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Income Distribution and Living Conditions

APPLICA

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Income inequality in the EU

Introduction: Why does income distribution matter?

In terms of policy, developments in income inequality are of significance mainly because of the social implications. According to social scientists, growing income inequality can lead to such policy problems as increased relative or absolute poverty, greater inequalities in subsequent generations, the weakening of social cohesion – and even slower economic growth.

Widening income inequalities can lead to greater relative poverty, as the income gap between the middle and the lower parts of the distribution increases. But increasing income inequality is also a determinant of absolute poverty: changes in the income distribution may lead to a greater proportion of people falling below a predetermined income level. The consequences of income poverty are low consumption and well-being in the present, but also insufficient investment (in health, education or business), which leads to lower well-being in the future. Some argue that redistributing income from the rich to the poor (decreasing inequality) could possibly lead to greater life expectancy, because additional investment in health brings about greater health improvements among the poor or because this mitigates the stress caused by low relative income (Leigh, Jencks and Smeeding, 2009).

A high level of inequality is also problematic because inequality in the parents' generation leads to inequality of income in subsequent generations. The transmission of ability within the family, plus income-related inequalities in investment in education, can lead to inequalities in the earnings and incomes of the children's generation (Becker and Tomes, 1986; Eriksson and Goldthorpe, 2002; d'Addio, 2007). If the initial inequalities are more substantial, intergenerational transmission leads to greater inequality in the next generation. Increasing income inequality is also thought to drive (or at least to be associated with) the polarisation and increasing fragmentation of communities, ethnic groups, regions and social classes within countries (e.g. Wilkinson, 1996).

Economic theory lends support both to the idea of a **negative** relationship between inequality and economic growth and to the notion of a **positive** relationship (for a review, see Aghion *et al.*, 1999). Classical theories argue for a trade-off between inequality and growth. They state

that higher income inequality favours growth by leading to higher aggregate savings (which is the main engine of growth) or by promoting innovations that involve major investment, or by providing greater incentives for capital accumulation. Newer theories highlight other mechanisms, by which decreasing inequality might be good for growth. One such theory is based on capital market imperfections: if poorer people face borrowing constraints, their high-return investment projects remain unrealised. Redistributing wealth from the rich to the poor would permit the realisation of these projects, which would favour economic growth (*ibid.*).

Other theories suggest political or social explanations. Increasing inequality leads to a relatively poorer median voter, who will make greater demands for redistribution (Persson and Tabellini, 1994). This results in higher tax rates, which leads to slower growth (because of the distorting effect of taxation). Other studies say that increasing inequality could lead to social conflict and less political stability, which results in an unfavourable environment for investment and slower economic growth. The debate as to the nature of – and the explanations for – the inequality and growth relationship is still going on. For an overview of studies in this field, see Arjona *et al.* (2001).

Here, we analyse the distribution of incomes in EU countries, using the most recent data available. The next section describes the methodology of the study and measurement assumptions. We then present the differences in inequality between countries. This is followed by an investigation of the sensitivity of the results to methodological assumptions: the influence of sampling error, the effect of choice of inequality index and selection of the equivalence scale are all analysed. Finally, we describe the income structure of different social groups.

Methodology of measuring incomes and inequality

This analysis is based on data from the 2007 EU-SILC and earlier waves of the study. Country coverage of the database extends to 24 Member States. The data relate to the population that lives in private households in the country in question at the time of the survey. Those who live in collective households or institutions were, therefore, by and large excluded. The income concept used in this analysis is annual net household disposable income, including any social transfers that are received and excluding direct taxes and social contributions. The reference period is the year 2006 (apart from in Ireland, where it is the 12-month period before the date of the interview).

The income concept applied in the following analysis is limited in two important respects. First, only the monetary income of households is considered – or, more precisely, the monetary income as defined in the EU-SILC; second, annual income is the focus of the study, rather than lifetime income (or wealth). Using only information on monetary income has a

distorting effect when we measure inequality, since income in kind is more important to certain social groups (e.g. rural households or households with owner-occupied housing) than to others. The omission of income in kind might also affect the comparison of inequality between countries, because this element varies in importance across the EU. (The extent to which omission of this element affects the comparisons is examined below.)

Another limitation of our analysis is that it considers only annual income, which is an imperfect measure of a household's material standard of living. A household with low annual income does not necessarily suffer from low consumption if it can rely on past income by drawing on savings. On the other hand, a household with relatively high annual income might be severely constrained in consumption if it has important debts to repay.

Box 1.1: Methodology of income measurement

The incomes of all household members and other household incomes are aggregated and total household disposable income is adjusted for differences in household size and composition, using an equivalence scale to take account of household economies of scale in consumption. As a baseline, we use the so-called 'modified OECD scale', which assigns a value of 1 to the first adult in the household; 0.5 to additional household members over the age of 14; and 0.3 to children under 14. The equivalised income thus calculated is then assigned to each household member. The inequality indices reported here are estimated on the basis of these figures, except where noted otherwise.

Non-positive income values – which result from the way in which the income of the self-employed is defined, i.e. essentially in terms of net trading profit – have been excluded from the analysis. In order to tackle the problem of 'outliers' (i.e. extreme levels of income reported), a bottom- and top-coding procedure (or 'winsorising') has been carried out (Cowell and Flachaire, 2006). Specifically, at the bottom of the ranking, income values of less than the 0.1 percentile were replaced by the value of the 0.1 percentile, while, at the top of the ranking, values greater than the 99.95 percentile were replaced by the value of that percentile.

It should also be borne in mind that surveys of household incomes are not capable of representing all the strata of society. Surveys always over-represent middle-income groups, while the poorest and the richest are inadequately covered. The reason for this is that these groups of society are much harder to reach. The poorest (e.g. the homeless) do not have an address or a telephone number, and consequently are missing from sampling frames of household surveys; meanwhile non-response among the richest is more common than among average households. Income inequality is thus underestimated by household surveys, and it is difficult to quantify the importance of this effect. The best we can do is to assume that it does not affect significantly our comparisons of countries.

As a baseline for comparison, we use the two inequality indices that are part of the EU social indicators: the Gini index[1] and the S80/S20 index, which is the ratio of the share of total income among those in the top quintile to the share of those in the bottom quintile of the distribution.

What do the main measures show?

As Figure 1.1 reveals, in 2006 the Southern European countries of Portugal and Greece, together with the Baltic states of Lithuania and Latvia, show the highest values of the Gini index. Portugal exhibits the greatest inequality, with a Gini index of 0.368, while Latvia, Greece and Lithuania have Ginis of between 0.33 and 0.35.

A second group comprises countries with a Gini index higher than 0.30 but below 0.33. Here we find the Southern European countries of Italy and Spain, the Anglo-Saxon countries Ireland and the UK, and the new Member States of Poland and Estonia.

Countries with a Gini index of between 0.25 and 0.30 form a third group. Here we find the Western European countries of France, Germany, Belgium, the Netherlands, Luxembourg and Austria, together with Hungary, Cyprus and Finland.

The countries with the lowest Gini index (below 0.25) are the Nordic countries – Sweden and Denmark – and the new Member States of Slovenia, Slovakia and the Czech Republic.

The S80/S20 index provides a very similar country ranking to that obtained using the Gini index (Figure 1.2). The most unequal country is Portugal, where the mean income of the richest quintile exceeds that of the poorest quintile by a factor of 6.5. The value of the index is also above 6 in Latvia, and Lithuania and Greece likewise show high values (5.7). The group of countries with a low level of inequality is formed of the same states as in the case of the Gini index. The only change in country ranking is Ireland, which, with an S80/S20 index of 4.7, is closer to the Western European countries than to the group of relatively high-inequality countries.

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[1] Gini$= (1/2n(n-1))\Sigma_i\Sigma_j|y_i - y_j|$, where y_i are individual incomes, n is sample size.

Figure 1.1: Gini coefficients of income inequality
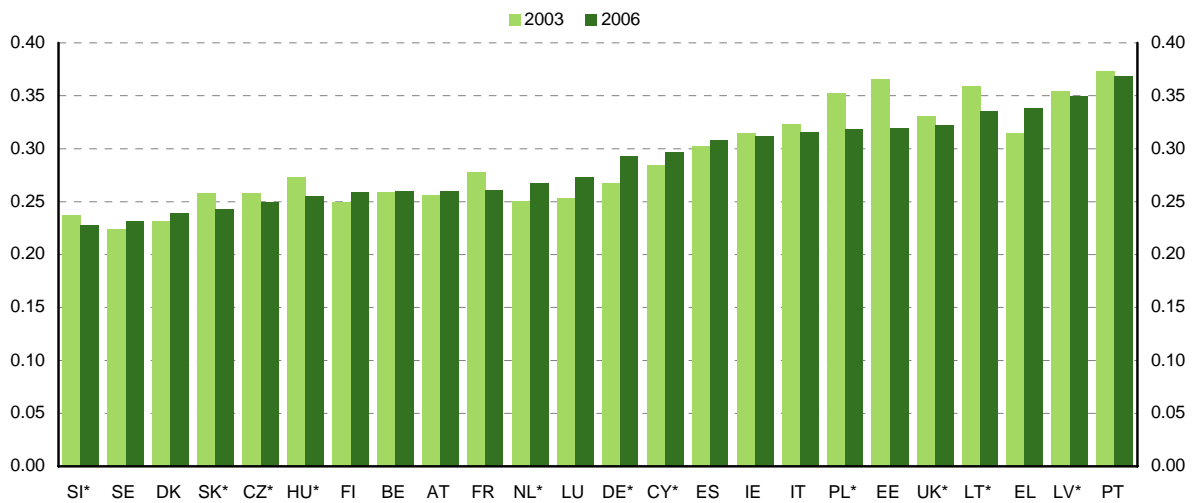
Note: For those countries marked with an asterisk (*), comparison is 2004-06; for the other countries the time span is 2003-06.
Source: Own calculations based on EU-SILC 2004, 2005, 2007.

Figure 1.2: S80/S20 index of income inequality, 2006
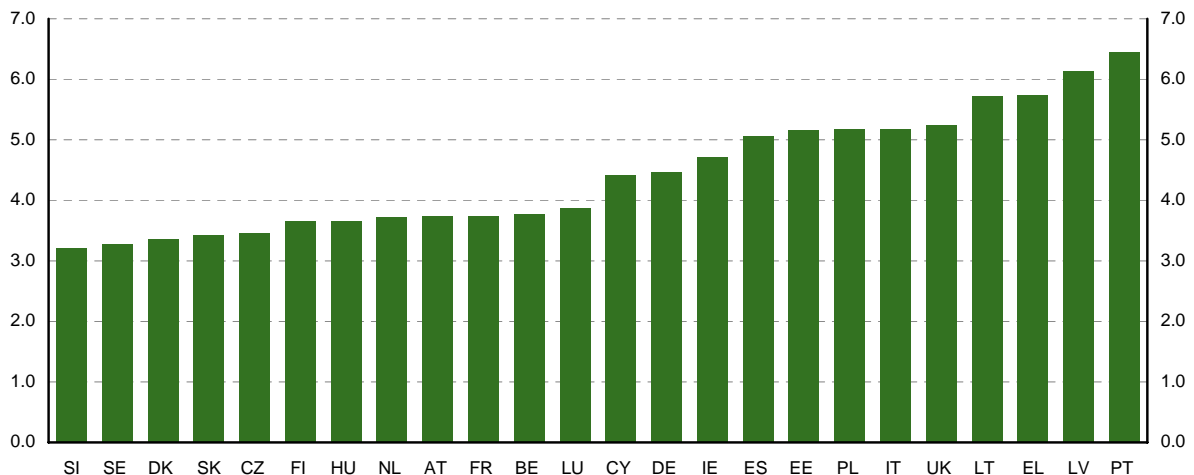
Source: Own calculations based on EU-SILC 2007.

As the 2007 study is only the fourth year of the EU-SILC, this allows investigation of the evolution of inequality over only a short period. For 13 countries, the first data series relates to 2003 incomes; for the remaining States, it reports the incomes of households for 2004. According to the Gini index, the most important decreases in inequality are to be seen in Estonia and Poland (see Figure 1.1): in Estonia, the Gini index fell by almost five points between 2003 and 2006, while in the case of Poland we observe a three-point decrease. A decrease of two Gini points can be detected in France, Lithuania, Hungary and the UK. The most important increase in the Gini index is found in Germany, where the index increased by almost four points, from 0.255 to 0.293. Greece, Luxembourg and the Netherlands also experienced increasing inequality, but by only two Gini points.

In Figures A.1 and A.2 of the Annex, we show Gini values for every year the given country participated in the study. This chart is useful for detecting unusually large year-to-year changes in inequality, which would be an indication of data problems. This is clearly the case in Hungary, where a 0.273 Gini in 2004 increased to 0.320 in 2005, before falling back in 2006 to a level even lower than two years previously. A similar pattern can be detected in Latvia, though the year-to-year changes are smaller.

How statistically significant are the results?

In this section, the sensitivity of results on inequality to changes in the methodology adopted will be investigated. First we analyse how sampling variability affects the ranking of countries, as determined by the point estimates of the Gini index. Then the sensitivity of country rankings to the choice of inequality index will be analysed. Finally, we look at the effect of modifying the equivalence scale.

How significant are differences in the degree of income inequality between countries?

In order to draw policy conclusions from inequality and poverty data, it is essential to take account of the fact that they are derived from surveys of a sample of households and inevitably, therefore, involve some margin of error. To make meaningful comparisons between countries or over time, it is necessary to allow for the margin of error that arises from sampling. This can be done by calculating the standard errors and confidence intervals of the estimates.

Box 1.2: Methodology of assessing the sampling error of estimates of inequality

Calculating standard errors for inequality indices is not without its difficulties. Inequality indices are non-linear functions of sums and means, which complicates estimation of sampling variance. One solution to this problem lies in deriving linear approximations of the given statistic, which – in very large samples – would have the same variance as the original statistic. Or alternatively, standard errors can be estimated using resampling techniques, such as the bootstrap or the jackknife (Verma, 2005). Moreover, in most cases, household surveys are not based on simple random samples but follow a more complex survey design involving multistage sampling, stratification and clustering. As sampling design has an influence on standard errors, it must be taken into account (Osier, 2006). To get some idea of the magnitude of the effect sampling design has on standard errors, we can use the Quality Reports of EU-SILC, published by Eurostat. The effect of sample design on standard errors is often expressed by the 'design effect', which gives the extent to which actual sample design inflates standard errors, compared to simple random sampling. Table 1.1, presented in the Annex, shows the estimated standard errors and design effects obtained by Eurostat for the EU-SILC 2005 (Eurostat, 2008). It can be seen that there is great variation in design effects among the countries covered by the analysis: they range from 0.98 (Slovakia) to 2.82 (the Netherlands).

In Figure 1.3, we present standard errors for Gini coefficients that were derived by the 'linearisation method'.[2] The standard errors calculated do take account of survey design features such as weighting and clustering of individuals into households. However, the lack of information in the EU–SILC user databases does not permit standard errors to be corrected for all aspects of sample design, such as multistage sampling, stratification or other types of clustering (see Box 1.2). We see the largest confidence intervals in the case of Cyprus, where the standard error of the Gini is 0.8 of a point. Luxembourg and Ireland have a standard error of 0.7; Latvia, Portugal and Greece – 0.6.

Figure 1.3: Gini indices of income inequality and 95% confidence intervals, 2006
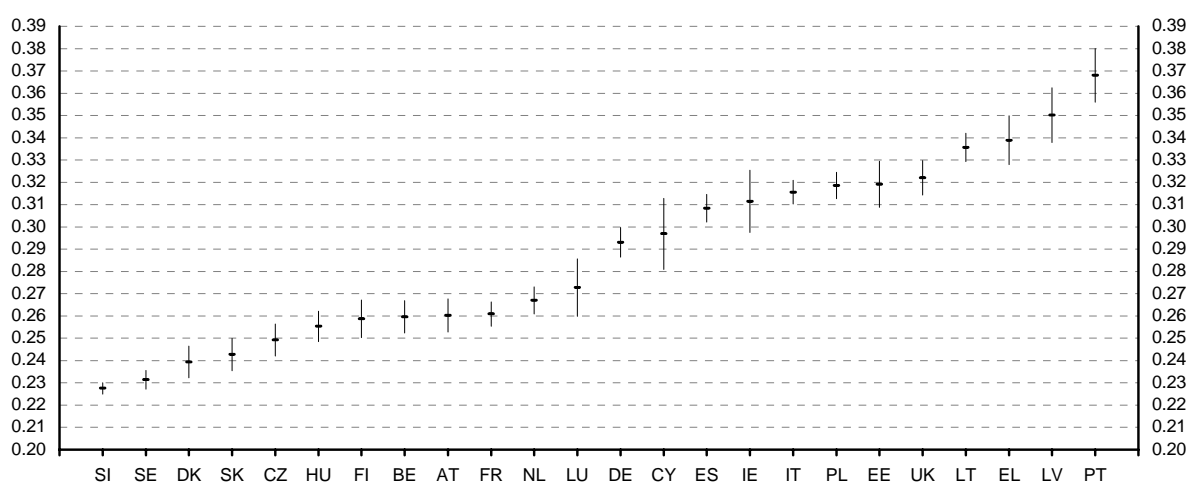
Source: Own calculations based on EU-SILC 2007.

What do other measures of inequality show?

Different inequality indices represent different approaches to inequality measurement.[3] The P90/P10 index (which is the ratio of the ninetieth to the tenth percentile of the income distribution) represents a purely statistical approach to the measurement of inequality. The so called 'Generalised Entropy Family' of indices is based on a set of characteristics (axioms) that researchers thought inequality indices should satisfy. These indices are all mean independent, population independent and additively decomposable, and satisfy the transfer axiom – that is, a transfer from a rich individual to a poorer one will decrease inequality.[4]

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[2] Standard errors were derived using the Stata program 'svylorenz' (see Jenkins, 2006).

[3] For reviews of inequality measurement, see, for example, Cowell (2000).

[4] Mean independence means that multiplying all incomes by a constant will not change inequality. Population independence means that the inequality index is insensitive to replications of the population. Additive

From this group here we use the mean log deviation (MLD),[5] the Theil[6] and the Squared Coefficient of Variation (SCV)[7] indices. The third group of indices is the Atkinson family of inequality indices, which is based on a particular form of the social welfare function. In general, the social welfare function shows how an increase in the income of different members of society translates into social welfare. The social welfare function used here exhibits inequality aversion – that is, the higher the income of a person, the smaller is the increase in social welfare brought about by any increase in the income of that person. When using the Atkinson index of inequality, researchers can choose the degree of inequality aversion by choosing the value of a parameter. The analysis here examines the results of assuming three alternative values of the inequality aversion parameter (ϵ): 0.5, 1 and 2, where a higher value implies a stronger aversion to inequality.

Some inequality indices are particularly sensitive to income changes at the tails of the income distribution. The SCV index is known to be sensitive to high incomes, while the Atkinson index calculated on the basis of the inequality aversion parameter $\epsilon=2$ is very sensitive to low incomes in the distribution (Cowell and Flachaire, 2006). We can expect indices that are sensitive to changes at the tails of the distribution to produce rankings that are different from the Gini ranking. Country rankings according to different indices are displayed in Table 1.2, and the values of different inequality indices are summarised in Table 1.3. It can be seen that rankings according to the S80/S20, the MLD and the Atkinson index (with $\epsilon=0.5$ and $\epsilon=1$) show only minor differences compared to the Gini ranking. In these cases, there are no countries where the ranking changes by more than three places. In the case of the P90/P10 and the Theil index, there are two or three countries for which we see an important difference in ranking from that obtained according to the Gini index. But even more important are the differences in the country rankings according to the Atkinson ($\epsilon=2$) and the SCV indices. In these cases, we see an important change in the ranking of eight to ten countries. Thus, our results confirm our initial expectations: country rankings according to inequality indices that are sensitive at the tails of the distribution – especially in the case of the SCV index – differ considerably from country rankings obtained with the Gini index.

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decomposability means that inequality can be decomposed into a weighted sum of within-group and between-group inequalities. For more details, see Cowell (2000).

[5] GE(0) = Mean log deviation index = $(1/n)\Sigma_i log(\mu/y_i)$, where y_i are individual incomes, n is sample size, μ is sample mean income.

[6] GE(1) = Theil index = $(1/n)\Sigma_i(y_i/\mu)log(y_i/\mu)$, where notations are the same as above.

[7] GE(2) = SCV = $var(y_i)/\mu^2$, where notations are the same as above, and var stands for variance.

For example, Denmark has the third lowest Gini coefficient, but is placed 18th in the ranking according to the SCV index. Cyprus and Ireland also rank higher in the SCV ranking than in the Gini ranking, while the opposite is true of Spain, Estonia and Lithuania.

How does the choice of equivalence scale affect the result?

Some goods, such as housing, heating or electricity, are consumed jointly by household members. Consequently, larger households do not need proportionately higher incomes to maintain the same level of well-being. Equivalence scales express such economies of scale in household consumption. For a simple sensitivity analysis, we compare inequality (Gini) rankings when different equivalence scales are applied. Simple equivalence scales can be defined by raising household size to power e, where the parameter e expresses the elasticity of scale in consumption in the household. If $e=1$ we assume that there is no economy of scale in the household, and therefore the well-being of household members can be measured by per capita income. Values of the e parameter closer to zero express stronger economies of scale in consumption. We experiment with values of the elasticity parameter equal to 1, 0.75, 0.5, 0.25 and 0. We also compare estimates obtained using the OECD II equivalence scale.

According to Coulter *et al.* (1992), an assumption of lower economies of scale in household consumption results in less inequality if household income is positively correlated with household size. On the other hand, assuming lower economies of scale can result in a re-ranking of households in such a way that inequality is increased. Coulter *et al.* (1992) suggest that starting from a high initial level of economy of scale, lowering the scale parameter first decreases inequality, while, at a lower level of economy of scale, a reduction in the scale parameter is likely to increase inequality, and thus a U-shaped pattern between economies of scale and inequality is to be expected.[8]

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[8] The U-shaped relationship between the economies of scale parameter and inequality was first empirically demonstrated in the case of the UK in Coulter *et al.* (1992). Jenkins (1991) demonstrated a U-shaped relationship between economies of scale and poverty, while Förster (1994b) reports similar results in an international context, using data from 13 OECD countries.

