany, Greece and Austria, but it is quite important in France, Italy and Spain. This is consistent with the notion that in countries where credit markets are not well developed, but house prices are high, many elderly individuals are house-rich but cash-poor. However, imputed rent is also a highly volatile measure, that is based on the market value of the main residence, and its average may be heavily influenced by the business cycle, as indeed capital income.

Two other striking features emerge when we look at Figure 2. First, earnings are the largest item in Denmark, Germany and Switzerland, whilst pensions play the biggest role in Austria and the Netherlands. Such differences may be due to differences in pension payments or in retirement ages across countries. Secondly, the residual item (that is mostly made of income from other members) is relatively small, except in Switzerland and the Netherlands.
Towards a Better Income Measure

We have already stressed that average gross household income is a relatively unsatisfactory measure of individuals’ access to economic resources and shown how different median income is from average income. In this section, we document the role of corrections for differences in purchasing power and in household size. We also show how to account for owner occupation housing (through imputed rent) and for tax and social security contributions paid. These two income components are particularly important, as they vary greatly across countries, age and income groups.

Figure 3 Different definitions of gross income

Figure 3 shows country medians of gross income in three different definitions: basic, corrected for PPP and corrected for both PPP and household size. The basic definition (left bar) does not include imputed rent – all non-Euro values are turned into euros at the current exchange rates. Allowing for differences in purchasing power (middle bar) has the effect of reducing median income in Switzerland and the Nordic countries, increasing it in Mediterranean countries (particularly Greece and Spain). Finally, differences in household size can be accounted for by dividing household income by the number of equivalent adults (EA, based on OECD scale – right bar). The resulting statistic comes close to the notion of per-capita income that is required for policy analysis, and shows that SHARE countries can be divided in three groups: Nordic countries, Switzerland and the Netherlands enjoy the highest gross income, followed by France and Germany. Austria, Italy, and particularly Greece and Spain have the lowest gross income as defined here.
In Figure 4 we show median income by country in three definitions: gross income accounting for PPP and household size (left bar), as already shown in Figure 3, the same plus imputed rent from owner-occupation (middle bar), and finally our estimate of median net income (that is, income after tax and social security contributions – right bar).

Comparing the first two bars for each country, we see that imputed rent (net of mortgage interest payments) does play a major role in explaining median gross income, very much in line with what we saw in Figure 2. Imputed rent is confirmed to be a substantial income component in Spain, Italy, France, Switzerland and to some extent Austria, Greece and the Netherlands. It is much less important in Nordic countries and Germany. It is worth stressing that SHARE is the only European – wide data set that allows consistent computation of imputed rent across countries, unlike the ECHP (European Community Household Panel) or its follow-up, EU – SILC (Statistics on Income and Living Conditions – for which records of imputed income are planned from 2007).

The right bar in Figure 4 shows median net income. This has been computed from household gross income, by subtracting income tax and employee’s social security contributions (SSC) on the basis of OECD estimates of average income tax and SSC rates by household types (married versus single, four different levels of gross income. Linear interpolation of tax and SSC rates has been used for in-between incomes). SSC have been computed on the basis of earnings of eligible individuals, while all remaining household income (except imputed rent from owner-occupations) has been taxed at the corresponding average tax rate. Country-specific exemption levels have been taken into account. We assume imputed rent not to be subject to taxation. It is worth stressing that SHARE uses information external to the survey to provide a net income measure, unlike ECHP or EU – SILC, which estimate a net/gross income ratio on the basis of information collected on various income components (some gross and some net - see Eurostat 2002, for further details).
We see that median net income is much lower than gross income in Nordic countries, as expected. We also see important effects of taxation in all other countries, with the noticeable exceptions of Greece and Spain. In Austria and Italy the difference between gross and net income is also relatively minor.

Taking this final picture at face value, we should conclude that the SHARE data on the economically relevant notion of income tell us an interesting story: Southern European countries – particularly Greece and Spain – are indeed poorer than the others, but their median income falls short of the more affluent countries, like Germany, France and the Nordic countries, by much less than a straight comparison with average gross income would suggest. A second point worth stressing is that Swiss and Dutch 50+ households seem to have better access to economic resources than households from all other SHARE countries. However, most households in these two countries have to purchase private health insurance, and this is not reflected in our net income computations.

Conclusions

We have provided evidence on ways in which income varies across countries, by looking at its various sources and by assessing the relevance of corrections for differences in purchasing power, in household size and in taxation. We have also shown that:

- Some international differences appear less strong when owner-occupier housing and taxation are brought into the picture.

- Imputed rent should be included in income, as is the income of any other asset held by the household.

- All the necessary adjustments can be implemented on the SHARE data in a consistent manner, and this makes this data set a particularly valuable source of information for policy analysis.

- The breadth of topics covered in the SHARE questionnaire will make it possible to construct further, more comprehensive measures of access to economic resources, but in all of them income is likely to play an important role.

References