Figure 1.4: Sensitivity of Gini estimates to the choice of equivalence scale, 2006
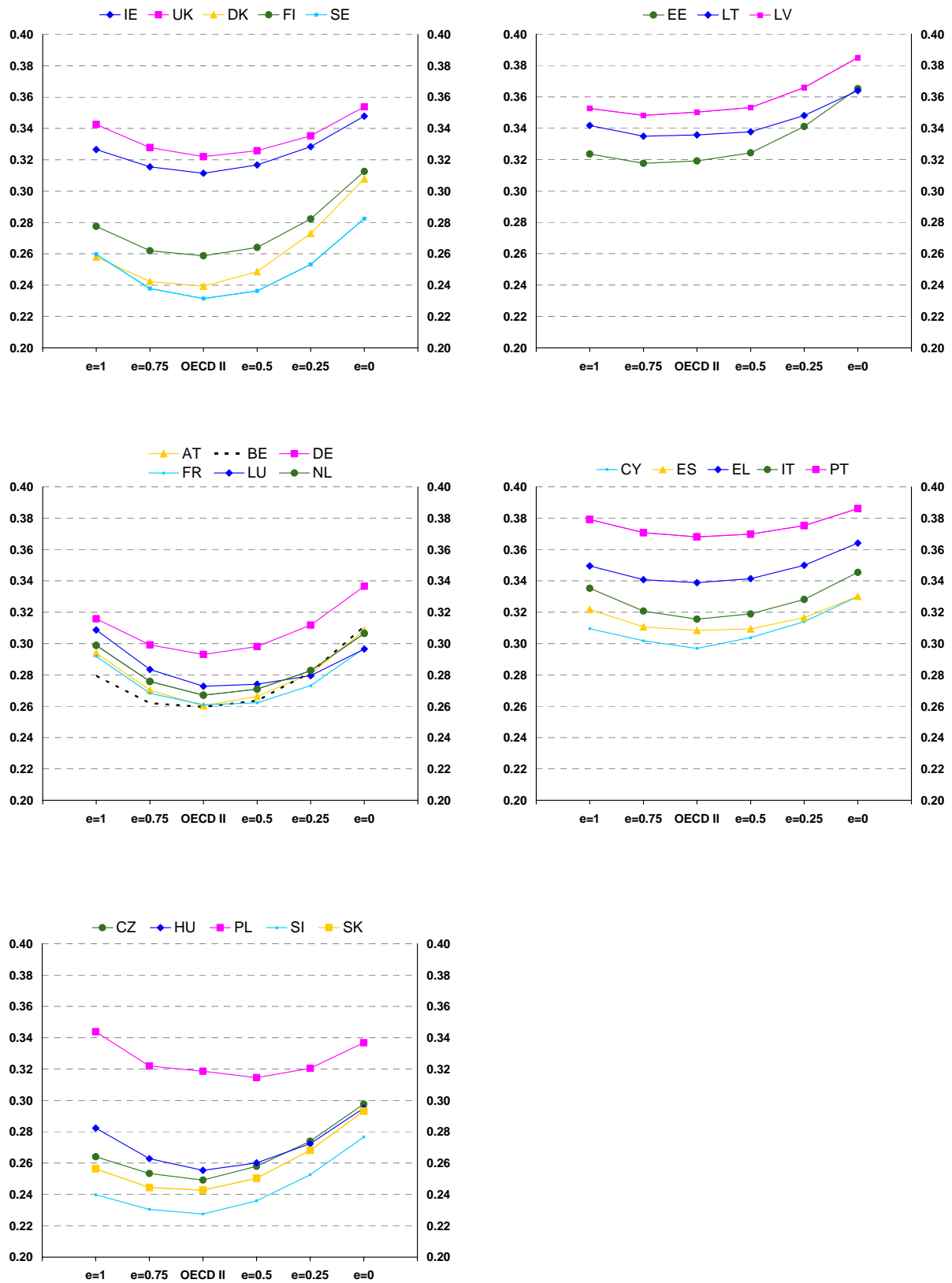
Source: Own calculations based on EU-SILC 2007.

Modifying the equivalence scale used is expected to affect different countries to different extents. Countries differ in terms of typical household size, the number of children per household and the correlation between household size and household income. First, in Figure 1.4, we present the sensitivity of the Gini coefficient to the choice of the equivalence scale in different country groups. Then we compare country rankings obtained with different equivalence scales. The graphs show a more or less U-shaped pattern, the Gini coefficient being relatively high for $e=1$, then lower at the $e=0.75$ equivalence scale. Further decreasing the elasticity parameter causes the Gini to rise, and generally the highest values are obtained when we assume full consumption sharing in the household ($e=0$). Estimates using the OECD II equivalence scale are closest to those obtained for the $e=0.75$ equivalence parameter. Despite the generally U-shaped pattern, the magnitude of change in the Gini coefficient differs from country to country. Among the EU15, the Mediterranean countries seem to be the least sensitive to changes in the equivalence scale. Moderate changes can be detected in the case of France, Luxembourg, the Netherlands and the Anglo-Saxon countries. In the Nordic states, changing the equivalence scale brings about more pronounced changes in the Gini: the highest Gini exceeds the lowest by at least 20%. The effect of changing the equivalence scale also varies within the new Member States: the Czech Republic, Slovakia and Slovenia show more pronounced change, while for Poland the changes are moderate. As Table 1.4 shows, only in the case of lower economies of scale ($e=0.25$, $e=0$) do country rankings differ significantly from the rankings obtained using the OECD II equivalence scale.

What are the main sources of income over the income distribution?

This section describes the composition of income across the distribution of income. This is done by forming five income groups, defined relative to the median income. The first category groups together those with less than half the median income; the second group comprises those with income between 50% and 80% of median income; members of the middle group have between 80% and 120% of the median; the fourth group has between 120% and 200% of the median; and members of the fifth group have more than twice the median income. As can be seen from Figure 1.5, countries with lower inequality have a smaller fraction of the population in the extreme income groups, and a higher fraction in the middle-income groups (see also Table 1.5). The percentage of those who belong in the middle-income group is highest (40–41%) in Sweden, Slovakia, Slovenia, Denmark and the Czech Republic. As we saw before, these are the countries with the lowest values of inequality indices. The lowest percentages of the middle-income group can be found in Latvia (23%), Portugal (26%) and also Lithuania, Estonia, Greece and Ireland (27%).

Figure 1.5: Distribution of the population according to income groups, defined relative to the median income, 2006
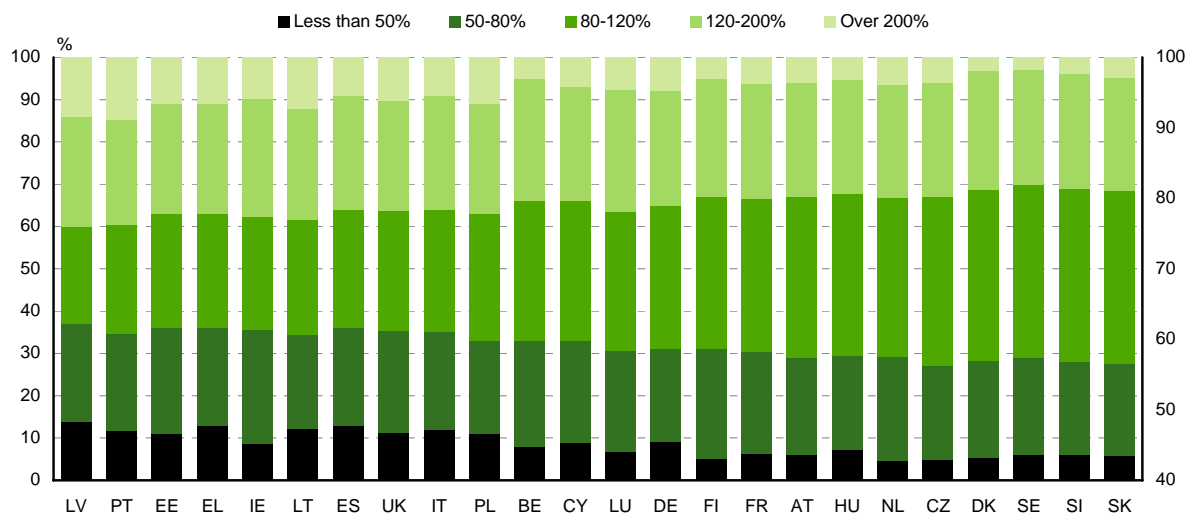
Source: Own calculations based on EU-SILC 2007.

The structure of gross incomes differs considerably between EU Member States (see Figure 1.6) and along the income ladder. The percentage of market income in total gross income varies from 71% (in Hungary) to 84% (Estonia and Latvia). Other countries with a relatively low share of market income are France, Austria and Sweden; aside from the Baltic states, Cyprus, Spain and the UK also show above 80% share of gross market income.

The most important component of market income is labour earnings. The share of labour earnings in gross income is highest in Estonia (80%), Latvia (78%) and Lithuania (75%), but Spain, Slovenia and Denmark also reach 70%. The lowest figures are to be found in the case of Italy and Greece, where only 50% of gross income comes from labour earnings. France, Austria, Ireland and Hungary also show a relatively small share of labour earnings (around 60%). The small share of earnings is compensated for by large shares of self-employment income in Italy and Greece: in these countries over a fifth of gross income derives from this source. The Czech Republic, Ireland, Portugal, Cyprus, Poland and Germany all recorded a relatively high share of self-employment income (between 10% and 16%). The lowest figures are to be found in Estonia (2%), Sweden (3%) and Luxembourg (4%). The share of capital income varies from 1% to 5% in every country.

Pensions account for between 10% and 20% of total gross income in the EU Member States, apart from in Denmark and Ireland, where they make up less than a tenth. The highest share of pensions is found in Italy, Austria, France and Poland (18–20%), and also in Hungary, Greece and Germany (16%). The highest share of social transfers (other than pensions) (12–13%) can be found in the Northern European countries of Denmark, Sweden and Finland, while Hungary, Slovenia and Ireland also have similar percentages. The lowest share of social

transfers is to be found in the Mediterranean countries of Greece, Italy and Spain, where transfers account for 4–5% of gross income.

Figure 1.6: Structure of gross income, 2006
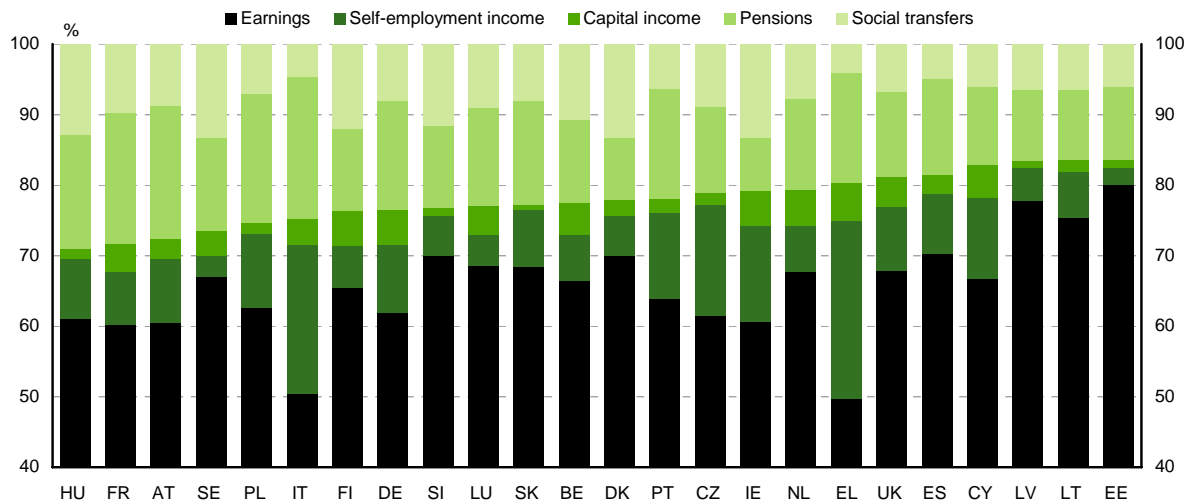
Source: Own calculations based on EU-SILC 2007.

Of course, there is huge variation in income structure across the income distribution. Table 1.6 shows the structure of gross income in the low-income (income below 50% of the median), high-income (income higher than 200% of the median) and middle-income (income between 80% and 120% of the median) groups of the population. The fraction of market income is lower among those in the low-income group than among the richest. In the low-income group the share of market income ranges from 24% (Ireland) to 69% (Greece), while in the high-income group the shares ranges from 78% (Cyprus) to 96% (Czech Republic).

It is also important to see the structure of the incomes of those close to the median, since the preferences of these individuals is decisive in any votes on redistribution. The lowest share of market income in the middle-income group is to be found in Hungary (63%) and Poland (67%), while the highest figures are in Cyprus (87%) and Estonia (82%).

Summary of findings

In 2006, those countries with the most unequal distribution of income were the Southern European countries of Portugal and Greece, together with the Baltic states of Lithuania and Latvia. Portugal had the highest inequality, with a Gini index of 0.368. The countries at the lower end of the country ranking are the Nordic countries of Sweden and Denmark, together with the new Member States of Slovenia, Slovakia and the Czech Republic. According to the Gini index, the most important decreases of inequality in the period 2003–06 were seen in Estonia and Poland, while the most important increase in inequality was observed in Germany,

The country ranking given by the Gini index is much the same if other inequality measures are used instead. Only measures that are particularly sensitive at the tails of the distribution produce rankings that are much different from that obtained using the Gini index. Country rankings show small changes when the equivalence scale is altered, and the differences are significant only if smaller economies of scale in household expenditure are assumed (e=0.25, e=0).

The size of the middle-income group is in line with the inequality indices. The proportion in the middle-income group is highest (40-41%) in Sweden, Slovakia, Slovenia, Denmark and the Czech Republic – those countries with the lowest values of inequality indices. The smallest proportions in the middle-income group are to be found in high-inequality countries, such as Latvia (23%) or Portugal (26%).

The structure of gross income varies between the EU Member States. The percentage of market income in total gross income ranges from 71% (Hungary) to 84% (Estonia and Latvia). Other countries with a relatively small share of market income are France, Austria and Sweden; meanwhile, in Cyprus, Spain and the UK the share of gross market income is over 80%. The share of pensions is largest in Italy, Austria, France and Poland (18-20%), while social transfers (12-13%) are largest in the Northern European countries and smallest in the Mediterranean countries.

Economic growth and inequality of earnings and market income in the European Union

Introduction: How does economic growth affect the distribution of earnings and market income?

In this part, our concern is to describe the relationship between economic growth and inequality of market income in EU countries.[9] Since, for the majority of households, the major part of market income comes from employment, the chief interest is in the effect of growth on the distribution of labour earnings between individuals and households; however, other sources of income, income from self-employment and capital income cannot be ignored.

Economic growth might have distributional consequences if it results in the changing of income differentials between sectors of the economy or if it brings about structural change (modifications of the sectoral composition of the economy).

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[9] The role of government redistribution in shaping inequalities is studied in Chapter 6.

One example of economic growth changing between-group income differentials is the process of skill-biased technological change. It is often argued that the increasing inequality of earnings in developed countries is a result of technological change, which raises the demand for better-educated workers at the expense of the lower educated in all sectors of the economy (for a review, see Aghion *et al.*, 1999; Gottschalk and Smeeding, 1997). If, in the short term, the increase in the supply of educated people fails to match the increase in demand, the premium paid for education increases.

Growth that occurs through structural change of the economy is the kind of development process that Kuznets described (Kuznets, 1955). The increasing population share of the initially small, high-income subgroup – all other things being equal – results first in rising inequality, which continues to the point where inequality attains its maximum level. Any further increase in the population share of the high-income group will result in decreasing inequality (Ferreira, 1999). Kuznets used this schema to describe the effect on inequality of poor rural people moving into initially less populated but industrialised and more affluent cities, but the same logic applies when other types of structural changes are considered.

Economic growth results either from an increase in employment or from an increase in the labour productivity of those in work – or, more usually, from some combination of the two. Employment growth has the effect of reducing inequality of labour income between individuals, since it increases the number of those with earnings from employment. The effect of employment growth or wage growth on the distribution of household labour income is ambiguous. Employment or wage growth might have an inequality-decreasing effect on the distribution of labour income between households, if it is concentrated in workless or low-income households. However, if it is concentrated in work-rich or higher-income households, then employment growth will increase labour income inequality between households. For example, Gregg and Wadsworth (1996) and Redmond and Kattuman (2001) study the distributional effect of employment polarisation – that is, employment becoming more unequally distributed among households.

The effect of economic growth on household income distribution depends also on the distribution of the increase in value-added between capital and labour. Capital income is much more unevenly distributed than is labour income: for a large majority of households, labour income is the predominant source of income, but a small number of households have very high incomes from business capital and other investments. Consequently, if the share of capital in value-added increases, so income inequality is likely to increase as well.

Methodology and measurement

This analysis is based on data from the 2007 EU-SILC and earlier waves of the study. Country coverage of the database extends to 24 Member States. For some of the analysis,

the country coverage is limited, since Italy, Spain, Portugal, Greece and Hungary did not provide data on gross wages. The data relate to the population living in private households in the country in question at the time of the survey. Those living in collective households or in institutions were, therefore, generally excluded. The reference period is the year 2006, except for Ireland, where it is the 12-month period before the date of the interview.

In this section, the basic income variable is gross annual earnings, though information on self-employment income and capital income will also be examined. Because all variables are susceptible to outliers (i.e. extreme levels of income reported), the same bottom- and top-coding procedure (or 'winsorising') has been carried out as in our analysis of overall income inequality. Most of the time, the Gini index[10] is used to measure inequality.

In this analysis, changes in income distribution will be analysed over a relatively short period (between 2004 and 2006). It should be borne in mind that changes estimated over such a short period may lack robustness, and trends in inequality might be confused with short-term and random fluctuations.

What is the evidence according to the latest data?

How are earnings distributed among those employed?

The distributional consequences of economic growth might best be studied over long time periods. As data from EU-SILC span only 3-4 years, we have to rely on earlier studies to present longer-term trends. Here the time span of the analysis is extended by briefly reviewing evidence concerning the growth-inequality relationship during the 1990s. In the case of the EU15, this can be done using the European Community Household Panel (ECHP), which covered those countries for the years 1994-2001. For the Central and Eastern European (CEE) countries, data can be taken from the UNICEF TransMonee database (Tables 1.7 and 1.8).

As can be seen from Table 1.7, growth and wage inequality do not seem to be strongly correlated over the period. Both countries with a relatively slow growth rate (below 2.5%) and a medium growth rate (between 2.5% and 3.7%) show diverse trends of wage inequality. On the one hand, we have countries like Austria, where a 2.5% annual growth rate goes together with a decline in wage inequality of 3.4 points. On the other hand, in Greece a similar growth rate is associated with a 2 point increase in inequality. The Netherlands and Hungary show annual growth rates of around 3.5%, and this goes together with a significant increase in the Gini index (5-6 points); whereas in Spain, no change in inequality is evident, despite a

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[10] Gini $= (1/2n(n-1))\Sigma_i\Sigma_j/y_i - y_j|$, where y_i are individual incomes, n is sample size.

similar rate of growth. While it is true that, among countries with the highest growth rates, there are more that experience an increase in wage inequality (Estonia, Slovenia and Poland) than do not, nevertheless in Ireland – the fastest growing country – inequality declined quite significantly.

Changes in wage inequality during the 1990s were related to changing education–related wage differentials and also to a changing structure of employment. According to Strauss and de la Maisonneuve (2007), the wage premium of tertiary education increased during the second half of the 1990s in such EU countries as Italy, Denmark, Ireland and Germany. In other EU countries, the wage premium of tertiary education did not change or even declined, as in the case of the Netherlands or Austria. Rutkowski (2001) shows that wage premiums increased considerably in every CEE country during this period.

The composition of the labour force also changed in several respects. The educational qualifications of the labour force improved during this period, and this was reflected in the increasing share among the employed of people with tertiary education. This period was also characterised by a rise in the proportion of women in employment. The composition of employment according to age has also changed: the average age of people in employment increased. The sectoral composition of employment changed, too: the share of industrial employment decreased and the share of employment in services increased. Increasing segmentation of the labour market and the rising importance of 'atypical' jobs (short–term contracts, part–time work, self–employment) also influenced the inequality of earnings (EC, 2006).

We now turn to a study of the growth and inequality relationship during the EU–SILC years (Figure 1.7). Between 2004 and 2006, economic growth was most rapid in the Baltic states. In Latvia, annual average GDP growth exceeded 10%, and both Estonia and Lithuania also recorded exceptionally high growth rates (7–9%). Slovakia, the Czech Republic and Ireland come next, with growth rates of between 5.5% and 6.7%. Portugal, Italy and Germany recorded the lowest growth rates in this period, with average annual growth rates of below 2%. In the majority of countries, the main factor behind economic growth was an increase in productivity (as measured by GDP per person employed), but in most countries employment growth also contributed to economic development (all except Portugal). In Spain and Ireland, employment increased annually by 4% on average. Cyprus and Luxembourg recorded 3% employment growth, while in Poland, Hungary, Estonia and Latvia a 2% annual increase was observed.

Figure 1.7: Average annual growth rates, 2004–06
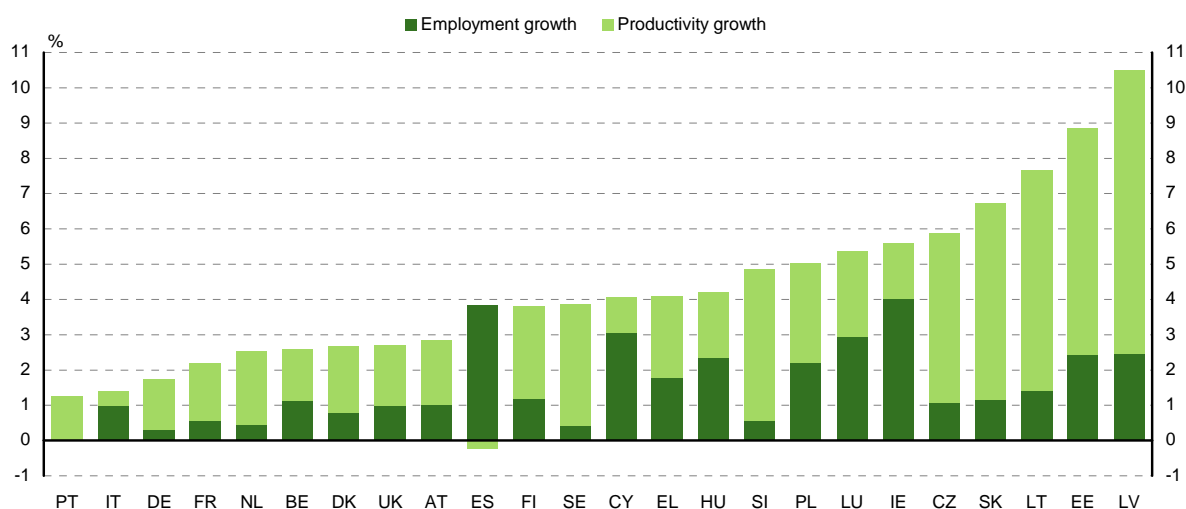
Source: Eurostat.

As data on monthly gross earnings exist only for a limited range of countries in EU–SILC, the distribution of annual gross earnings across full–year, full–time workers is studied here. As may be seen from Figure 1.8 (left–hand bars), Belgium and Denmark showed the lowest Gini index (0.23) of earnings distribution, while the most unequal earnings distributions were to be found in Portugal, Latvia and Lithuania, where the Gini index was between 0.34 and 0.40. During the years covered by EU–SILC, earnings inequality did not change in the majority of countries. Increases in inequality were observed in Austria and the Netherlands, where the Gini index increased by two points, while Ireland also recorded an increase of 1.6 points. In the case of France, Poland, Slovakia and Slovenia, there was a small decrease in wage inequality.

Figure 1.8: Gini index of inequality in gross annual earnings across full-year, full-time workers and all employed, 2006
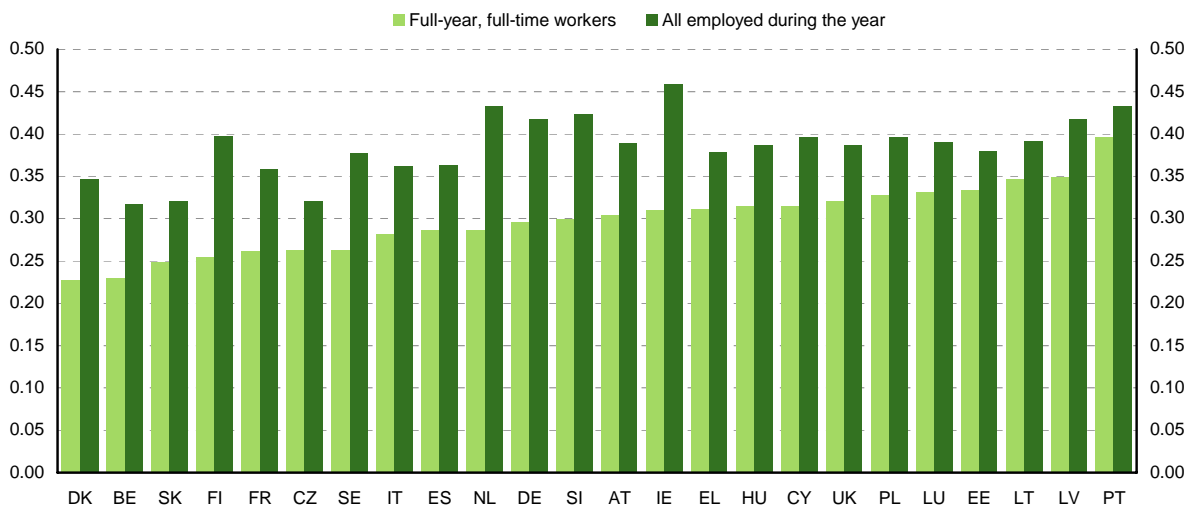
Source: Own calculations based on EU-SILC 2007.

To see the relationship between growth and inequality, a table similar to Table 1.7 can be presented for the period 2004–06. No clear-cut relationship between growth and inequality emerges (Table 1.9). No countries record huge increases in inequality – not even among those countries characterised by rapid development. While Ireland recorded a moderate increase in earnings inequality, no change was observed in other countries with high growth rates (Czech Republic, Lithuania, Estonia), while in Slovakia there was even a small decline in earnings inequality (see also Table 1.10).

An important factor underlying the change in wage inequality during the 1990s was changing educational wage premiums. The question is whether there are any signs of this in the most recent period. As Figure 1.9 shows, there is no general tendency in the period 2004–06 for earnings differentials to increase according to level of education. In some countries (most importantly in Austria and Germany), relative earnings among those with tertiary education did rise. On the other hand, Poland and Estonia (and, to a lesser extent, Lithuania and Slovenia) show a decline in the earnings of those with a diploma, relative to the earnings of people with primary or lower secondary education. This is remarkable, since in these countries – and other CEE countries – one major factor behind the increasing wage inequality of the 1990s was rising educational wage premiums.

Figure 1.9: Evolution of earnings differentials between those with tertiary education and the low educated, 2004 and 2006
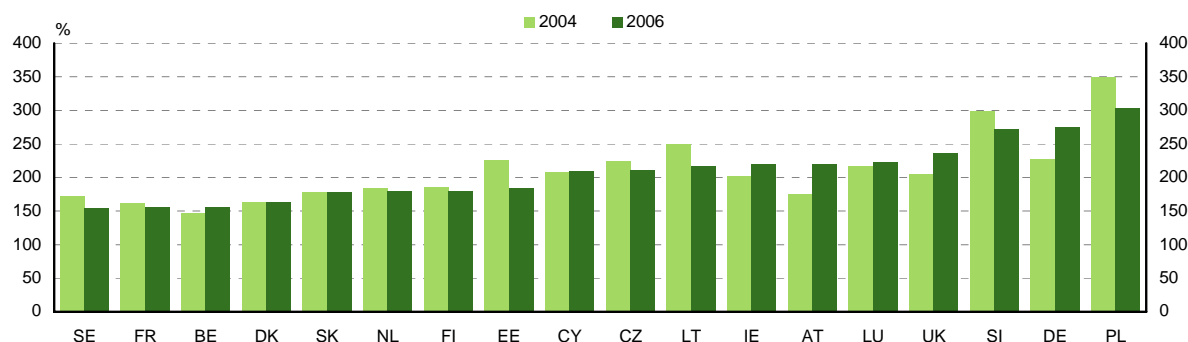
Note: Gross earnings of tertiary-educated, male, full-year, full-time workers relative to those with primary or lower secondary education.
No data on gross earnings in 2004 for Italy, Portugal, Spain, Greece or Latvia.
Source: Own calculations based on EU-SILC 2005 and 2007.

When the focus is broadened to include all employed (not necessarily those working full time over the entire year) during a given year, we find a generally higher degree of earnings inequality. We can see this by comparing the two sets of data for each country in Figure 1.8. The lowest Gini indices for earnings among all those employed were around 0.32 (in Belgium, Slovakia and the Czech Republic), while the values were above 0.43 in the most unequal countries (Ireland, Portugal and the Netherlands). This is a result of the inclusion of a more heterogeneous population, where part-time workers, workers with short-term contracts and occasional workers are also included, as are those who enter or quit the labour market during the given year. The difference between Ginis for the full-time employed and for all those employed is highest in countries like Finland, the Netherlands, Sweden, Ireland and Germany, where atypical employment plays an important role in the labour market.

When changes in earnings inequality among all those employed are considered, Ireland stands out as the country with the most important change – an increase in the Gini index of almost 5 points (see Table 1.10). Austria records a 3-point increase, while Slovakia and Belgium record increases of over 2 points. Only one country shows a decrease in inequality of earnings among those employed – Lithuania, where a modest decline (-1.5 points) in the Gini coefficient was observed.

What has been the effect of employment growth on the distribution of earnings?

In the previous discussion, attention was limited to the evolution of inequality of earnings among those in employment. This focus does not allow us to see the direct effect of employment growth on the distribution of labour income. Employment growth increases the proportion of working-age people in work and, therefore, receiving income from employment, and, as a result, it is expected to reduce overall income inequality by reducing the number of people who do not have income from employment.

That is why the focus here is on the distribution of income from employment among everyone of working age. The change in inequality within the working-age population depends on a change in inequality of earnings among those in employment (see Table 1.11) and a change in the proportion of people who are employed. Earnings inequality among those of working age declines if inequality of earnings among the employed declines and/or if the proportion of those in employment rises. As is indicated in Table 1.11, the Gini index of the distribution of earnings among those of working age declined in Lithuania by 5.7 points, while Poland and Estonia also recorded significant reductions (4–5 points). In Germany and the UK, there was a more modest decline (3 points). In all of these cases, the principal factor behind this was a rising proportion of those with labour income, since Gini indices of earnings among the employed did not change much. In Austria, inequality of earnings among those of working age rose due to increasing inequality of earnings among the employed. As was noted above, Ireland also recorded an increase in the inequality of earnings, but employment rose there as well. In this case, the effects of these conflicting forces virtually cancelled one another out, so there was no significant change in earnings inequality within the working-age population in Ireland.

How is income from employment distributed among households, as opposed to individuals?

So far, the distribution of individual earnings has been studied, but this neglects income pooling within households. In fact, individual consumption opportunities depend on employment and the labour income of all household members. Here the concern is with the distribution of employment and labour income among households. The effect of employment growth or wage growth on the distribution of labour income among households might be different from the effect on distribution among individuals. If we consider the distribution of labour income among households, employment growth or wage growth might have an inequality-decreasing effect if it is concentrated in workless or low-income households, or an inequality-increasing effect if it is concentrated in work-rich and/or higher-income households. In this section, we investigate the relationship between a change in the employment rate and changes in the proportion of those living in jobless households. Since here we analyse data from the Labour Force Survey, the country coverage is extended to all EU Member States.

Figure 1.10: Employment growth and household joblessness, 2003–07

Source: Eurostat.
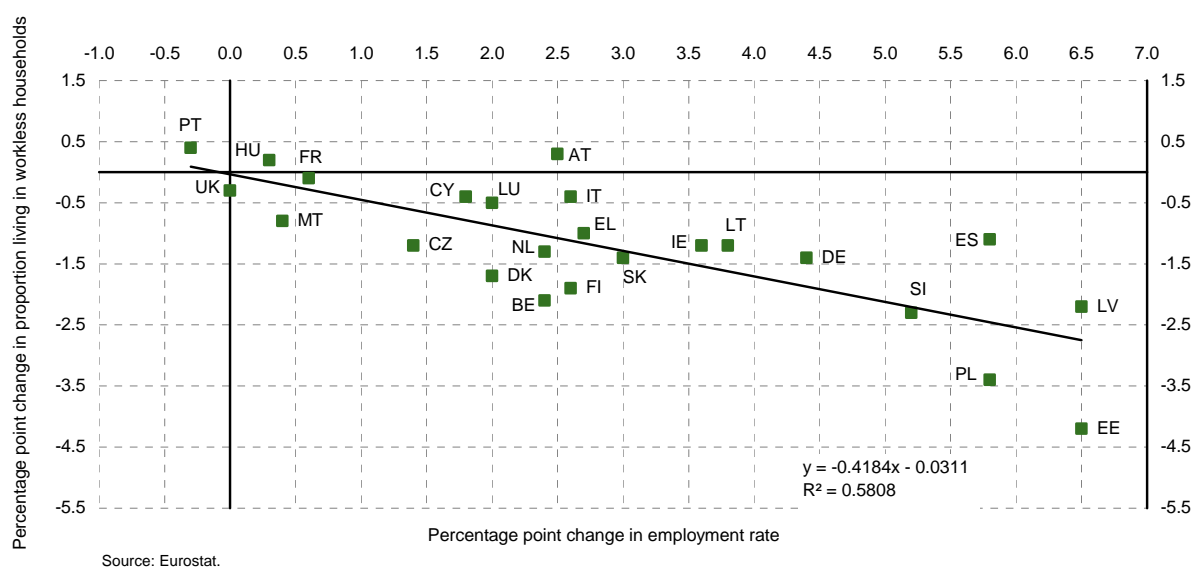
As Figure 1.10 shows, the change in the employment rate is negatively correlated with a change in the proportion of those living in workless households. In countries where employment rates rose, the proportion of those living in jobless households declined. Thus, in general, a rising employment rate reduces inequality in the distribution of employment among households. The rate of decline of this proportion is less than proportionate, however: a 1 percentage point increase in the employment rate is associated with a 0.4 percentage point decline in the proportion of those living in jobless households. Moreover, countries differ in the extent to which the proportion of those living in jobless households responds to changes in the employment rate. For example, in Poland, Estonia, Belgium and Finland, the decline in the proportion of those living in workless households was more pronounced than would have been expected on the basis of the actual increase in the employment rate. On the contrary, in Spain and Italy, the proportion of those living in workless households declined only modestly, while in Austria it increased, despite the significant increase in the employment rate.

Members of the same household pool their income from employment. Figure 1.11 shows the change in inequality in equivalised household earnings.[11] The highest degree of inequality among the countries studied is in Poland and Ireland, where the Gini index is above 0.5. The lowest degree of inequality is – as in other cases – in Sweden and Denmark. Poland,

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[11] The household distribution of labour income is analysed by equivalising total earnings of household members using the modified OECD equivalence scale.

Lithuania and Estonia show a moderate decline in inequality during the period 2004–06, while no significant change is evident for the other countries.

Figure 1.11: Gini index of equivalent household earnings among people of working age, 2004 and 2006
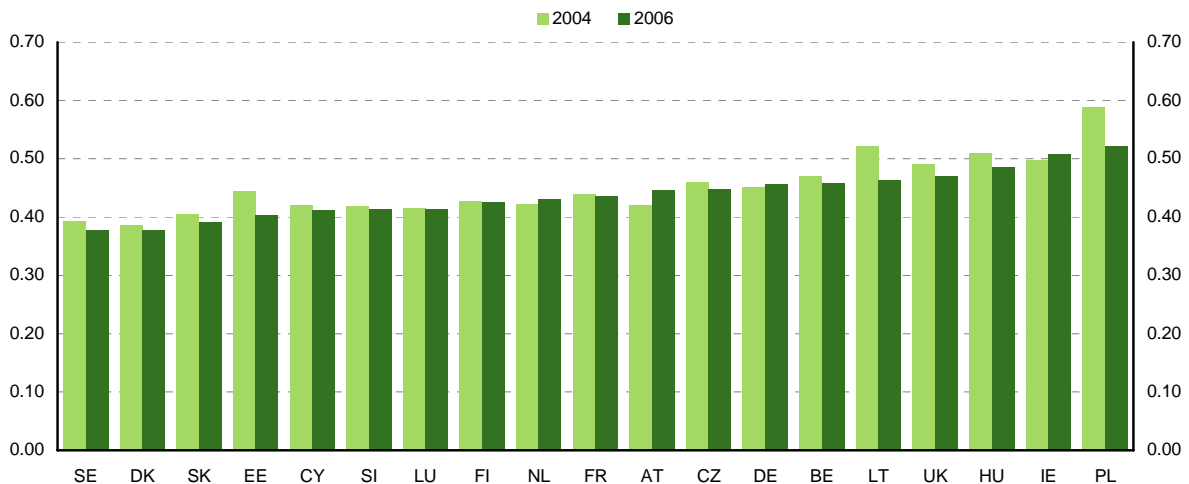
Note: Household gross earnings were equivalised using the modified OECD scale. No data on gross earnings in 2004 for Italy, Portugal, Spain, Greece or Latvia.

Source: Own calculations based on EU-SILC 2005, 2007.

Changes in inequality of market income

Economic growth influences not only the distribution of labour income: self-employment income and capital income are also subject to economic forces. Household earnings, self-employment income and capital income together make up the 'market income' of households. In the Baltic states, Slovenia, Sweden and Luxembourg, earnings make up more than 90% of market income. In Greece and Italy, the role of earnings is less important, but the share of self-employment income in market income is much higher than elsewhere. Across the board, the share of capital income is between 1% and 6% of market income. The highest values are to be found in Greece, Ireland and the Netherlands (Table 1.12).

Figure 1.12: Gini indices of the distribution of gross equivalent household market income among those of working age, 2004 and 2006

Note: Household gross market income was equivalised using the modified OECD scale. No data on gross earnings in 2004 for Italy, Portugal, Spain, Greece or Latvia.
Source: Own calculations based on EU-SILC 2005, 2007.
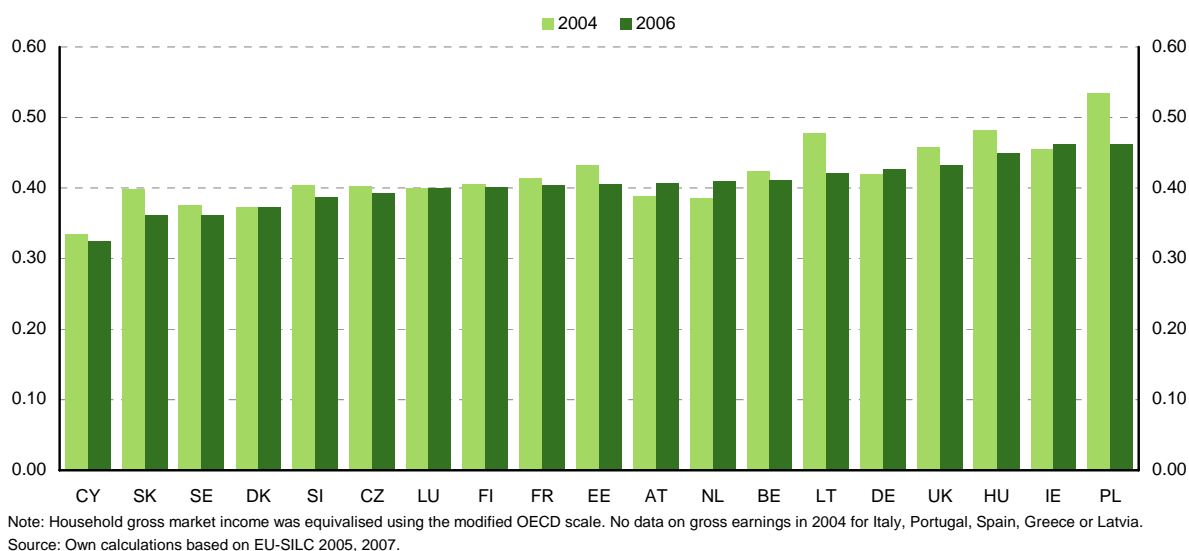
The different levels of inequality in the distribution of market income are shown in Figure 1.12. Ginis range from a low of 0.32 in the case of Cyprus to 0.45 in the case of Hungary, Ireland and Poland. Significant changes in market income inequality can be found in Poland and Lithuania, where the Gini index decreased by 5–7 points.

Summary of findings

Our analysis indicates that no simple relationship is evident between growth and earnings inequality across countries. Even in the case of countries which saw rapid growth in the period 2004–06, the experience as regards the distribution of gross earnings varies considerably.

The direct effect of employment growth on inequality is, however, evident. In countries where economic growth is accompanied by an increase in the employment rate, inequality of household earnings among those of working age tends to decline. This was particularly so in Lithuania, Poland and Estonia in the years prior to the present economic crisis. Increasing employment tends also to reduce the proportion of those living in jobless households, thus contributing to a more equitable distribution of employment and labour income between households.

Income inequality between population subgroups

Introduction: How do differences in demographic composition and labour market prospects between households affect inequality?

Income inequality is the result of complex social processes, which involve various demographic and economic mechanisms, as well as the social welfare system in place and the interaction between this and demographic and economic factors.

Income differences between groups based on demographic attributes (age, household structure) might be significant in shaping inequalities, and demographic changes contribute to changes in inequality. Age shows the position of individuals in their professional career and in their family life cycle. Accumulating work experience and/or improving the match between skills and jobs will increase an individual's wages with age. The position in the family life cycle will also affect household income: the income situation of young people might be less favourable because of the presence of dependent children. Demographic changes, such as population ageing, contribute to inequality change. Greater longevity and the retirement of baby-boom cohorts result in a changing population age structure, with a growing proportion of elderly people and a declining proportion of young. Demographic processes also lead to changes in household composition, as typical household size has been decreasing in developed countries (OECD, 2008).

As labour earnings are the main source of income for the average household, household income is strongly affected by the labour market status of household members. Changes in the labour market are important drivers in the evolution of aggregate inequalities. Short-term fluctuations in unemployment, as well as more fundamental changes (such as increasing labour force participation by women or the increasing segmentation of the labour market), also influence the work attachment of households (EC, 2006).

Education is an important determinant of labour market prospects and incomes. According to human capital theory, individual productivity increases with higher levels of schooling, and this is reflected in the higher wages of the better educated. According to these theories, education is expected to be an important determinant of the individual and household income situation. Changing population structure and changing income differentials across education levels are expected to be important drivers of income inequality.

Labour market prospects might be dependent on spatial aspects of the labour market as well: employment prospects might be better – and wages might be higher – in more urbanised areas. Economic activity is often concentrated in large cities, and this results in greater demand for labour in more urbanised areas. If there are obstacles to the mobility of

people, spatial inequality might become a source of persistent inequality, and this might result in persistent poverty of certain households living in underdeveloped areas.

In this part, the effect of demographic and labour market characteristics on the distribution of income will be described. As the time span of the EU-SILC does not yet allow long-term changes to be analysed, attention will be focused on between-country differences in the effect of various demographic and labour market characteristics.

Methodology and measurement

The concern in this section is to investigate inequality between subgroups of the population, based on the demographic and labour market characteristics of households. The question asked in the analysis is: how large are inequalities in income between age groups, people with different levels of education, people with different employment status and people living in different types of area? How much of total income inequality is due to inequality between these population subgroups?

Simple decomposition methods allow such analysis by separating inequality into two components: inequality within categories of the given variable (e.g. age) and inequality between groups. In this case, decomposition of the mean log deviation (MLD) index is performed (see Box 1.3 below on the methodology of inequality decomposition). Here, the degree of between-group inequality depends on the relative mean incomes of different subgroups, and also on the relative size of those subgroups.

Analysis is carried out on the basis of the distribution of equivalised household income among individuals. Incomes of different households are equivalised using the OECD II scale (i.e. as throughout the analysis). As the standard of living of the individual is determined by the income situation of the household in which he/she lives, we classify individuals based on the characteristics of their household or of the household head. We will be considering two demographic attributes: age of the household head[12] and household structure. Age of the household head is grouped into four categories: 18–35 years old, 36–49 years old, 50–64 years old, and 65 years and over. Household structure is a six-category variable: one person household; multi-person household without dependent children; single-parent household with one or more dependent children; household with two adults and one or two dependent

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[12] Since no household head is defined in the EU-SILC, this is taken to be the oldest man of working age (18–64). If there is no man of working age, then the oldest woman of working age is instead taken as the household head. If there are no members of the household of working age, the oldest man of 65 or over is taken as the household head, or the oldest woman if there is no man.

children; households with two adults, three or more dependent children; and other households with dependent children.

Box 1.3: Decomposition of inequality by population subgroups

When performing decomposition analysis, the question under consideration can be formulated in two ways. The first is: how much inequality would be observed if age (or education or employment) were the only source of income dispersion? The second is: by how much would income inequality be diminished if, starting from the actual distribution, income dispersion due to age (or education or employment) were to be eliminated, while within-group inequality is preserved? The mean log deviation (MLD) inequality index[13] is selected here for the calculations because, as was argued by Shorrocks (1980), in this case the answers to the two formulations coincide. Thus, the between-group component is calculated as the MLD index of the distribution, where the incomes of individuals are replaced by the respective group means; while the within-group component is the sum of within-group MLD indices, weighted by the population shares of the respective groups.[14] The same methodology has been used by a number of authors to investigate the effect of various individual or household attributes on income inequality (e.g. World Bank 2005; Mitra and Yemtsov 2006) and also to analyse drivers of changes in inequality (e.g. Jenkins 1995; Förster 2000).

Of the labour market characteristics of the household, the effect of the education and work intensity of the household will be investigated. The education attainment level of the household head is coded on a three-point scale (lower than upper secondary, upper secondary, tertiary education). Work intensity is calculated as the ratio between the number of months spent in employment during the year by household members of working age (i.e. those aged 16–64) and the number of months they could potentially spend in work, if they were all employed. A work intensity index value of 0 corresponds to no one being in employment – i.e. a jobless household. A work intensity index value of 1 means that all the household members of working age have been employed for the entire year, while an index value of between 0 and 1 reflects a situation in which either only one household member has worked for the full year or household members have worked for only part of the year. Here we use a three-category version of the variable: work intensity less than 0.5, work intensity higher than 0.5 but lower than 1, work intensity equal to 1.

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[13] Mean log deviation index $= (1/n)\Sigma_i \log(\mu/y_i)$, where y_i are individual incomes, n is sample size, μ is sample mean income.

[14] Formally, total inequality, as measured by the MLD index, can be decomposed as the sum of two components: $MLD = \Sigma_k v_k MLD_k + \Sigma_k v_k \log(\mu/\mu_k)$, where v_k refers to the population share of subgroup k, and other notations are the same as before. The first part of the right-hand side of the equation relates to the 'within-group' inequalities: it denotes the weighted average of inequalities within the subgroups. The second part of the expression relates to 'between-group' inequalities – that part of the inequalities that would remain if the income of each individual in a subgroup were replaced by the average of the subgroup.

The 'degree of urbanisation' variable has three categories: densely populated area,[15] intermediate area and sparsely populated area. Information on degree of urbanisation is missing in the case of the Netherlands and Slovenia. In the case of Estonia, Latvia and Lithuania, the categories of densely populated area and intermediate area are merged, and thus only two categories exist.

What do the latest data show?

In the following analysis, between-group inequalities according to demographic and labour market-related factors will be presented. Since the sum of between-group and within-group inequalities equals total measured inequalities, the various components can also be expressed in percentage terms. In the following graphs, the inequality between groups will be shown both in absolute and in relative terms: that is, as between-group inequality measured by the MLD index and as the fraction of total inequality accounted for by inequality between subgroups of the population. Tables in the Annex present the population shares and relative means of the different population subgroups. First, we present results for each of the factors separately, by calculating the inequality between groups of each of the variables. We then examine the inequality between groups of demographic and labour market factors taken together. We conclude by summarising our results by country groups.

How do age and household structure affect income distribution?

Income inequality between groups by the age of the head of the household account for a relatively small part of total income inequality in the EU countries. As Figure 1.13 shows, in most of the countries inequality between age groups equals less than 5% of inequality. The only country where inequality between age groups is higher than 10% is Denmark, where income differences according to age explain 12% of inequality. The role of age is also relatively more important in Sweden (9%), Finland and Estonia (7–8%) and Cyprus (6%). In absolute terms, inequality between age groups is widest in Estonia and Denmark. Latvia and Lithuania also show relatively high absolute inequality between age groups, but this is mostly related to the high level of total inequality in those countries, since inequality between age groups does not account for a particularly large part of total inequality.

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[15] A densely populated area is a contiguous set of local areas, each of which has a density of above 500 inhabitants per square kilometre, where the total population for the set is at least 50,000 inhabitants. An intermediate area is a contiguous set of local areas, not belonging to a densely populated area, each of which has a density of above 100 inhabitants per square kilometre, and either with a total population for the set of at least 50,000 inhabitants or adjacent to a densely populated area. A thinly populated area is a contiguous set of local areas belonging neither to a densely populated nor to an intermediate area.

Figure 1.13: Income inequality between age groups, 2006
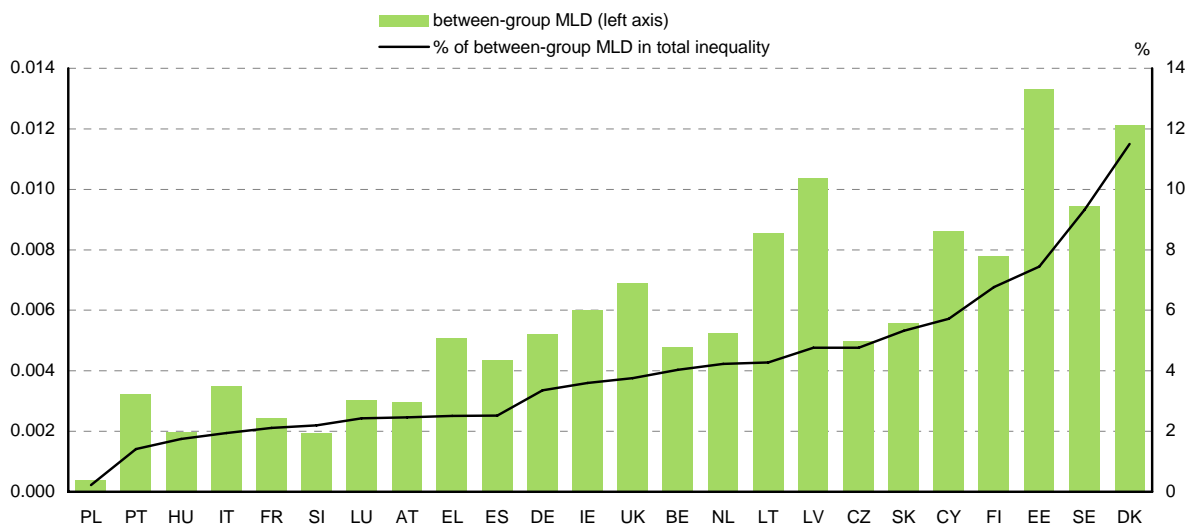
Source: Own calculations based on EU-SILC 2007.

The between–group effects are different for different EU Member States, because age groups vary from country to country in terms of their relative mean incomes and their share of the population. Income differences between age groups might arise from income differences between working–age people of different ages or income differences between those of working age and the elderly. Among those of working age, age–related income differences arise from differences in labour market prospects and from income changes over the family life cycle. In the Nordic countries, where the effect of age is relatively strong, income differences between older and younger people of working age (under 65 years) are important. In Denmark, the average income of those between 50 and 64 years of age is 20% higher than the country mean, while the average income of those aged between 18 and 35 years is 15% lower than the overall mean (see Table 1.13). The pattern in Sweden and Finland is similar. Interestingly, the Baltic states show the opposite: relative incomes are higher among younger (18–35 years old) than older working–age people. In Estonia, the relatively strong effect of age is also due to the low incomes of the elderly: the average income for those above 65 years is 66% of the overall mean income. The relative incomes of the elderly are also low in other Baltic states, Cyprus and Ireland. By contrast, the elderly enjoy a relatively favourable level of income in Poland, Austria, France, Luxembourg and Hungary, where their average income is close to the national average.

Figure 1.14: Income inequality between groups, by household structure, 2006
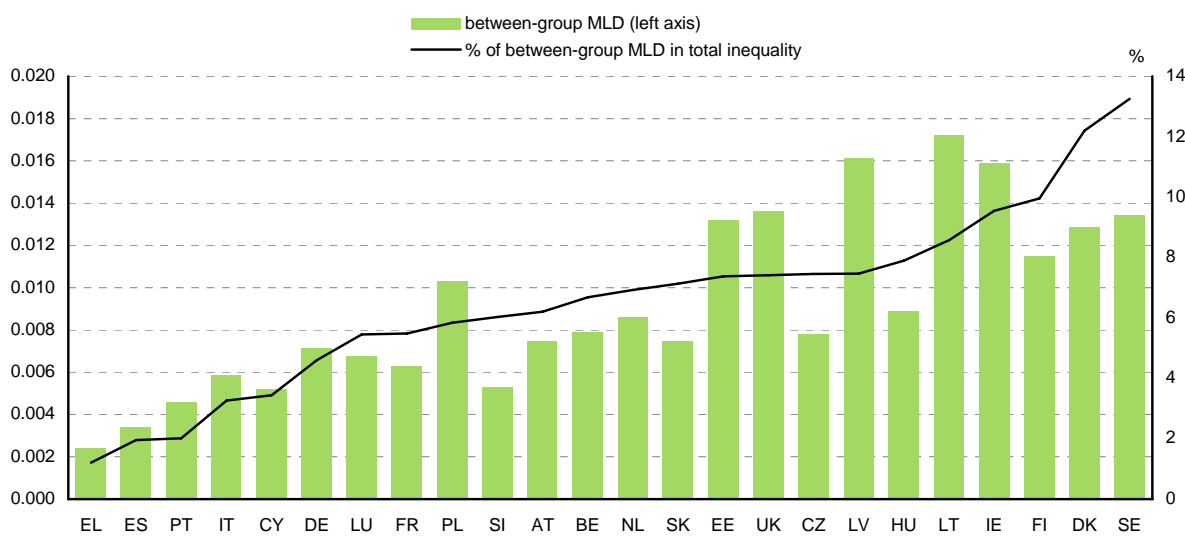
Source: Own calculations based on EU-SILC 2007.

The other demographic variable included in the analysis is household structure (Figure 1.14). In absolute terms, household-structure inequality between groups is widest in the Baltic states, along with Ireland and the UK. When between-group inequality is assessed in relative terms, the Northern European countries are at the top of the country ranking. In Sweden, household structure accounts for 13% of overall inequality. Denmark (12%) and Finland (10%) (together with Ireland) follow in the country rankings. In the Southern European countries, household structure accounts for only 4% or less of income inequality, as measured by the MLD index. Generally speaking, households composed of two or more adults but no children are in the most favourable income position, while single-parent households and households with three or more children have the lowest relative incomes (see Table 1.14). The income situation of single-parent households is worst in Ireland, the UK, the Netherlands and Estonia, where the average income of those living in such households is less than two-thirds of overall mean income. Moreover, there are relatively many single-parent households in those countries, and this serves to increase the scale of the effect on inequality.

The relative income of single-parent households is highest in Italy, Portugal, Greece, Slovakia and Poland, where their relative income exceeds 80% of overall mean income. The effect of this on inequality is, however, diminished by the fact that in none of these countries are there many such households. Those with three or more children have the lowest relative income in Latvia, Lithuania, Poland and Italy, where their income falls more than 25% short of the overall mean. On the other hand, in Ireland, families with three or more children have income around the average; also in France, Germany, Denmark and Belgium, their average income is less than 10% lower than the country average.

The role of education, work intensity and degree of urbanisation

How much does inequality between people with different levels of education contribute to overall inequality of income?

Income inequality between households grouped in terms of the educational level of the household head is widest in Portugal, both in absolute and in relative terms. The MLD index of inequality between groups equals 0.068 in Portugal, which amounts to 31% of total inequality (see Figure 1.15). Absolute inequality between households so defined is also relatively high in Lithuania, Poland, Greece and Ireland, even if their MLD indices are much lower than in Portugal.

In relative terms (i.e. in terms of the overall extent of inequality attributable to differences in the education of household heads), Luxembourg and Slovenia are ranked just below Portugal, with 23% of total inequality accounted for by between-group inequality in these terms, while in Hungary, Poland and Cyprus, inequality between education groups accounts for 20–21% of total inequality. The lowest figures are to be found in the case of Sweden, where only 4% of inequality is accounted for by income differences across education groups. In other countries, the between-group effect of education is between 10% and 20%.

Figure 1.15: Income inequality between groups, by education level, 2006
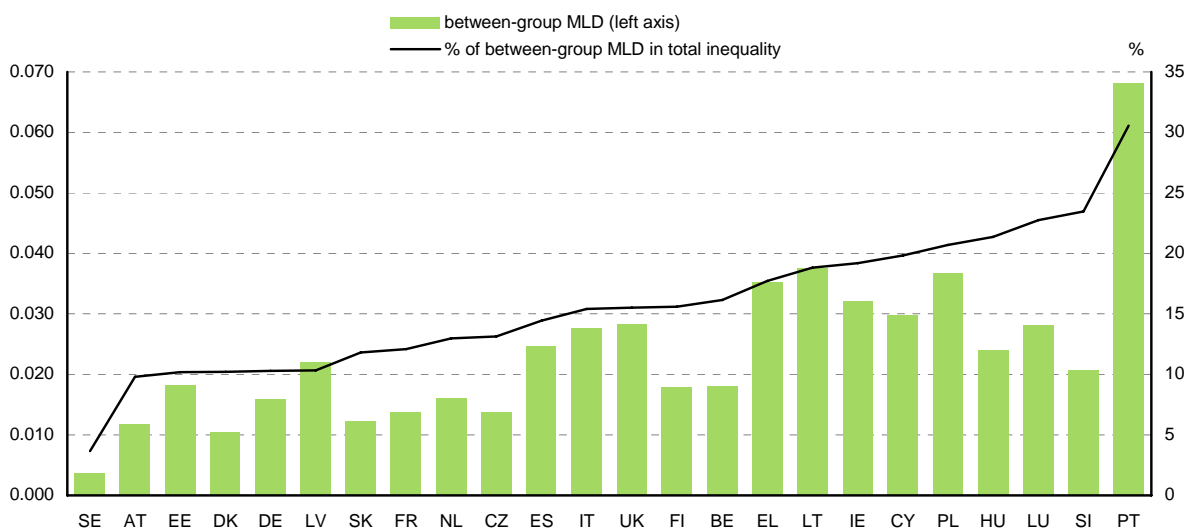
Source: Own calculations based on EU-SILC 2007.

The differences in between-group inequality from country to country derive from differences in educational attainment levels, as well as from differences in average income between those with different levels of education. Income differences between education levels can be important at both the lower and the upper ends of the distribution. The relative incomes of those with education below upper secondary level are lowest in Lithuania, Slovakia, the UK, the Czech Republic and Germany, where the incomes of those with low education falls short

of the overall mean by more than 30% (see Table 1.15). Poland, Estonia, Latvia, Hungary, Austria and Cyprus also record low relative incomes (70–75%) among those people with lower education. On the other hand, the average incomes of those with tertiary education are highest in relative terms in Portugal, where their average income is more than double the overall mean income. The relative income of people with tertiary education is also high (between 150% and 200% of the average) in Poland, Italy, Greece, Lithuania and Hungary.

How important are differences in work intensity as a factor underlying income inequality?

Household income is dependent on the work attachment of household members. Households where all adults work all year round have higher incomes than do jobless or work–poor households. In absolute terms, inequality between households grouped by degree of work intensity is widest in Lithuania, Latvia, Ireland and Estonia. In relative terms, differences in work intensity are also most important in Ireland, where they account for 23% of overall inequality, and in the Baltic states, the Czech Republic and Belgium (18–20%) (see Figure 1.16). They are least important in Cyprus, Sweden and the Netherlands, where work intensity accounts for only 5–6% of inequality, as measured by the MLD index. These differences reflect the relative level of social transfers, especially unemployment benefits, as well as the relative number of workless households, which varies from country to country.

Figure 1.16: Income inequality between groups, by work intensity, 2006
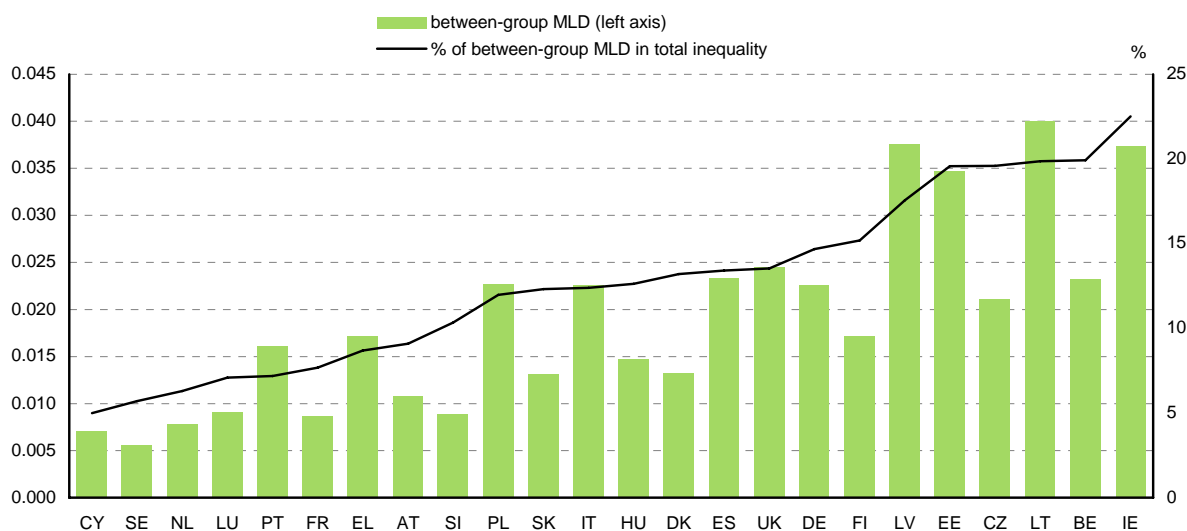
Source: Own calculations based on EU-SILC 2007.

The large between–group effect of the work–intensity variable in Ireland is due both to the high relative income of households where all those of working age are employed throughout the year (21% above the mean) and to the low relative income of jobless or low work–intensity households (55%) (see Table 1.16). The same holds true of Latvia and Lithuania, where the relative income of jobless and work–poor households is especially low. Work–rich households enjoy a favourable income situation in Italy, Poland, Spain and Greece as well. In

these countries, the average income of those living in households where all adults work throughout the year exceeds the national average by more than 20%. But again, the scale of the effect depends on the relative numbers in the different categories.

How much does inequality between people living in different types of area contribute to overall inequality of income?

Income inequality between households grouped by the degree of urbanisation of the area in which they are located is of only limited significance in most of the countries (see Figure 1.17). The MLD index of between-group inequality is lower than 0.01 in the majority of EU Member States. In relative terms, in no country does between-group inequality exceed 10% of total inequality, and only five countries record figures higher than 5%. This means that average incomes do not vary much between the different types of area, though this may conceal differences in education, household structure, work intensity or age. From both an absolute and a relative perspective, the most important effect of urbanisation is to be observed in Lithuania, where inequality between groups, as defined by the degree of urbanisation, accounts for 9% of overall inequality. The between-group effect is only slightly smaller in Hungary and Poland (8% of total inequality).

Households in more urbanised, densely populated regions have above-average income in all but three countries, while those living in sparsely populated areas have below-average income in all but one country (see Table 1.17). The highest relative incomes of those living in densely populated areas are in Lithuania and Poland, where average income is over 20% higher than the country mean. The lowest relative incomes for inhabitants of sparsely populated areas are found in Spain and Greece, where incomes are 83% of the country mean.

Figure 1.17: Inequality between households living in areas with different degrees of urbanisation, 2006
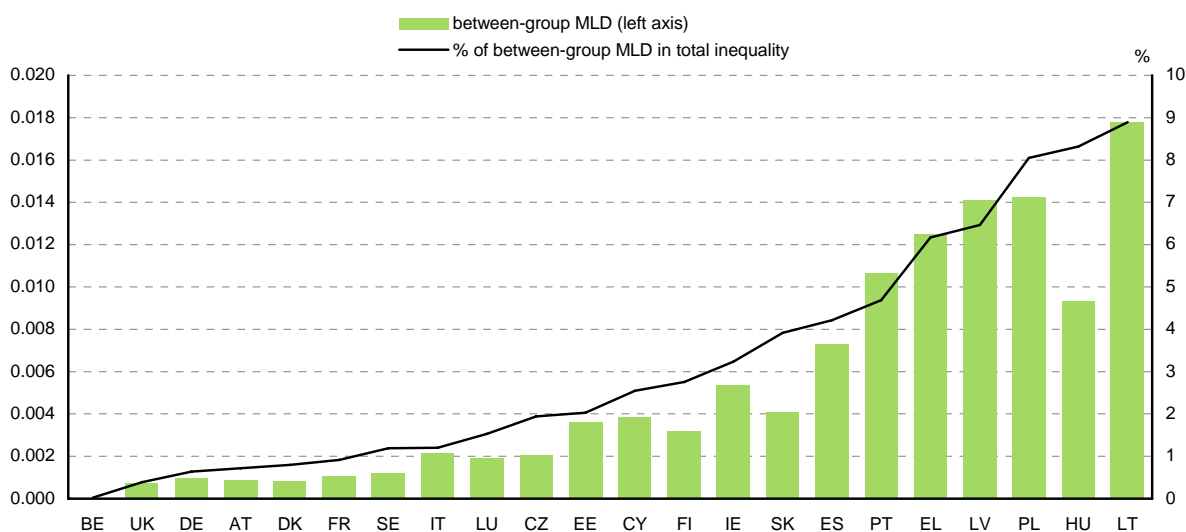
Source: Own calculations based on EU-SILC 2007.

For how large a part of inequality do demographic and labour market variables jointly account?

By combining demographic and labour market variables, it is possible to investigate the joint role of these factors in shaping income inequalities. Here we analyse the combined effect of household structure with education and work intensity. The same decomposition method is applied as above, but the grouping variable is a combination of two factors. For example, the joint between–group effect of household structure and education is calculated by grouping each household type by the education level of the household head. (Note that the combined effect of variables is not equal to the sum of between–group components described above.)

Figure 1.18: Proportion of inequality accounted for by combined demographic and labour market variables, 2006
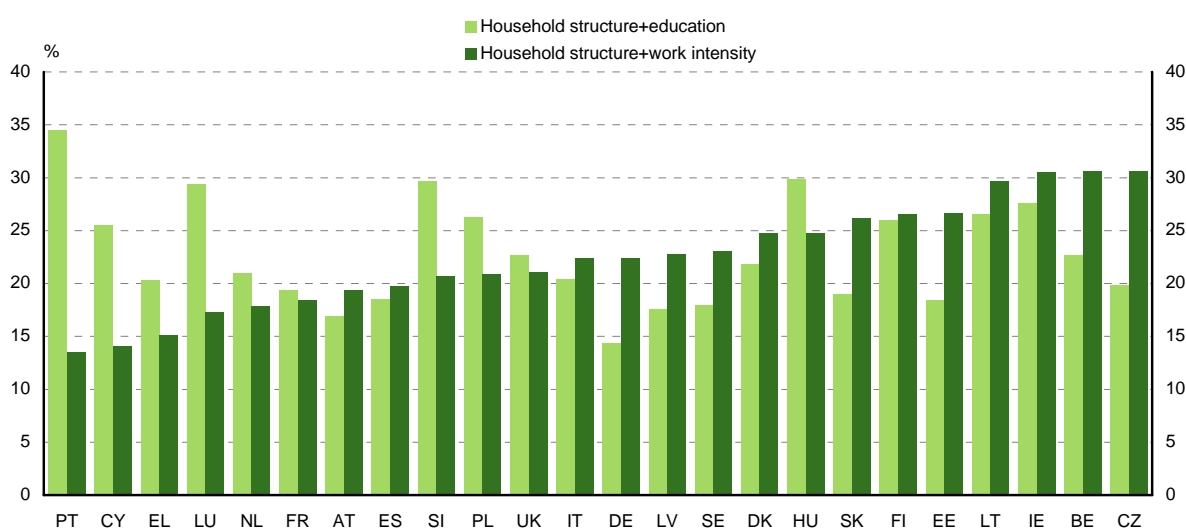
Source: Own calculations based on EU-SILC 2007.

Household structure and work intensity combined show the highest between–group effect, in relative terms, in the Czech Republic, Belgium, Ireland and Lithuania, where the combination of these two variables accounts for more than 30% of total inequality. The lowest figures are to be found in Portugal, Cyprus and Greece, where the between–group effect is below 16%.

As can be seen in Figure 1.18, the country ranking obtained when household structure is combined with education is quite different. Portugal, Luxembourg, Hungary and Slovenia are the countries with the highest between–group effects (30% or higher), while the lowest figures can be found in Germany and Austria (14–17%).

To conclude, it is possible to present the effect of different variables by country group, taking simple (unweighted) country averages of between–group effects. As is evident from Figure 1.19, for most of the country groups, the effect of demographic variables is lower than that of education or work intensity. The Nordic countries seem to be different in this respect. In those countries, demographic variables (age, household structure) and labour market-related variables (education, work intensity) all have similar effects (explaining

around 10% of inequalities on average), while the degree of urbanisation has a negligible effect.

When interpreting the results of such decomposition, it is generally not recommended to compare between–group effects across variables with a different number of groups. A higher number of subgroups obviously leads to more dispersion between groups and less dispersion within groups. Here, education, work intensity and the degree of urbanisation variables are all coded on a three–point scale, so the relative importance of between–group effects can be safely compared. When comparing the effect of these with demographic variables, it should be borne in mind that demographic factors are combined into **four** subgroups in the case of age and **six** groups in the case of household type.

Figure 1.19: Average between–group effects (in percentage terms) of different variables in country groups, 2006
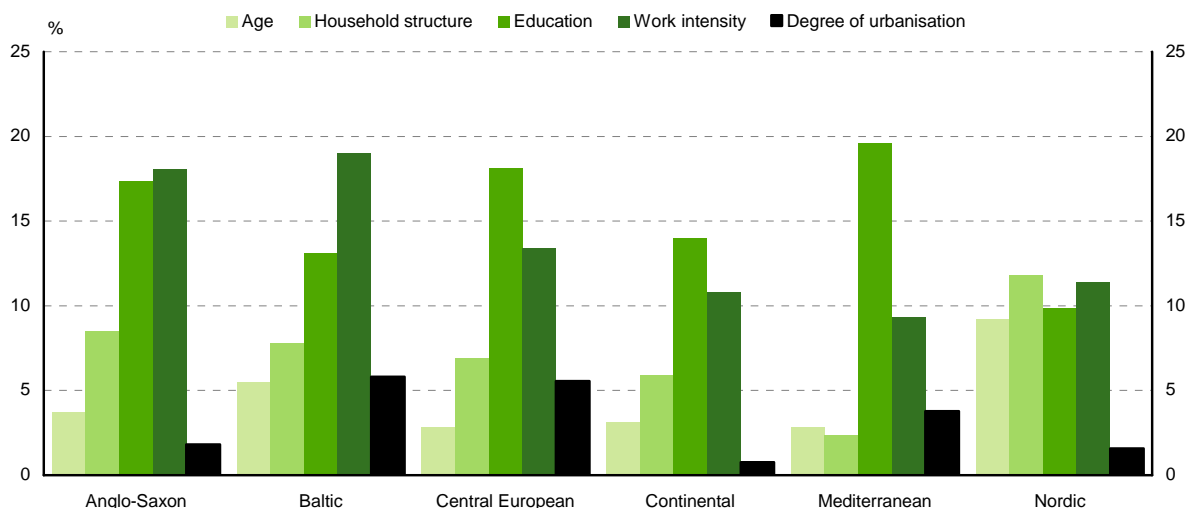
Source: Own calculations based on EU-SILC 2007.

It is evident that the structure of inequalities in the Central European, the Continental and the Mediterranean countries is similar, to the extent that income differences according to education are the most important. In the case of the Mediterranean countries, this is clearly the case, since the average effect of education is over 20%, while work intensity accounts for less than 10% of inequalities. In the case of the Central European and Continental countries, work intensity also plays an important role, explaining between 10% and 15% of inequalities. For the UK and Ireland (the Anglo–Saxon countries), education and work intensity have similar effects, explaining 17–18% of inequalities, on average. In the Baltic states, work intensity is the most important factor, explaining on average 19% of inequalities, compared to 13% for the difference in levels of education. It is also apparent that the degree of urbanisation has a noticeable effect only in the case of the former socialist countries (Central European countries and the Baltic states).

Summary of findings

In most of the EU countries, the income inequality between households grouped by demographic factors (specifically the age of the household head and the household structure) plays only a limited role in shaping the extent of overall inequality. Income inequality between age groups is widest, in relative terms, in the Nordic countries (especially Denmark), the Baltic states, Cyprus and Ireland. This reflects the relatively low income of the elderly in those countries.

Income inequality between different types of household has the largest effect on total income inequality in Northern Europe. Single-parent households and those with three or more children have the lowest relative income, especially in Ireland, the UK, the Netherlands and Estonia. Households with three or more children have the lowest relative income in Latvia, Lithuania, Poland and Italy.

Education and work intensity play an important role in shaping inequalities in all EU countries. The effect of differences in education levels is particularly important in the Mediterranean, the Central European and the Continental countries, and most especially in Portugal, Slovenia, Hungary, Poland and Cyprus. The degree of work intensity of the household is more important than education in Estonia, Lithuania and Ireland.

Households in more urbanised, densely populated regions tend to have above-average income, but this plays only a minor role in shaping inequalities in most of the countries. The degree of urbanisation has a noticeable effect only in the former socialist countries of Central and Eastern Europe.

Chapter 2

Levels and trends of income poverty in the EU[16]

Orsolya Lelkes, Eszter Zólyomi

Introduction

Since 2004, the entry into the EU of countries with much lower levels of average real income than the older Member States has increased the policy interest in the concept of absolute poverty and in the ways of measuring this, which are discussed later in this report (see Chapter 3). The concern here, however, is with the relative concept, defined in relation to average income in each country. This, of course, means that people identified as having income below a poverty threshold defined in the same way for each country enjoy very different standards of living in different parts of the EU, even though they might share the common characteristic of being at risk of social exclusion in the country in which they live.

Poverty affects not only those who are poor, but others, too. High inequality has been shown to reduce the self-reported well-being of people in Western Europe (Alesina *et al.*, 2004). From a political economy point of view, large numbers of people with low levels of income may undermine the system of income redistribution, may provoke conflicts of interest between net beneficiaries and contributors to the tax system, and may place social solidarity in jeopardy (though the actual interpretation of social solidarity is strongly determined by the cultural context of a given society).

The measurement of poverty

So far as poverty and social exclusion are concerned, the focus of policy attention across the EU tends to be on the relative number of people in each country with (equivalised)[17] disposable income below 60% of the national median. This figure, which is the main EU indicator for the risk of poverty, varies widely across the EU – from below 10% to above 20% of population. It varies even more widely between sections of the population in Member

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[16] With contributions from Terry Ward and Erhan Őzdemir.

[17] Calculation of equivalised household income is performed using the so-called 'modified OECD scale', in order to adjust for differences in the size and composition of households. The first member of the household is assigned a weight of 1, additional adults receive a weight of 0.5 each, and children (defined for this purpose as those aged under 14) receive a weight of 0.3 each.

States. Our concern is to examine these variations, and how they differ from country to country, on the basis of the latest data provided by the EU-SILC. But we also intend to review changes over the years (insofar as this is possible, given the data available).

So how many people across the EU are at risk of poverty? Some 16% of the population is at risk of poverty across the European Union – in the sense that they have income below 60% of the national median of the country in which they live. This represents a total of over 17 million people (Figure 2.1 below and Table 2.1 in the Annex). Many of these people live in severe poverty. The risk-of-poverty rate varies between 10% and 21%: the risk is lowest in the Czech Republic, the Netherlands, Sweden and Slovakia, and highest in the UK, the Baltic states and the Mediterranean countries of Greece, Italy and Spain.

Figure 2.1: At-risk-of-poverty rates across the EU, 2006
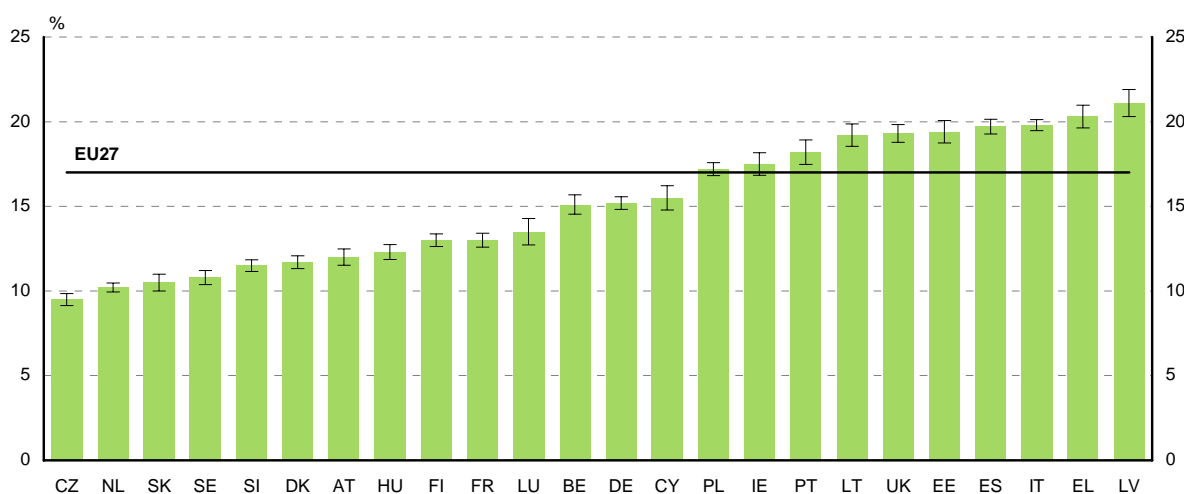
Source: Own calculations based on EU-SILC 2007.

Due to the definition of the indicator (i.e. relative and country-specific), the poverty thresholds differ greatly from country to country in terms of purchasing power. The average poverty threshold in the new Member States is over 60% lower than the average for the EU15.

The different poverty thresholds (set at 40%, 50% or 60% of the national median income) that are often used capture a different depth of poverty. The 50% threshold is most often used by the OECD and in the Luxembourg Income Study literature: '…the 40-percent line captures what is sometimes referred to as "severe poverty" while the 60-percent line, commonly employed by the European Union, is sometimes labelled "near poverty"' (Gornick and Jäntti, 2009).

The choice of a particular threshold largely determines the headcount, as is indicated by Figure 2.2, which shows the proportion of people below the various poverty thresholds. Poverty rates range from 2% to 8% when the 40% threshold is used, and between 5% and 14%

for the 50% threshold. A further, related issue is the distribution of those with income below the line, i.e. are they clustered around 60%, between 50% and 60%, or well below – under 40%?

Figure 2.2: At–risk–of–poverty rates at different income thresholds (40%, 50%, 60%), 2006
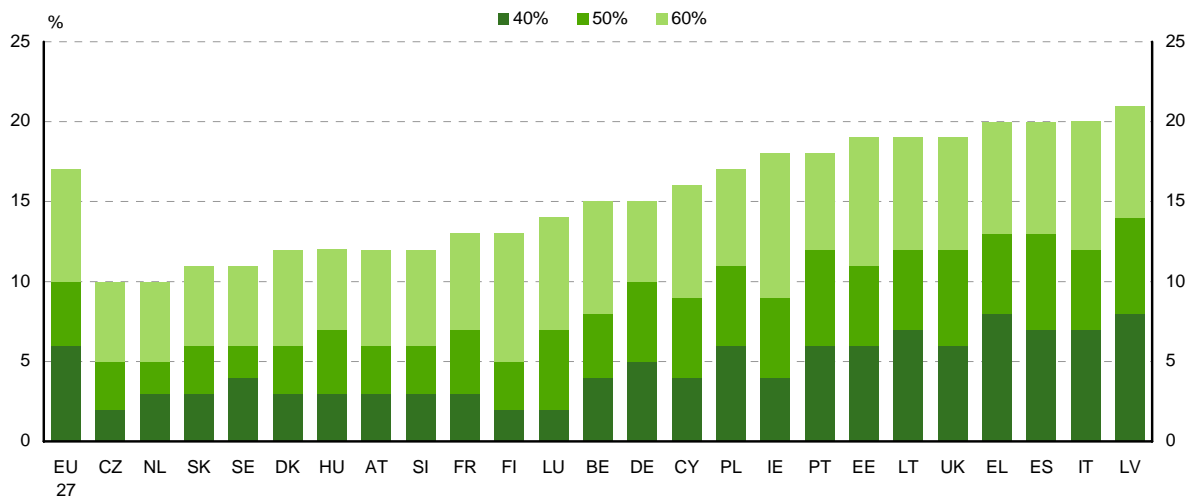
Source: Eurostat figures based on EU-SILC 2007.

Figure 2.3 highlights not only a lower (50%), but also a higher (70%) threshold than that used as the lead poverty indicator here. The length of the lines give an indication of the number of people concentrated around the 60% threshold, and the difference between the endpoints and the 60% point shows how many are concentrated just below or just above the line. In Finland and Ireland, for example, relatively large numbers of people can be found close to the threshold, both above and below. On the other hand, in a handful of countries there are considerably more people with incomes between 60% and 70% of the median than between 50% and 60%. The most obvious cases include the Netherlands and Germany.

Figure 2.3: At−risk−of−poverty rates at different income thresholds (50%, 60%, 70%), 2006
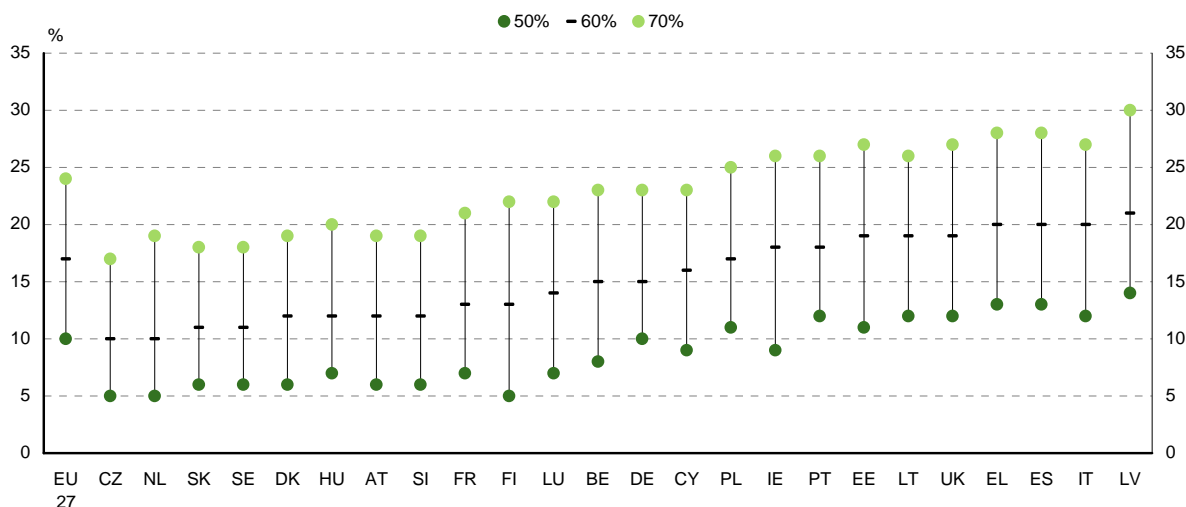
Source: Eurostat figures based on EU-SILC 2007.

The at−risk−of−poverty threshold is, by definition, relative and country−specific. The poverty levels of income, therefore, differ substantially from country to country, and some of the population regarded as being at risk of poverty in a prosperous country may not be classified as such in many other countries. As Figure 2.4 shows, the threshold for a two−adult two−child family in Latvia, Lithuania and Poland is only about a fifth of that in Luxembourg (the country with the highest average income per head) and is under a third of that in the UK.

Monetary value of the at−risk−of−poverty threshold for households consisting of two adults with two children younger than 14 years (in purchasing power parity terms), 2006
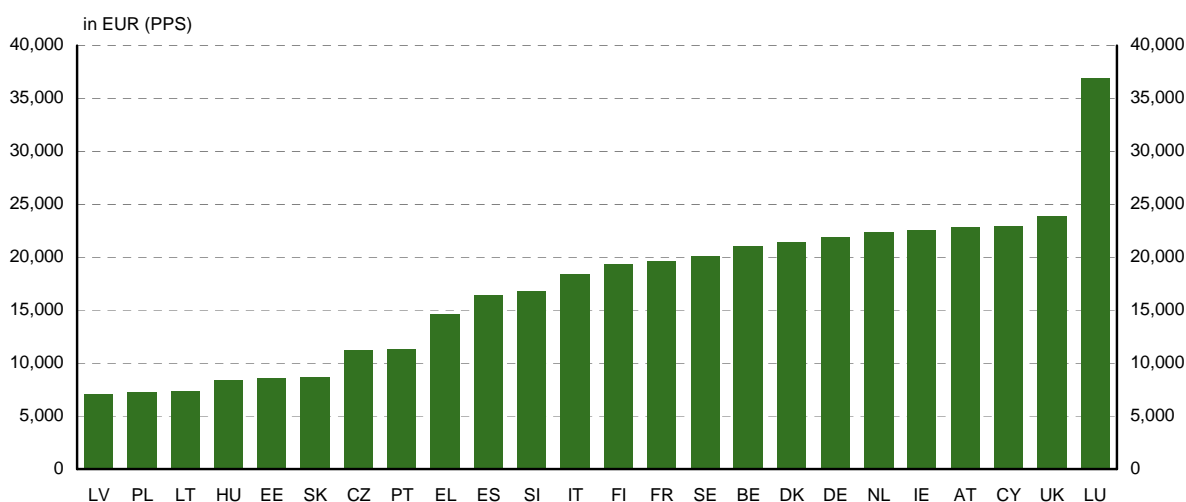
Source: Eurostat figures based on EU-SILC 2007.

Accounting for housing costs[18]

Housing costs are an essential element of household expenditure and tend to absorb a significant part of income. This can mean that people on low incomes have relatively little left over to meet other essential needs. In some Member States, therefore, such as in the UK, indicators of the risk of poverty are calculated both before and after housing costs.

At the same time, housing is a durable consumer good and is a source of satisfaction – just like any other such good. Within limits, most people can choose to have a more or less attractive house, depending on how much they are willing to spend on it, even if their choice might be tightly constrained by their income and other circumstances. But a house or an apartment is equally an asset – a store of wealth – and this tends to differentiate it from most other consumer durables.

Both of these things are complicating factors, in the sense that the cost of housing and its variation (both within and between countries) therefore reflects not only the situation in the housing market and the costs of maintaining, heating, cooling and lighting a house, but also individual choice to opt for a more attractive house or to invest in this form of asset rather than another.

In other words, if housing absorbs a high proportion of someone's disposable income, this may be because the person concerned chooses to have a high-quality house in an attractive and convenient location and/or to put their money into an asset that is expected to increase in value, rather than to spend their income in other ways. This would argue against deducting housing costs when assessing the risk of poverty. In practice, however, there is no easy way of distinguishing this situation from one in which people are obliged to pay a lot for housing and the associated costs because of the nature of the market or because their circumstances leave them relatively little choice over how much to spend in this regard.

How do housing costs vary between households and Member States?

In 2006 in the EU, total housing costs – defined as including rent and mortgage interest payments (though not repayment of capital), as well as the costs of fuel, maintenance and repairs, but excluding any housing allowances received – amounted on average to around 20% of disposable income (after deducting housing allowances) (see Figure 2.5). The scale, relative to income, varied from around 30% in Germany and the Netherlands to under 15% in Ireland, Cyprus, Luxembourg and Slovenia. There is only a limited tendency for housing

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[18] By Erhan Őzdemir.

costs to vary with housing tenure (or more precisely with the extent of home ownership), reflecting the fact that a large share of housing costs consists of maintenance, fuel, various charges and other costs, rather than rent or mortgage payments. Despite the fact, therefore, that the great majority of people in most of the EU10 countries of Central and Eastern Europe own their own homes or pay little or no rent, there is only a limited tendency for housing costs to be lower in these countries than in the EU15.

Figure 2.5: Housing costs relative to disposable income for total population, 2006

Mean housing costs as % of disposable income

Source: Eurostat figures based on EU-SILC 2007.
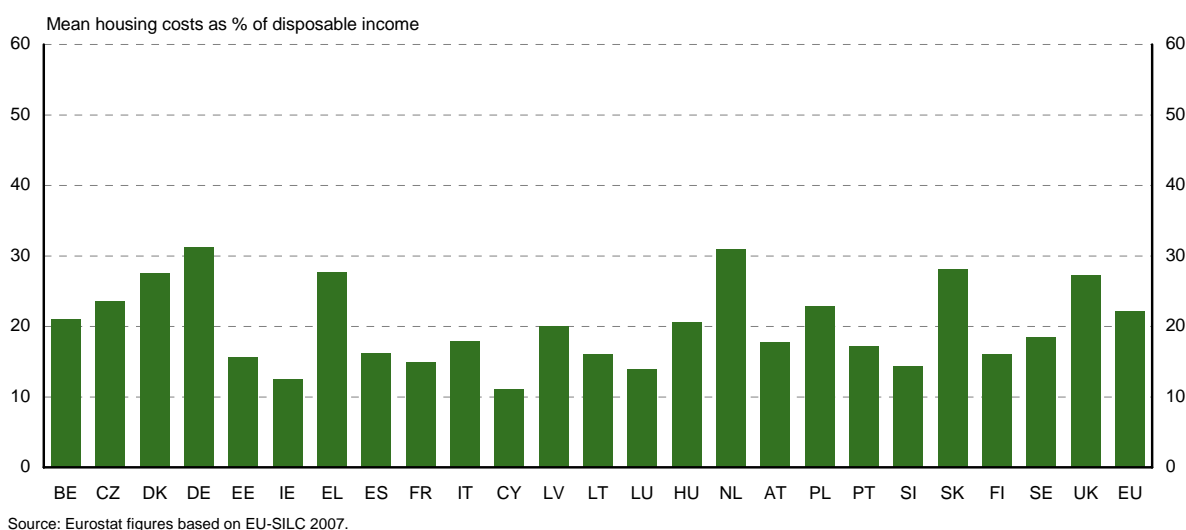
Figure 2.6: Housing costs relative to disposable income for population at risk of poverty, 2006

Mean housing costs as % of disposable income

Source: Eurostat figures based on EU-SILC 2007.
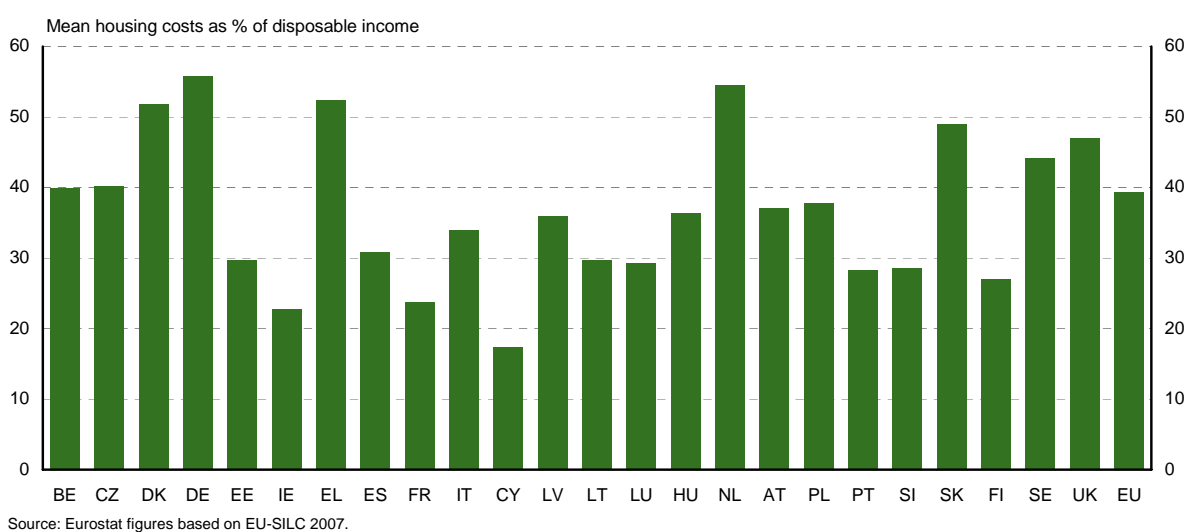
The burden imposed by housing costs, however, tends to vary inversely with income. The cost of housing, therefore, absorbs a much larger share of the disposable income of those at

risk of poverty than it does for other people. In the EU as a whole, in 2006, such costs absorbed, on average, around 37% of the disposable income of those with income below the poverty threshold (Figure 2.6). In Germany, they absorbed over 55%, and in Denmark, Greece and the Netherlands over 50%. Only in Ireland, France and Cyprus was the figure below 25%.

Moreover, there are large variations in the scale of housing costs between those with similar levels of income. In part, this reflects whether or not they have outstanding mortgages (in the case of homeowners), and in part whether they live in low-rent or rent-free accommodation. Across the EU, therefore, some 40% of those with income below 60% of the national median had housing costs amounting to 40% or more of income, while almost as many (37%) had costs of less than 25% of income (Table 2.2).

The distribution of costs differs widely from country to country, especially for those with income below 60% of the national median. In Denmark, Germany, Greece, the Netherlands and Slovakia, most of the people with income below this threshold have housing costs of 40% or more of disposable income; in 10 of the other Member States, most of the people concerned have costs of under 25% of income, including in Ireland and Cyprus (where 75–76% fall into this category) and Spain, France and Finland (where 60–65% do).

Do large families have higher housing costs than people living alone?

Housing costs tend to represent a larger share of income for those living alone than for large families. This reflects the fact that housing costs, considered overall, may be only slightly higher for larger families than for smaller ones, given the large share of costs that are absorbed by fuel, maintenance, repair and so on, and also given the fact that house prices and rents do not tend to increase in proportion to the size of houses.

In the EU as a whole, therefore, housing costs averaged around 34% of disposable income for people of working age living alone, and around 32% for lone parents. Housing costs also represent a relatively large share of income (31%) for those aged 65 and over who live alone. These figures are substantially higher than for other households with more than one adult, whether or not they have children (Figure 2.7).

Figure 2.7: Average housing costs as percentage of disposable income by household type for total population and those at risk of poverty in the EU, 2006

Note: 'Other' includes households with more than 2 adults.
Source: EU-SILC 2007.

The figures, moreover, show a similar pattern in most countries. In all Member States without exception, therefore, housing costs represent a larger share of disposable income for people of working age who live alone and for lone parents than they do for the population as a whole. They also represent a larger share for those aged 65 and over living alone in all countries except Luxembourg, where the share is similar to that for the rest of the population. The picture is similar for those with income below the poverty threshold.

How does measuring income after housing costs affect the risk of poverty rate?

Since housing costs represent a charge on disposable income that (arguably) must be met before other expenditure, there is a case for deducting these costs from income before assessing the distribution of purchasing power across society and identifying those whose income falls below a particular level relative to the median. On the other hand, relatively high housing costs might reflect the choice of the people concerned to have a better-quality house in a more attractive and convenient area, rather than to spend their income in other ways. There is, however, no systematic relationship between costs and the quality and size of housing, and so it cannot be assumed that those people with higher housing costs relative to income also generally live in a better-quality or a larger house.

In practice, there is no compelling evidence to determine whether disposable income should be measured before or after housing costs when we come to assess income distribution and identify the risk of poverty. There may perhaps be an argument for measuring the risk of poverty in both ways, as in the UK.

Since housing costs account, on average, for a larger proportion of disposable income for those with lower incomes than for those with higher levels, the effect of measuring disposable income after housing costs is to increase the proportion of the population in all countries with income below the poverty threshold – whether this is defined as 60%, 50% or 40% of median income. While, therefore, deducting housing costs reduces median income, it reduces the income of those at the lower end of the scale by more.

Accordingly, if disposable income is defined as being **after** housing costs are deducted, the proportion of people with income below 60% of the (new) median increases, on average, across all countries, from 16% to 22% (Figure 2.8). The increase is particularly large in countries where housing costs are high relative to income – in Denmark, Germany, the Netherlands, Sweden and Slovakia (8–9 percentage points in each case). On the other hand, the increase is relatively small in the Southern countries, excluding Greece (but including Cyprus), as well as in Ireland, Estonia, Lithuania and Slovenia, where housing costs are much lower in relation to income.

As a result, once housing costs are deducted, Germany becomes one of the countries with the largest proportions of its population with income below the poverty threshold defined in this way, above Portugal and (to a lesser extent) Estonia, Lithuania and Poland, but still below Greece, Spain, Italy, Latvia and the UK.

Figure 2.8: Proportion of population below at–risk–of–poverty threshold (60% below median) before and after the deduction of housing costs, 2006
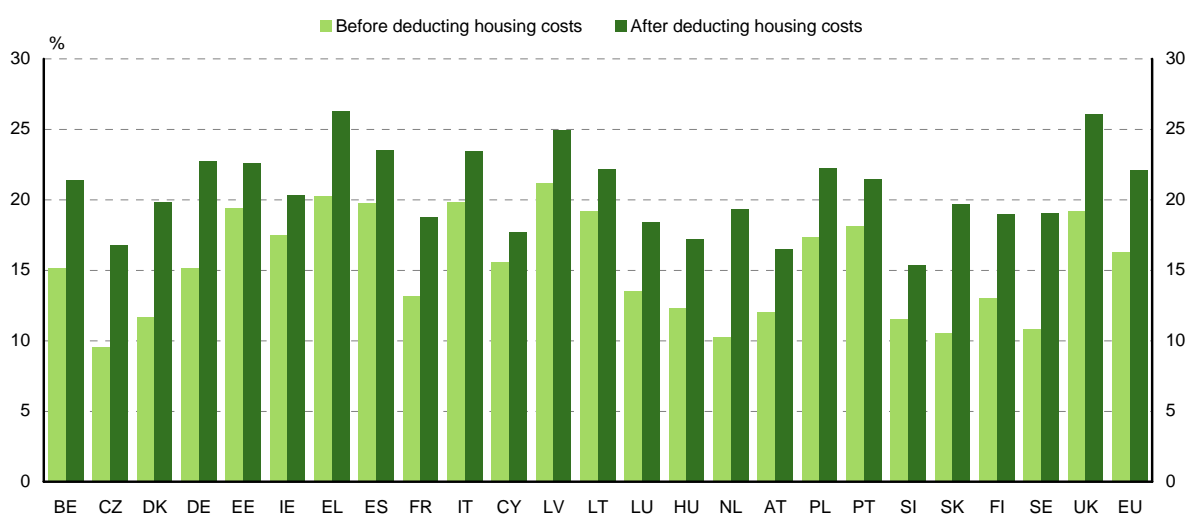
Source: EU-SILC 2007.

The effect of measuring the risk of poverty after deducting housing costs varies between men and women and across broad age groups. In particular, defining income to exclude housing costs tends to result in the proportion of those below the poverty threshold being increased by slightly more for women than for men (Figure 2.9). This reflects the larger

number of women – especially lone parents and those aged 65 and over – who live alone and who, accordingly, tend to have high housing costs in relation to income. The larger effect on women is common to all countries, with the exception of Luxembourg and Portugal. It is especially large in Denmark, Sweden and Slovakia, where in each case the poverty rate among women is increased by around 10–11 percentage points if income is measured after housing costs – some 3–4 percentage points more than for men.

Figure 2.9: Difference in the proportion of the population at risk of poverty before and after the deduction of housing costs, by sex, 2006
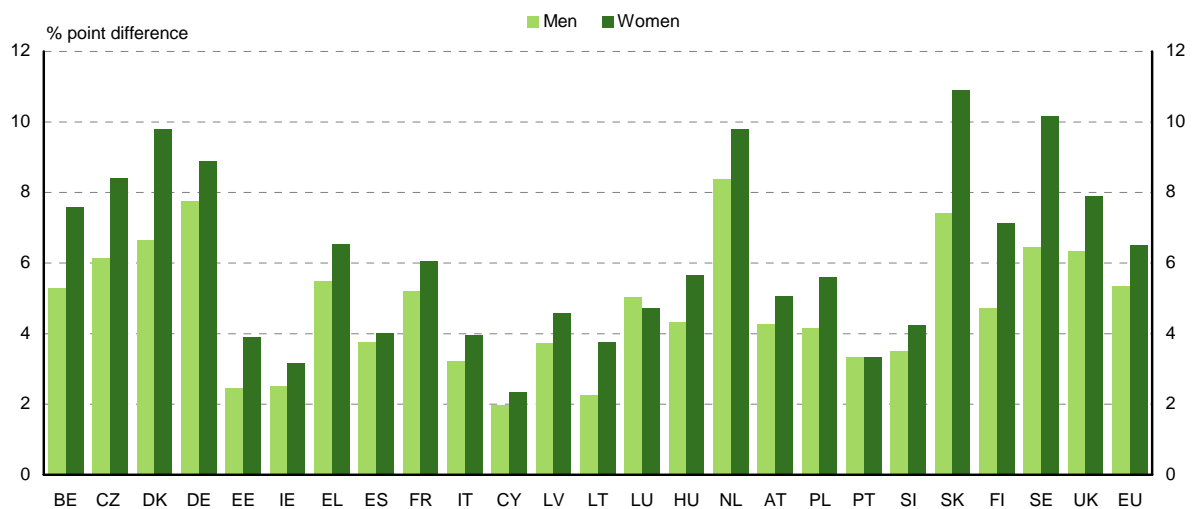
Source: EU-SILC 2007.

Housing costs also tend to have more of an effect on those aged 65 and over than on younger age groups, though the scale of the effect varies greatly from country to country. The proportion of those aged 65 and over at risk of poverty is increased, on average, by around 8.5 percentage points if income is measured after housing costs rather than before – some 3 percentage points more than for those aged 25–64 (Figure 2.10). There are, however, four countries – Spain, Cyprus, Luxembourg and Portugal – where the effect of excluding housing costs is smaller for the older age group than for the younger one. (In Portugal, the effect of deducting housing costs from income is to reduce the risk of poverty among those aged 65 and over.) Conversely, measuring income after housing costs increases the proportion with income below the poverty threshold substantially more for those aged 65 and over than for those aged 25–64 in Denmark, Sweden and Slovakia – the same countries as were highlighted when we discussed differences between the figures for men and women, and for similar reasons.

Figure 2.10: Difference in the proportion of the population at risk of poverty before and after the deduction of housing costs, by age, 2006
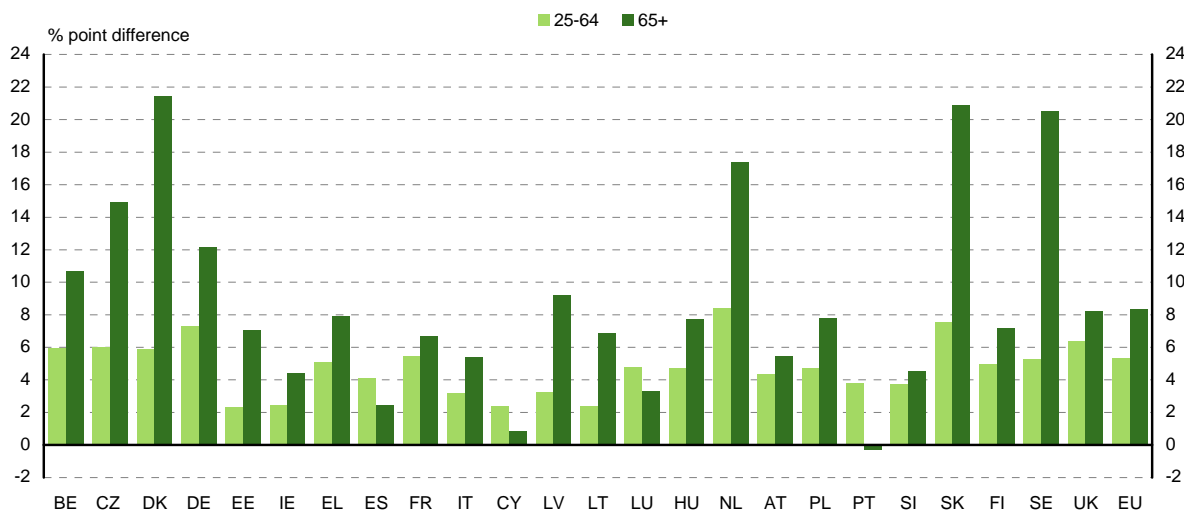
Source: EU-SILC 2007.

Overall, housing costs have a similar effect on the risk of poverty among children as on people aged 25–64, the proportion with income below the poverty threshold being increased by 5–6 percentage points, on average, in both cases. The effect, however, varies markedly from country to country: in around half, the risk among children increases by more than among those aged 25–64 (the effect being especially large in Germany and the UK), while in the other half the risk to them increases by less than among those aged 25–64.

From the above, we can see that the effect of measuring income after housing costs rather than before when calculating the risk of poverty is to increase the risk among:

- women relative to men;
- those aged 65 and over relative to younger age groups; and
- those living alone, including lone parents, relative to those living in couple households with and without children.

These groups, therefore, would account for a larger proportion of the population with income below the poverty threshold if income were to be defined as **after** housing costs are deducted. Since the groups concerned already have a relatively high risk of poverty in most countries, the effect of taking explicit account of housing costs when assessing this risk is to widen the differences between population groups distinguished in this way.

How low is the income of those at risk of poverty and how is it related to the numbers concerned?

The 'poverty gap' (the Laeken indicator termed the 'relative median at-risk-of-poverty gap') – measured as the difference between the median income of those below the poverty

threshold and the threshold itself, expressed as a percentage of the threshold – indicates the extent to which the incomes of the (relatively) poor fall below the poverty threshold on average. In policy terms, it indicates the scale of transfers that would be needed to bring the income of the poor up to the poverty threshold level (by redistributing income from those above the threshold). In the following analysis, the conventional threshold of 60% of median equivalised income is used to calculate the poverty gap.

Note, however, that the resulting gaps indicate the average income of those below the threshold, but not the distribution of this income between them. As Sen and Foster (1997, p. 170) argue, neither the poverty headcount measure nor the poverty gap measure would change if there was an income transfer from a destitute person to someone who is better off but still regarded as poor. As an alternative, they propose an index that also includes a measure of inequality in the incomes of the poor.[19]

Some indication as to the distribution of the poor can be gained by comparing the proportion of them below the various poverty thresholds of 40%, 50% and 60%.

Figure 2.11: Poverty gap and at-risk-of-poverty rate, 2006
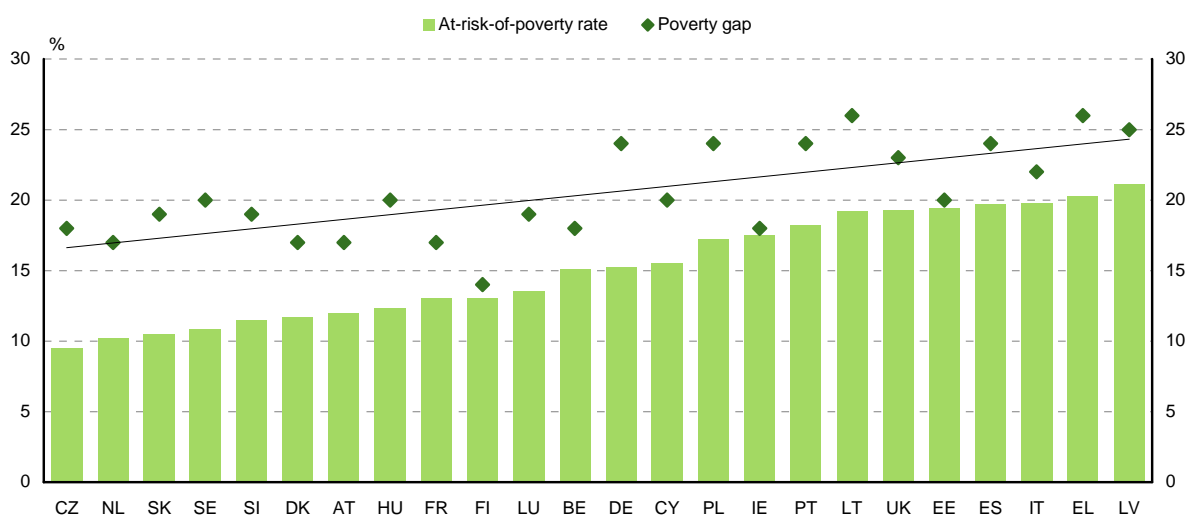
Source: Own calculations based on EU-SILC 2007.

The median income of those below the poverty threshold in the EU25 is, on average, 20% lower than this threshold, which itself represents the minimum level of income regarded as essential to avoid relative deprivation. The poverty gap in the EU25 countries varies from 14% (in Finland) to 26% (in Lithuania and Greece) (see Figure 2.11). These values are

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[19] The properties of the Sen index are discussed by Xu and Osberg (2002). The Sen index has been used to analyse poverty effects of taxes and transfers in OECD countries by Förster (1994a). See: www.oecd.org/dataoecd/47/56/33941184.pdf

positively correlated with the at–risk–of–poverty rate. In other words, those below the poverty line tend to have lower median incomes in countries where the proportion of people falling below the line is larger. This suggests that these two indicators might have a common explanation in the form of the shape of income distribution: the distribution of income at the bottom end of the scale is more uneven in countries that have a relatively large proportion of the population below the threshold, i.e. there tends to be proportionately more of them with very low income levels.

How does the risk of poverty tend to change over time?

Poverty trends for the period since 1995 were presented in Ward *et al.* (2009). The establishment of trends based on data where there is often a break in the series poses problems. When, however, a single data source is used – the EU–SILC survey – the time period shortens to a maximum of five years (and then only for a few countries).[20]

Nevertheless, the use of this survey ensures consistency of the data over time (including sampling and definitions), which makes an assessment of statistical significance meaningful and enables confidence intervals to be estimated.

Overall poverty has declined in Slovakia, Ireland and Poland. By contrast, at–risk–of–poverty rates have increased in Finland and Germany (Figure 2.12). There has been a mild, but statistically significant, increase in Italy. This is also confirmed by the OECD, comparing data points from 'around 2000' and the 'mid–2000s'.[21] In the majority of countries, there has been no statistically significant change in the at–risk–of–poverty rate over the past three or four years. There have been blips – fluctuations upwards and downwards – most strikingly in Sweden, Latvia and Hungary. As is discussed in Ward *et al.* (2009, p. 44), there are also probable measurement errors with respect to the 2005 poverty rate in Hungary and Germany (the former overestimating and the latter underestimating the extent of poverty).[22]

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[20] These countries include: Belgium, Denmark, Ireland, Greece, Luxembourg and Austria.

[21] OECD Stat Extracts, see: http://stats.oecd.org/index.aspx

[22] A recent methodological paper by Frick and Krell (2009) presents differences between the EU–SILC and the German panel study (SOEP) in terms of both the extent of poverty and changes over time. The authors argue that the EU–SILC is affected by sample bias and methodological problems (e.g. rather than face–to–face interviews, it was conducted as a postal survey), and it under–represents the migrant population due to the exclusive use of German as the language in the questionnaire.

Figure 2.12: Poverty trends, 2003–06

b) Countries with low levels of population at risk of poverty in 2006
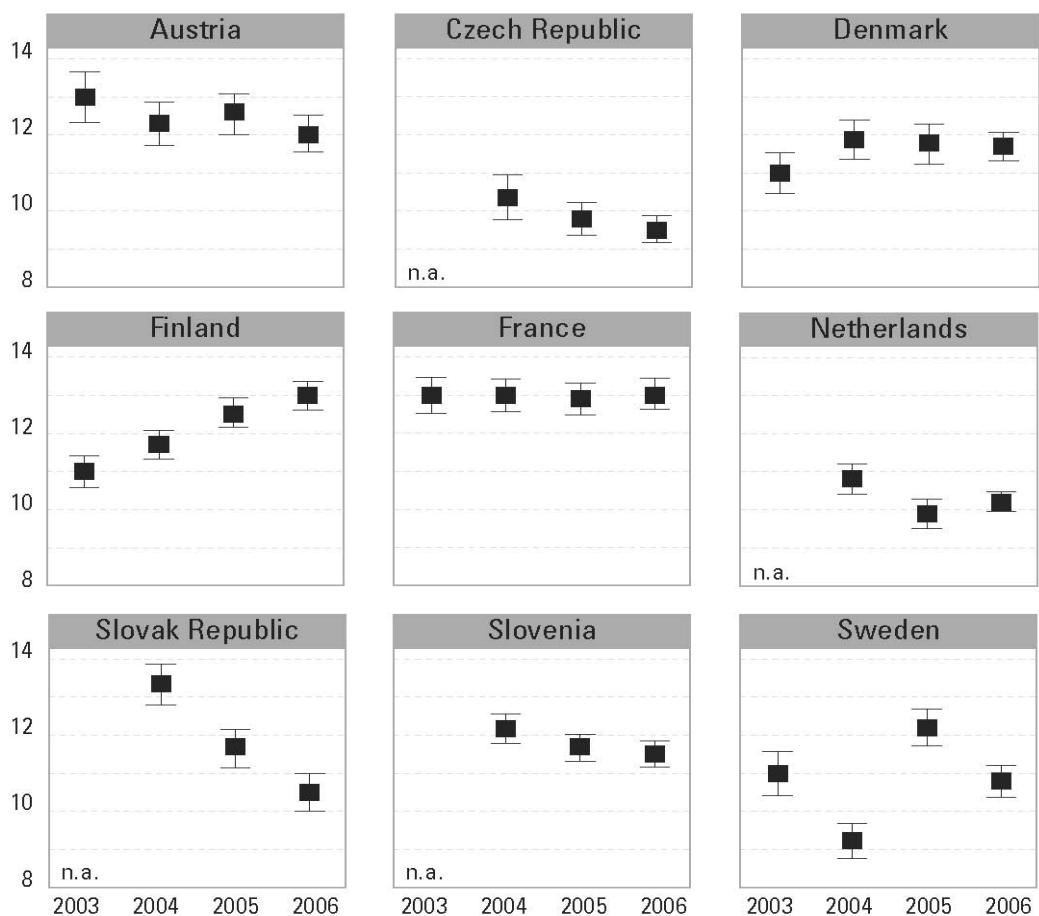
a) Countries with medium levels of population at risk of poverty in 2006
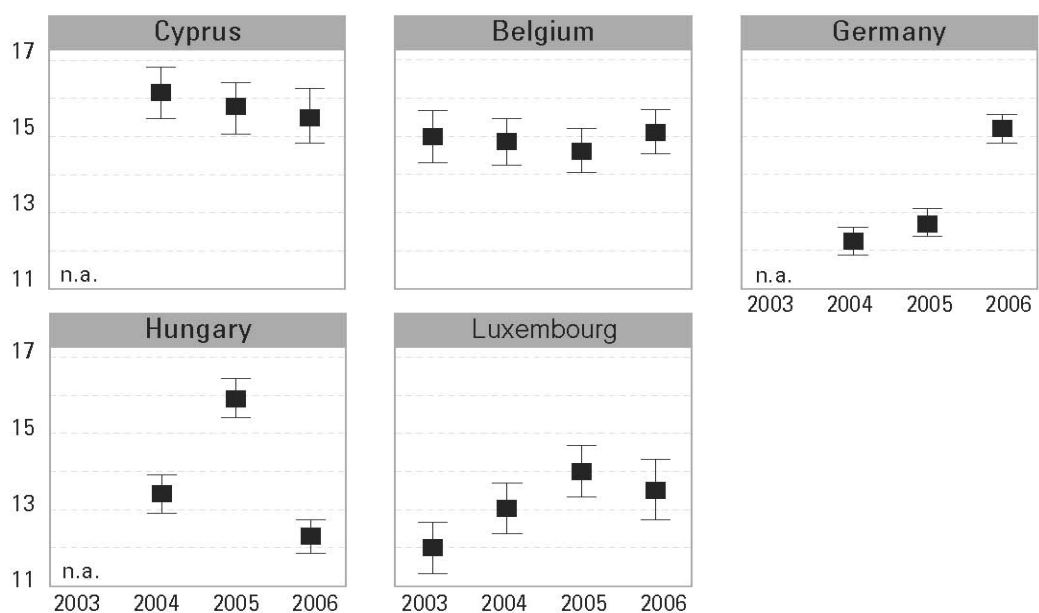
c)   Countries with high levels of population at risk of poverty in 2006
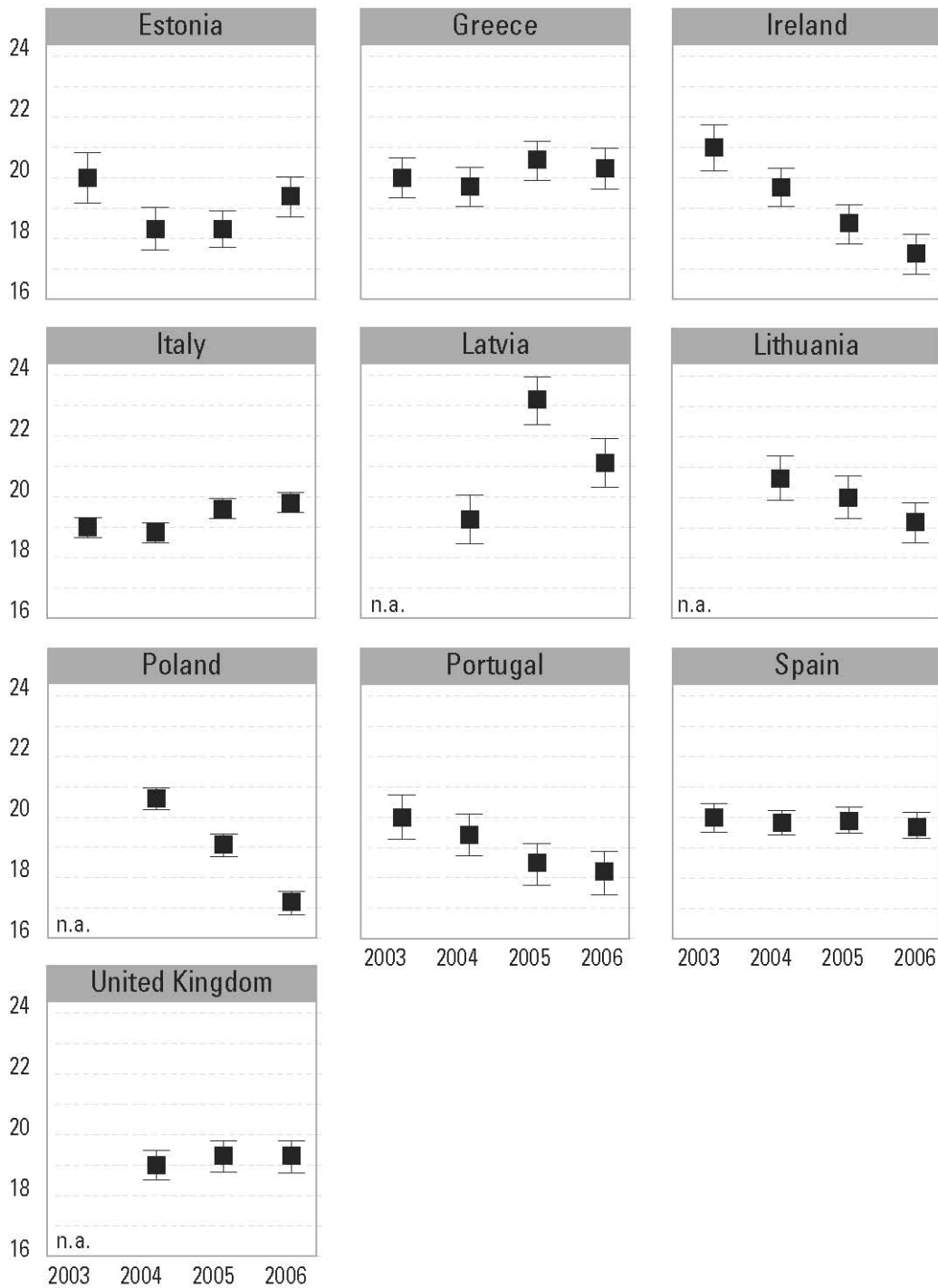
Source: Own calculations based on EU-SILC 2007.

What are the characteristics of those at risk of poverty?

This section examines the characteristics of those people at risk of income poverty – their age, gender and the composition of the households in which they live – and their employment situation. The focus is on factors associated with intra–country poverty, rather than poverty across countries. The factors that underlie the variation in poverty within countries tend to differ from those that matter across countries. The latter are primarily differences in the institutional structure, including both labour market structures and social policies. Demographic differences from one country to another also play a role, albeit a smaller one, as variation in demographic composition and the pace of demographic change tends to be smaller than variations in institutions. The effect of taxes and benefits on income distribution will be explored in Chapter 6 of this report.

Figure 2.13: At–risk–of–poverty rates of children and the elderly, 2006

Source: Own calculations based on EU-SILC 2007.
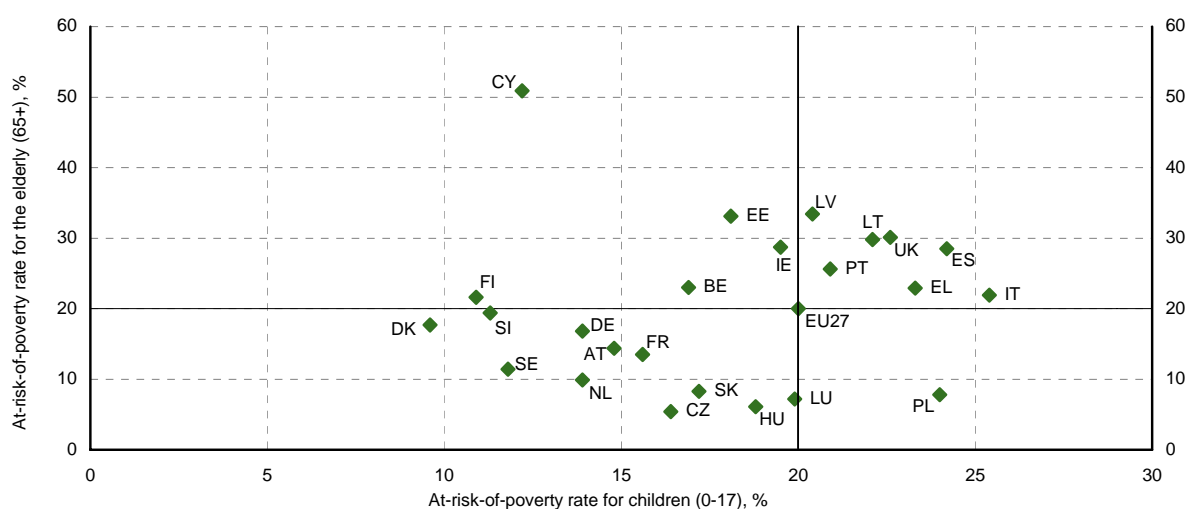
As Figure 2.13 shows, in countries where a large number of people are below the poverty threshold, both the young and the elderly are affected: the top–right quadrant of the graph reveals that in Greece, Spain, Italy, Lithuania, Latvia, Portugal and the United Kingdom there is an above–average risk of poverty among both children and those over the age of 65. These countries were shown earlier to have a high risk of poverty among the total population (Figure 2.1).

The situation is similar at the other end of the scale: in the Czech Republic, the Netherlands, Slovakia and Sweden, risk of poverty among both children and the elderly is below the European average. On the other hand, there are clear outliers. There is a major difference between the situation of the two age groups in Cyprus (with the risk of poverty reaching 51% among the elderly, compared with 12% among children) and in Poland (with a 24% at–risk–

of-poverty rate among children, by contrast with 8% among the elderly). The causes and remedies of child poverty and poverty in old age differ significantly. These are discussed in turn below.

With respect to child poverty, Bradbury and Jäntti (1999) conclude that, while variations in welfare state institutions are important in accounting for the diversity of children's poverty outcomes across countries, variation in the market incomes of their families is a more powerful explanatory factor. Rainwater and Smeeding (2003) largely concur, concluding that, at the bottom of the household income distribution, both earnings received and transfer income are important factors underlying cross-national child poverty variation. Chen and Corak (2005) also found that, in explaining cross-national variation in child poverty trends, demographic variation matters modestly, while national labour market patterns and social policy factors both matter a great deal – and they matter via complex and interacting mechanisms.

Poverty in old age has a clear gender dimension. Women tend to be exposed to a higher poverty risk than men throughout the life cycle, with the exception of childhood, as Figure 2.14 shows. On average, the relative disadvantage faced by women becomes greater in old age. Poverty rates were found to be consistently higher among older women, particularly those who live alone, and this pattern is evident (to varying degrees) in all countries (OECD, 2001; Williamson and Smeeding, 2004). This reflects the twin facts that women living alone have a lower income than men both below and above the age of 65 and that more women in the older age group live alone, as female life expectancy is greater.

Women also have lower employment rates, are more likely to work part time or in other atypical forms of employment, on average earn less over their lifetime, and in general spend less time in the formal labour market than their male counterparts for the simple reason that they have significant spells out of it having and caring for children and/or caring for elderly family members. The outcome of this labour market disadvantage is that they build up lower entitlements to pension payments. Because of their lower pension benefits, many women face a real threat of poverty and social exclusion in their post-retirement phase of life (Ginn and Arber, 1999). Also, women typically live longer than men and the higher risk of poverty of very elderly women, particularly of those living alone, is at least partly attributable to the fact that they are often widows (Zaidi, 2009). A key challenge facing pension systems in general is to secure a decent income in retirement for women with family and work experiences that differ greatly from previous cohorts (Yakibu, 2000; OECD, 2009, chapter 2).

Figure 2.14: At–risk–of–poverty rates, by age group and gender, in the EU, 2006
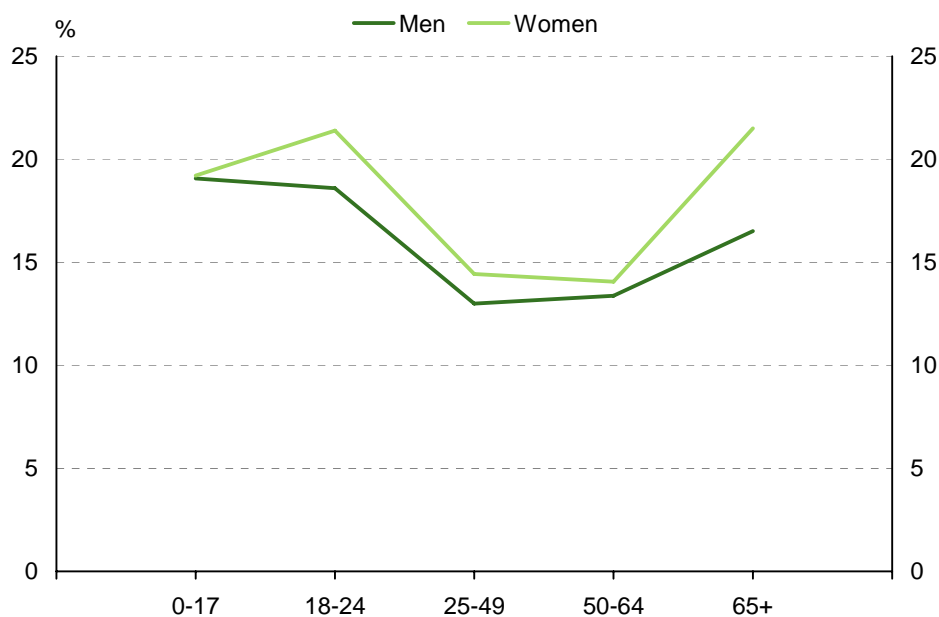
Source: Own calculations based on EU-SILC 2007.

Gender differences are pronounced within the elderly population, more so than among other age groups (Figure 2.14). As expected, in all countries the risk of poverty among elderly women is higher than among elderly men (Figure 2.15). The reasons are generally to do with lower pension entitlements (for the reasons outlined above). There is a particularly wide difference in the Czech Republic, Hungary, Slovakia, Slovenia, Poland, Sweden, Austria, Estonia and Latvia. As the figure shows, elderly women living alone have an exceptionally high risk of poverty (over 40%) in eight of the 24 countries. Living alone almost doubles the risk of poverty faced by elderly women in the Czech Republic, Slovenia, Ireland and Latvia.

Figure 2.15: At–risk–of–poverty rates among the population aged 65 or over, by gender, 2006
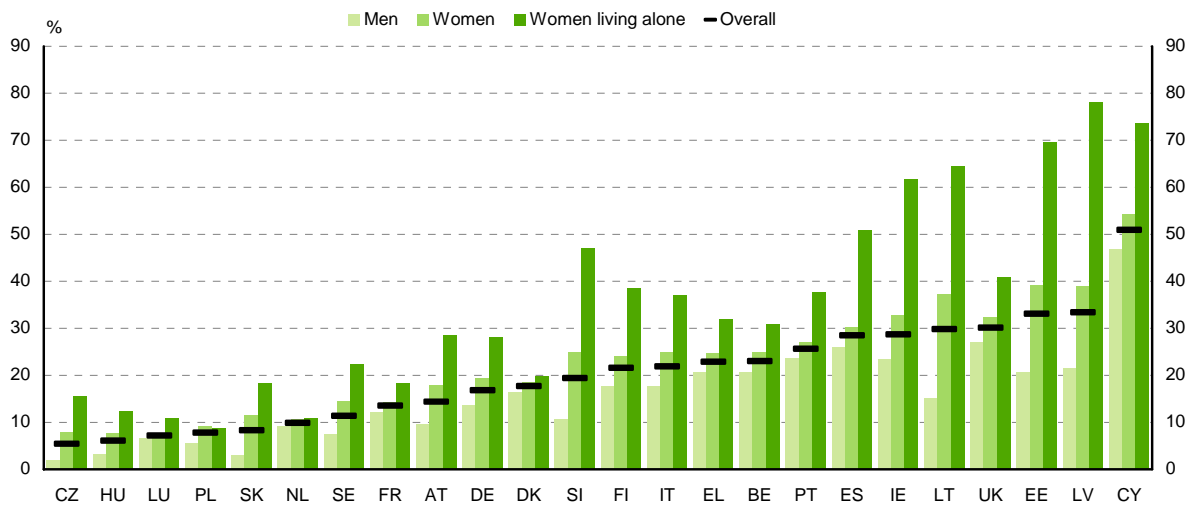
Source: Own calculations based on EU-SILC 2007.

The risk of poverty rises significantly with the number of dependent children in the household, in particular for those households with three or more children (see Figure 2.16 and Table 2.3 for the actual figures). In 14 of the 24 countries, poverty among families with two children is higher than among those with one child. This is true of the Mediterranean countries and most of the Central and Eastern European countries. The risk of poverty for families with three or more children, however, is much higher in certain countries, including the Czech Republic, Slovakia, Portugal, Lithuania, the United Kingdom and Latvia. By contrast (and contrary to the general picture across the EU), there are a few countries where large families do not suffer a relatively higher risk of poverty: Cyprus, Germany and Finland; and there are others where the additional poverty risk is relatively small: Sweden, Slovenia, Denmark, Belgium, Ireland and Estonia.

Figure 2.16: At-risk-of-poverty rates among households with dependent children, by number of children, 2006

Note: Poverty rates are calculated for those living in the household types indicated.
Source: Own calculations based on EU-SILC 2007.
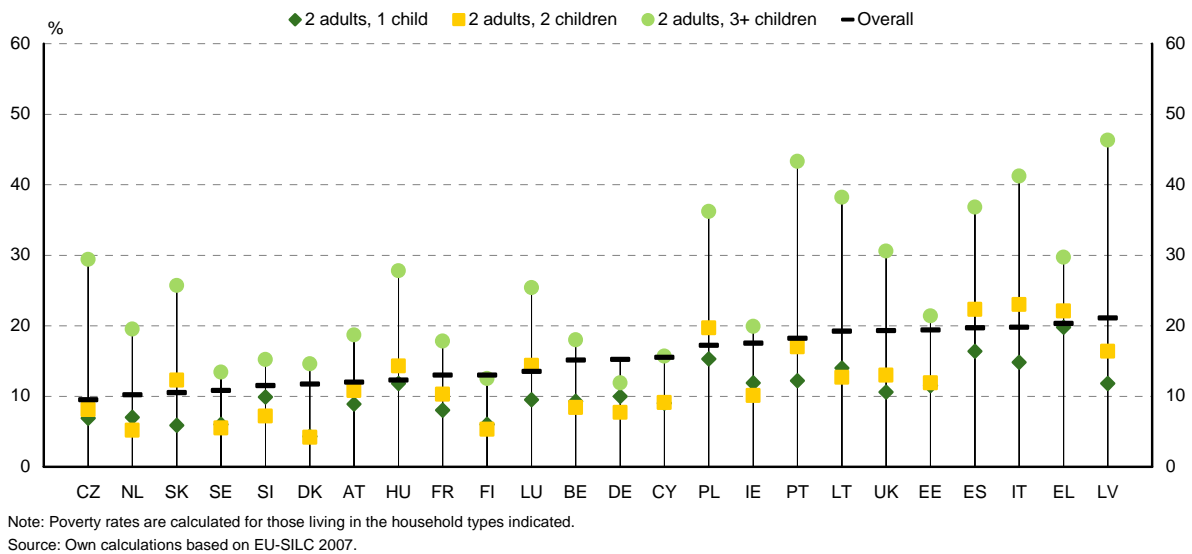
Single-parent households are particularly at risk of poverty in most countries, with poverty rates ranging from 17% to 46% (Figure 2.17). In over half of the countries, at least one person in three living in a single-parent household is at risk of poverty, with the highest rates in Ireland, Lithuania, the United Kingdom, Estonia and Luxembourg. Since up to 10% of households may be of the single-parent variety, this is far from a marginal social issue.

Figure 2.17: At-risk-of-poverty rates of single-parent household members and share of people living in such households, 2006

Source: Own calculations based on EU-SILC 2007.
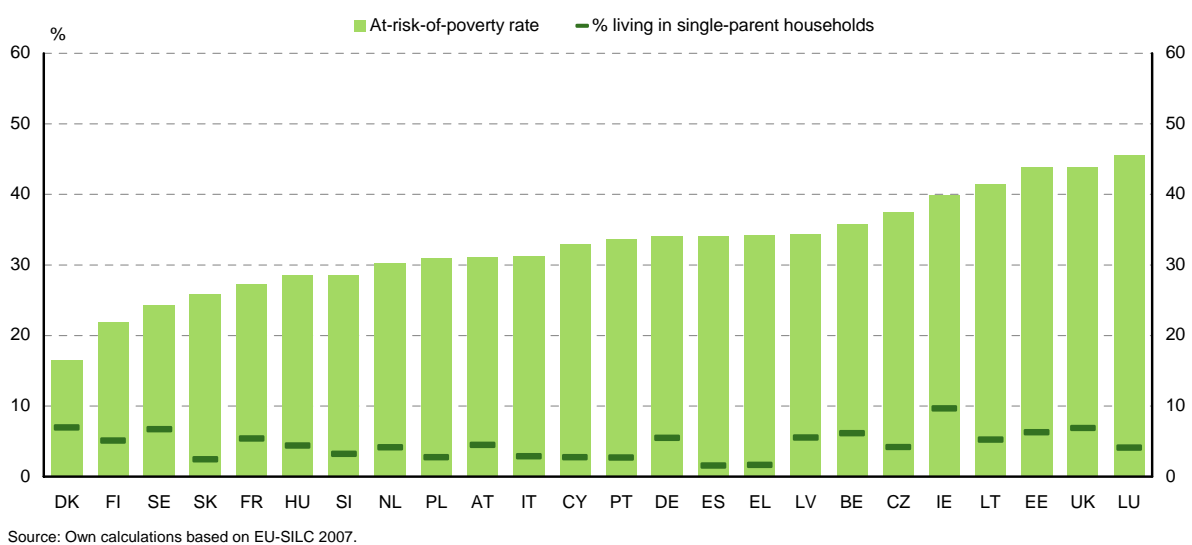
Employment reduces the risk of poverty substantially, as the largest slice of household income comes from earnings from work. On the other hand, employment in itself is not a sufficient safeguard against the risk of poverty in many countries. There is no straightforward relationship between the level of employment and the at-risk-of-poverty rate across countries (Figure 2.18). Countries with relatively high employment levels may have above-average (Estonia, UK) or below-average (Sweden) shares of the population at risk of poverty; while in countries with low employment, there might well be a good safety net protecting against the risk of poverty.

In line with these findings, using data from the Luxembourg Income Study, Cantillon, Marx and Van den Bosch (2002) find that, while there is no significant correlation between employment and the incidence of poverty, as many would expect, there is a strong and positive correlation between the incidence of relative poverty and **low pay** at a country level.

Figure 2.18: Employment rate and at-risk-of-poverty rate of the working-age population (aged 16–64), 2006
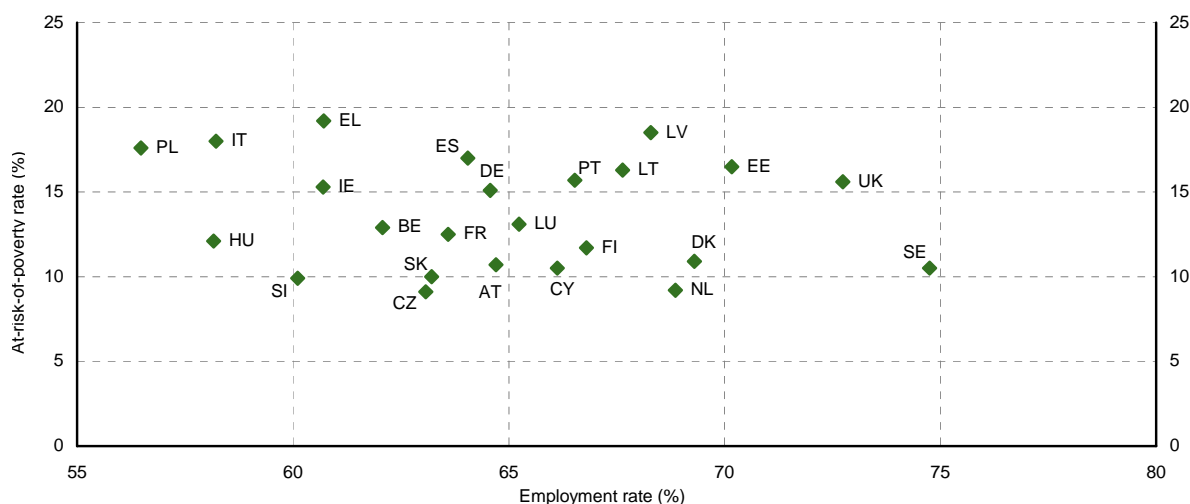
Source: Own calculations based on EU-SILC 2007.

Overall across countries, there seems to be no simple relationship between level of employment and the relative number of people at risk of poverty (at least measuring in relation to 60% of median income); but among **individuals**, employment is a key factor that reduces the risk of poverty.

In order to assess the relationship between employment and risk of poverty at a household level, we can apply a new measure of work intensity, which takes explicit account of part-time working (see the Appendix to this chapter for a description of the calculation of this).

We adopt a slightly different grouping of the estimated values for the work-intensity indicator to that included in the EU-SILC. This is in order to provide a more meaningful

division, by distinguishing couple households in which one person worked throughout the year from those households in which both people worked but either not full time or not throughout the year. (In the EU-SILC categorisation, both of these are included in the 0.5 to 1 group.)

Figure 2.19: At-risk-of-poverty rates by work intensity of households, using a new measure of work intensity, 2006
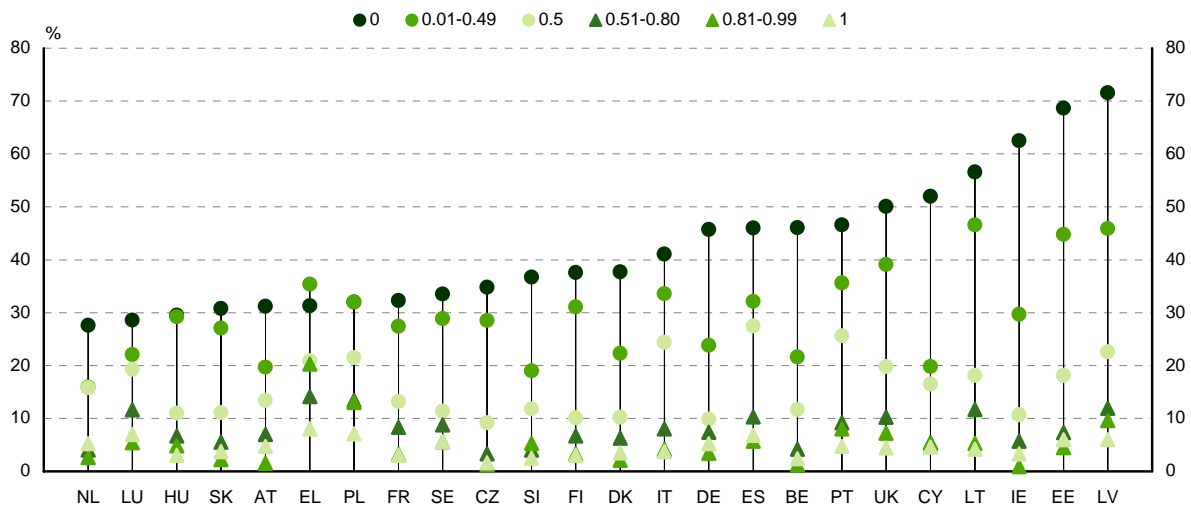
Source: Own calculations based on EU-SILC 2007.

Jobless households are at the highest risk of poverty in all countries except Greece. The risk among such households is particularly high (50% or over) in the Baltic states, Cyprus, Ireland and the UK. At the other end of the ranking come the Netherlands, Luxembourg and Hungary, where the risk among jobless households remains below 30% (Figure 2.19 and Table 2.4).

In most countries, the risk of poverty declines as the work-intensity index increases. The gains in terms of poverty reduction are greater among the lowest categories, between households with no jobs and those with some employment, which may refer to either part-time employment or employment of one of the household members. The difference in terms of poverty risk between jobless households and those with a work intensity of 0.5 can be over threefold. On the other hand, in the majority of countries there are only negligible differences in terms of poverty risk between those living in households with a work intensity of 0.51-0.80 or 0.81-0.99, or where all adults are in full-time employment (work intensity

equals 1). These forms of engagement in the labour market are particularly favoured by families with children, including those living with grown-up children.[23]

How vulnerable are migrants to the risk of poverty?

Definition of 'migrants'

The measurement of migrant status used here is based on country of birth. Among people aged 18 or over, migrants are those who were born outside their present country of residence, and a distinction is drawn between those born inside and outside the EU. Children aged under 18 and living with their parents are defined as migrants if **both parents** were born outside the country of residence. Those under 18 and living alone are treated in the same way as if they were 18 or over.[24]

The data on migrants, of course, only partially covers ethnic minorities. Thus certain groups that tend to be marginalised in society, in particular the Roma, remain hidden.[25]

Income poverty among the migrant population

Migrants tend to face a higher risk of poverty (defined conventionally as having income below 60% of the median) than do others (predominantly people born locally, in the country of residence). While the at-risk-of-poverty rate of the local population varies from 8% to 21%, and that of migrants whose origins are in the EU ranges from 8% to 28%, migrants with a non-EU origin can face at-risk-of-poverty rates of up to 43% (in Belgium). At-risk-of-poverty rates within the non-EU migrant group exceeds 30% in a number of countries, including Sweden, Spain, Italy, Greece, Finland, Luxembourg and Belgium (Figure 2.20).

The situation of EU migrants tends to be more favourable than that of migrants from outside the EU, although there are exceptions to this: in the UK, there is no significant difference

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[23] These latter households are classified as 'other households with no children' by Eurostat, as the children are not 'dependent' any more, due either to their age (25 or more) or to their labour market engagement (18 or over).

[24] Note that this definition of migrants includes those who have acquired citizenship since moving to the country. Such people vary markedly in number across the EU because of the different rules and requirements that govern the acquisition of citizenship in different countries. These differences are the reason for identifying migrants in terms of country of birth rather than citizenship (which is often the criterion). The issues of measurement, together with an analysis of the groups based on the two alternative definitions, are discussed in more detail in Lelkes and Zolyomi (2008).

[25] On this issue, see Platt (2007) and Bernat (2007).

between the poverty rates of the two migrant groups, and there is little difference in Ireland. Both countries have experienced substantial inward migration from the new Member States since they acceded to the EU (as well as before).

Interestingly, migrants fare no worse than the local population in Poland, Hungary, Slovakia and Portugal. In the first three of these countries, however, the migrant population is small (Table 2.5).

Figure 2.20: At-risk-of-poverty rate among migrants, by region of origin, 2006
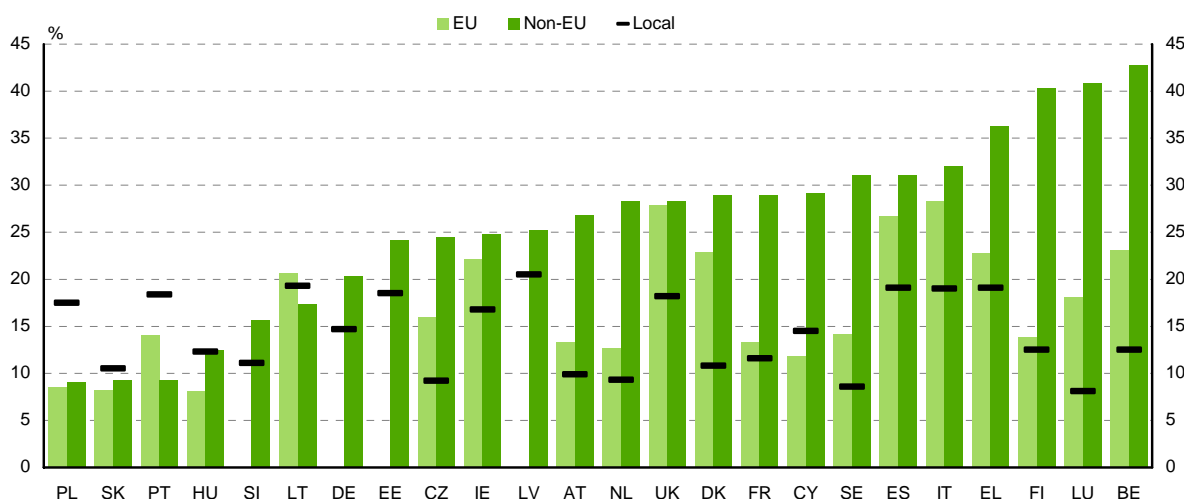
Note: The estimates are based on a low number of observations (20-49) in Lithuania (for EU) and in Slovakia (for non-EU).

Source: Own calculations based on EU-SILC 2007.

EU migrants tend to live alone more frequently than the locally born population. There are relatively more non-EU migrant families with three or more children or 'atypical' household formations with children (Figure 2.21). There is a particular pattern with respect to children: the majority of EU migrants tend not to have children (60%), in contrast to non-EU migrants and the local population, where less than half of the people in these groups are childless (46% and 49%, respectively). This may reflect the greater mobility of childless households within the EU. The most typical pattern of household formation among EU migrants is for them to live either alone or in a two-adult household where both adults are of working age. There is also a relatively large proportion of single-person households among non-EU migrants, while the share of households with three or more children (11%) is larger than among EU migrants (5%) or the local population (7%).

Figure 2.21: Household structure of the migrant population, by region of origin, 2006
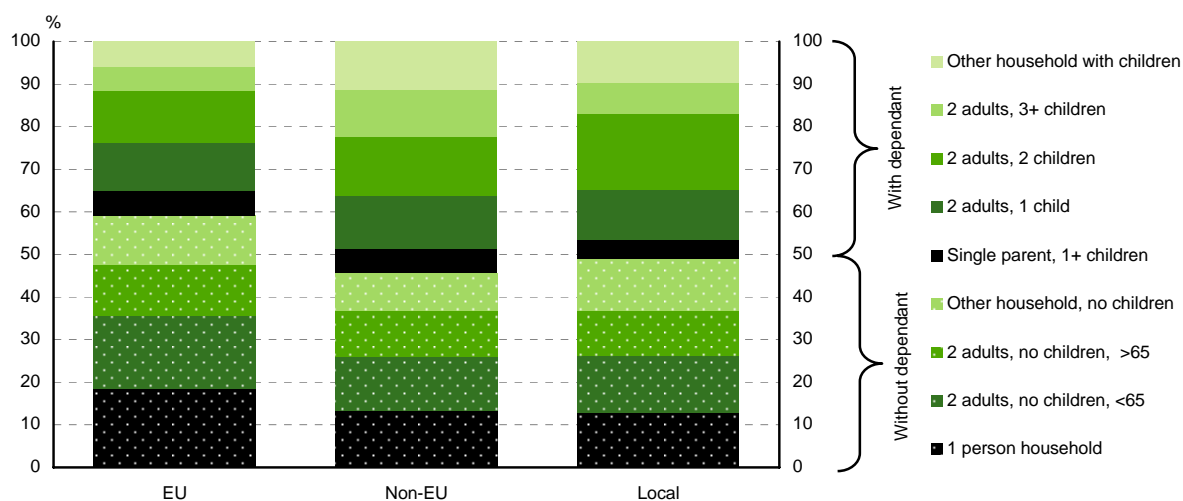
Source: Own calculations based on EU-SILC 2007.

The employment rate (based on self-declared economic status among those of working age) of non-EU migrants tends to be lower than that of the local population in most countries (the difference being particularly wide in Germany) (see Table 2.6). In nine of the 24 countries, however, non-EU migrants have higher employment levels than does the local population. This is especially true of Greece, Cyprus, Spain and Italy. This highlights the importance of the type of job that migrants tend to do and the kind of employment they have as factors underlying their tendency to be more at risk of poverty than others in the community.[26]

The share of employed people among EU migrants is, in a number of cases, smaller than among non-EU migrants. On the other hand, the share of EU migrants who are inactive tends to be larger than the share of inactive non-EU migrants and the local population. This pattern is particularly pronounced in some of the EU10 countries (Poland, Hungary, Slovakia and Lithuania).

Summary of main findings

Overall, some 16% of the population of the European Union is at risk of poverty (as conventionally defined) – a total of over 17 million people. The proportion ranges from 10% to 21%, with the lowest rates in the Czech Republic, the Netherlands, Sweden and Slovakia, and the highest rates in the UK, the Baltic states and the Mediterranean countries of Greece, Italy and Spain.

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[26] See Ward *et al.* (2009) chapter 3 for an analysis of the EU Labour Force Survey.

In recent years, the risk of poverty seems to have declined in Slovakia, Ireland and Poland, whereas it appears to have increased in Finland and Latvia. In most countries, however, it has not changed significantly.

The at-risk-of-poverty rates of children and the elderly tend to be positively correlated, which means that, in countries with levels of poverty risk that are above the EU average, both groups face a relatively high risk of poverty. Some countries, however, clearly stand out, in the sense that a specific age group has a comparatively large disadvantage in terms of risk of poverty – the elderly in Cyprus and children in Hungary, Poland and Luxembourg.

Women tend to be exposed to a higher poverty risk than men throughout the life cycle, with the exception of childhood. Gender differences are particularly pronounced among the elderly population, especially those living alone. Single-parent households and those with three or more children have an especially high risk of poverty.

Employment reduces the risk of poverty and the risk of poverty tends to decline as the work intensity of households increases, if we allow for part-time working and work for only part of the year.

Migrants, especially those from outside the EU, tend to face a higher risk of poverty than the locally born population. Although this may partly be due to demographic factors (a higher proportion of non-EU migrants appear to live in households with three or more children than do the local population), employment (participation, and therefore earnings from work) appears to play a greater role, though the types of job that migrants tend to do and their rates of pay seem to be as important as whether or not they are employed.

Appendix – Calculation of a new indicator of work intensity

The measure of work intensity included as a variable in the EU–SILC database, as indicated above, allows for the number of months worked during the income reference year but makes no allowance for part–time working or for the number of hours usually worked per week. The proposed alternative measure is similar to the EU–SILC variable but makes an explicit adjustment for hours worked if they are less than full–time hours (taken to be 35 hours a week or more). It is calculated to cover all members of a household aged 18–64 and summarises their employment status during the preceding year (the year to which income relates). The formula is:

$$\sum_{18}^{64} \frac{ftem_i + a_i * ptem_i}{ftem_i + ptem_i + unem_i + stm_i + rm_i + inacm_i}$$

where:

$ftem_i$ = total months in full–time employment of each household member aged 18–64 over the year

$ptem_i$ = total months of each household member in part–time employment over the year

a_i = weight applied to represent usual working hours of household members employed part time relative to full–time hours (i.e. average usual hours spent in part–time employment per week/35 – 35 being taken as the minimum number of full–time weekly hours), which has a maximum value of 1 (when usual hours worked are equal to full–time hours)

$unem_i$ = total months spent unemployed by each household member over the year

stm_i = total months spent studying by each household member over the year

rm_i = total months spent in retirement by each household member over the year

$inacm_i$ = total months spent in inactivity by each household member over the year

All the data used to calculate the measure come from the EU–SILC database, which gives details of the employment status of each individual aged 16 or over in the course of the preceding year, including whether they worked full time or part time.

The weight applied to those working part time during the previous year (which, in the measure included in the EU–SILC database, is implicitly taken to be 1) is based on their average usual hours worked each week at the time of the survey in both their main job and any additional job(s). It is assumed, therefore, that the hours in question are the same as those usually worked during the reference year. While in some case this may not be a valid assumption, it is analogous to the assumption made in the calculation of household income that the composition of the household was the same in the reference year as at the time the survey was undertaken. In cases where someone worked part time for at least one month

during the reference year, but currently works full time or does not work at all, an average estimate of part-time hours is used as a weight, taking explicit account of the characteristics of the person concerned – i.e. whether they are a man or a woman, and the broad age range to which they belong.

A second, much more minor, difference from the EU-SILC measure is the inclusion here of months spent in full-time education in the denominator of the formula. Because of this, and, more importantly, the explicit allowance for part-time working, the estimates of work intensity calculated using the proposed measure will, in a number of cases, be less than those indicated by the measure used in the EU-SILC database.

Just like the existing measure, the new one will assign a value of 1 if all members of a household aged 18–64 were employed full time throughout the preceding year, and a value of 0 if no one of working age was employed. It will give the same value as the existing measure if all those in work in a household were employed full time but worked for only part of the year, but it will give a lower value if anyone of working age was employed part time for any (or all) months of the year.

For a comparison of the new and the existing measures of work intensity, see Ward and Őzdemir (2009).

Chapter 3	EU-wide distribution of incomes

Márton Medgyesi

Introduction: The case for an EU-wide definition of relative poverty

The enlargements of 2004 and 2007, and the entry of countries with average levels of income well below those of the EU-15, have meant that the EU has become more heterogeneous. The set of indicators adopted by the EU to monitor social inclusion includes mostly **relative** poverty measures, which define the risk of poverty in relation to the median income of the country concerned. These indicators are meaningful from a national perspective, in that they identify those people with the lowest levels of income in each Member State who are most likely to be deprived of access to the resources that other people in the community take for granted. The people so identified, however, can have very different levels of income, depending on the Member State in which they live. To take the most extreme case, those living in Luxembourg have a median level of equivalised income that is five times higher than their counterparts in Poland, even when income is measured in purchasing power parity (PPP) terms to allow for differences in price levels between the two countries (see below).

Such differences have obvious relevance for two of the main objectives of the EU – to raise the standard of living and the quality of life for all its citizens and to promote economic and social cohesion throughout the Union. Progress towards reducing the differences is primarily assessed and monitored with reference to GDP per head, measured in PPP terms. This, however, is an indicator of the economic strength of the countries (or regions) concerned and of their output, rather than of income levels as such – and still less of the income received by households and the distribution of income between individuals.

To supplement the measure of GDP per head, therefore, there is a case for developing an indicator that focuses explicitly on household income (and, accordingly, on social rather than economic cohesion) and that takes account of income differences between Member States.

The need for an indicator that better reflects differences in living standards across the EU has been recognised almost since the first indicators were developed in 2001. A potential candidate might be the relative number of people with disposable income below a particular level, either in relation to median income across the EU as a whole or in absolute terms (income being measured, as in the case of GDP per head, in PPP terms to ensure comparability across countries).

Such a measure is not new; it has been suggested on a number of occasions in the recent past. Marlier *et al.* (2007) review the arguments for and against such an indicator, pointing

out, in tune with the arguments above, that an EU-wide poverty rate is more in line with the idea that the EU is a social entity in its own right and that individuals have social rights as citizens of the EU. At the same time, in the more prosperous countries, an EU-wide poverty rate would not treat as deprived many of those people who have low levels of income in national terms, whereas it would count as deprived many people with relatively high income in the least prosperous countries – people who are clearly not at risk of exclusion from the society in which they live.[27] This argues for an EU-level indicator to **complement** rather than to replace the present national indicators used.

The EU-SILC, it should be noted, makes the calculation of an EU-wide measure more possible (and more meaningful) than before by providing data on household income for all Member States – on a reasonably consistent basis. Accordingly, it enables those whose income falls below a certain level to be identified in terms of the parts of the Union in which they live, as well as in terms of their characteristics. It also enables the relative income of such people to be monitored over time, as well as the way in which this is affected by economic growth, as development takes place in the countries concerned.

In general, applying an EU-wide poverty line would mean a higher risk of poverty in countries with median income below the EU median; meanwhile, countries where median income is higher than the EU median would see lower poverty rates than in the case of a national poverty line.

Another way of taking account of income differences between countries is to focus on an **absolute** poverty rate. When defining absolute poverty, researchers refer to poverty lines that do not depend on the actual distribution of income in the society, but are independent of time and space – although maybe not entirely, since the need for income is not completely independent of context. Absolute poverty lines are often derived by first defining a minimum necessary level of consumption (e.g. food-energy intake) and then determining the total expenditure level that is necessary to meet this consumption level (Deaton, 1997).

Another possibility is to specify an expenditure or income level in monetary terms, and then set poverty lines for the various countries using an amount of money that has the same purchasing power for all countries. For example, the World Bank defined a $1.25 a day

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[27] This issue is examined by Whelan and Maitre (2009), who analyse the effect of consumption deprivation (benchmarked in overall EU24 terms) on economic stress in EU Member States. Their results show systematic differences between countries, as the effect of deprivation is greater in more affluent societies. They interpret the result as contradicting the hypothesis of the Europeanisation of reference groups.

expenditure level as an absolute poverty line, and this has come to be used extensively in analysis of poverty in developing countries (UN, 2009).

Here we examine the relative number of people across the EU with an (equivalised) income of less than EUR 5 (Lelkes *et al.*, 2009), converted into PPP terms to take account of the differences in what EUR 5 can buy in the various countries. The figure itself is largely arbitrary, but it helps to convey a picture of the proportion of the EU population with a level of income that would generally be regarded as low.

Measuring the distribution of income at the EU level

So as to compare income across countries, it must be measured in terms of a common standard (in order to take account of differences in price levels in the various countries), rather than simply converted into a common currency using the prevailing exchange rate (see Box 3.1). A common equivalence scale is also used across countries to take account of differences in the size and composition of households.[28]

Box 3.1: Comparing the incomes of individuals living in different countries

In order to make income in different countries comparable, it needs to be adjusted to take account of price-level differences between countries. As Marlier *et al.* (2007) state, the relevant adjustment is one that relates to consumption, rather than to total national product. In the spirit of this, we use as adjustment factors the comparative price levels published by Eurostat (Eurostat, 2009), which are made up of the ratio between purchasing power parities (PPPs) and the market exchange rate for each country. PPPs are currency conversion rates that convert economic indicators, as expressed in national currencies, into a common currency, which equalises the purchasing power of the different national currencies and so allows for meaningful comparison. The adjustment factors used are shown in Table 3.1 in the Annex. It is important to bear in mind that these adjustment factors relate to an average consumption bundle, which may be different from the consumption bundle of households in poverty.

A much more important factor, however, is the exclusion of benefits in kind and common services from the measurement of income. These vary widely across the EU, adding significantly to effective income in countries where they are important – such as the Nordic countries – and, accordingly, understating the differences in standards of living that exist between countries.

This analysis is based on data from the 2005 and 2007 EU-SILC. Country coverage of the database extends to 24 Member States. The data relate to the population living in private

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[28] The modified OECD scale assigns a value of 1 to the first adult in the household, 0.5 to additional members above the age of 14, and 0.3 to children under 14. Household income is then divided by the number of people living in the household, using these weights to derive an average equivalised sum, which is then assigned to each household member. See Brandolini (2007) for a discussion of comparisons of income distribution across countries.

households in the country in question at the time of the survey. Those living in collective households and institutions were, therefore, generally excluded. The income measure used in this analysis is annual net household disposable income, including any social transfers received and excluding direct taxes and social contributions. The reference period is the year 2006, apart from in Ireland, where it is the 12-month period leading up to the date of the interview.

Non-positive income values – which may arise because of the way the income of the self-employed is defined (i.e. essentially in terms of net trading profits) or because the taxes paid in a particular year exceed gross income – have been excluded from the analysis.

What do the latest data show?

Income distribution in the EU

In order to gain a picture of income differences both between and within countries, we show the distribution of incomes in individual European Member States in Figure 3.1 and Table 3.2. The income distribution of the countries is represented by the average income of each decile (i.e. of each 10% of the population, ranked according to their equivalised disposable income). The income values are shown in Euros at purchasing power standard (PPS), i.e. with cross-country price differences taken into consideration, thus allowing direct comparisons to be made. The countries are arranged in increasing order of average income.

Figure 3.1: Distribution of incomes in EU countries (in EUR at PPS), 2006
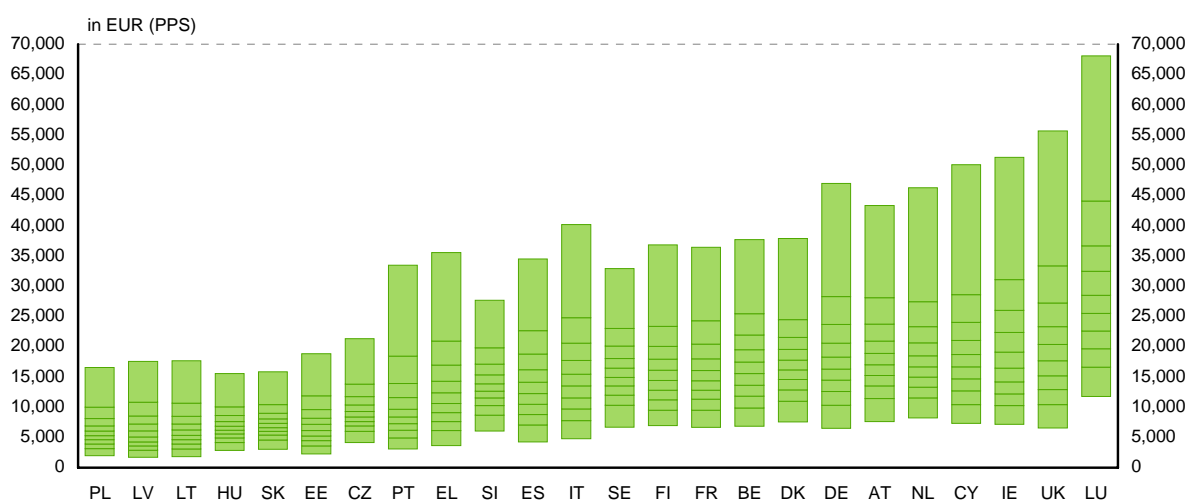
Note: Horizontal lines on the bars represent the average incomes of income deciles.
Source: Own calculations based on EU-SILC 2007.

As can be seen from Figure 3.1, there are significant differences between the EU Member States in terms of income levels, and a substantial proportion of the income inequality

between the citizens of the European Union can be explained by the differences in incomes from country to country. It is clear that there are significant income differences between EU15 and EU12 countries: seven new Member States are at the lower end of the country ranking by average income. Poland, Latvia and Lithuania have the lowest absolute overall income level, with an average equivalised income of below EUR 7,000 (measured in PPS terms). Other former socialist countries follow in the country ranking: Hungary, Slovakia, Estonia and the Czech Republic all have average incomes of between EUR 7,000 and 10,000. The only former socialist country that has a higher average income is Slovenia, where average income is higher than in Portugal or Greece and is close to that of Spain. As we can see, people in the top decile of the former socialist countries' income distribution have an average standard of living that is typical of people with middle incomes in many Western European countries.

The largest group of European countries is characterised by average incomes of between EUR 15,000 and 20,000 (measured in PPS terms). By far the highest average income level (PPS EUR 30,580) is recorded in Luxembourg, while average levels in excess of PPS EUR 20,000 are to be found in the United Kingdom, Ireland, Cyprus and the Netherlands.

Figure 3.1 also gives an indication of income inequalities in the various countries. In countries where relatively high inequalities are a feature, the average incomes of the ninth and tenth deciles are substantially higher than those of the bottom deciles. In Portugal, for instance, the average income of the top decile is almost double that of the ninth decile and almost treble overall average income.

Income inequalities in the EU can also be examined by relating individual incomes to the EU-wide median income. Five income groups can be defined relative to the median income. The first category groups together those with less than half the median income; the second group is composed of those with income between 50% and 80% of median income; members of the middle group have between 80% and 120% of the median; the fourth group has between 120% and 200% of the median; and members of the fifth group have more than double the median income. Figure 3.2 shows the income position of the populations of individual countries, relative to the overall European median income.

Figure 3.2: Distribution of incomes with reference to the EU median, 2006
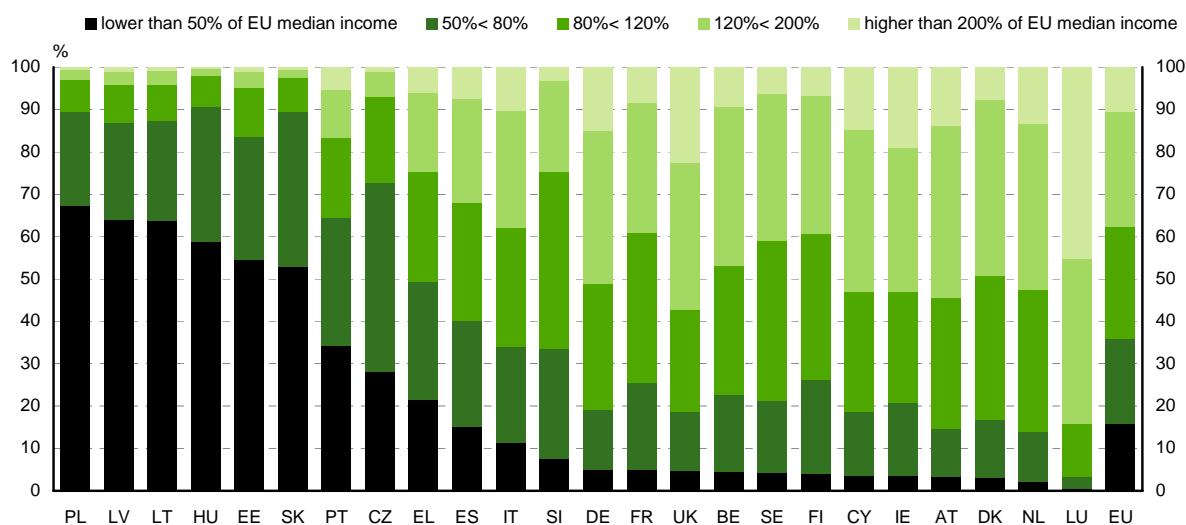
Source: Own calculations based on EU-SILC 2007.

Some 16% of Europe's population have a disposable income of less than half the European median. Some 20% have an income of between 50% and 80% of the median, while 26% have an income of around the median level. Some 27% have income that is between 20% and 100% higher than the overall European median income, while 11% have an income that is at least double the median.

With the exception of Slovenia and the Czech Republic, most people in the former socialist countries belong to the lowest income group. At the other end of the scale, in Luxembourg, the Netherlands and Denmark, under 3% have income that is less than half the EU median. In the Baltic states, Poland, Hungary and Slovakia, only 10–15% of the population have income around or higher than the EU median. In the Czech Republic, 27% have this level of income, and in Slovenia the proportion is two-thirds. But this is still much smaller than in higher-income countries: in Luxembourg, the Netherlands, Austria, Germany, the UK and Cyprus, more than 80% of the population have income higher than the EU median. Almost half of all people in Luxembourg (45%) have incomes that are more than double the overall European median, and over a fifth of the UK population also belongs in this category.

How many people across the EU are at risk of poverty if this is measured on an EU-wide basis?

Measuring low income with an EU-wide threshold

The poverty threshold can be defined at various levels relative to EU median income: Figure 3.3 shows poverty rates with the poverty line set at 60%, 50% and 40% of EU median income. According to the EU-SILC data for 2006, some 23% of all EU citizens have income below 60%

of the EU median income, 16% have income below 50% of the median, and 10% have income of less than 40% of the median (see also Table 3.3).

The proportion of people with income below the threshold is highest in the former socialist countries, whichever of the thresholds is considered. This is because average income is lower than in the EU15 countries. In Poland, 78% of the population have income of less than 60% of the EU median; in Latvia, Lithuania and Hungary – 74-75%; and in Slovakia and Estonia the figure is 68-71%. In Portugal and the Czech Republic, a little under half of people have income below this level; in Spain and Greece the figure is 24-31%. At the other end of the scale, the figures are below 5% in Luxembourg and the Netherlands, and just above that level in Austria and Denmark.

Figure 3.3: Poverty rates relative to the EU median, 2006
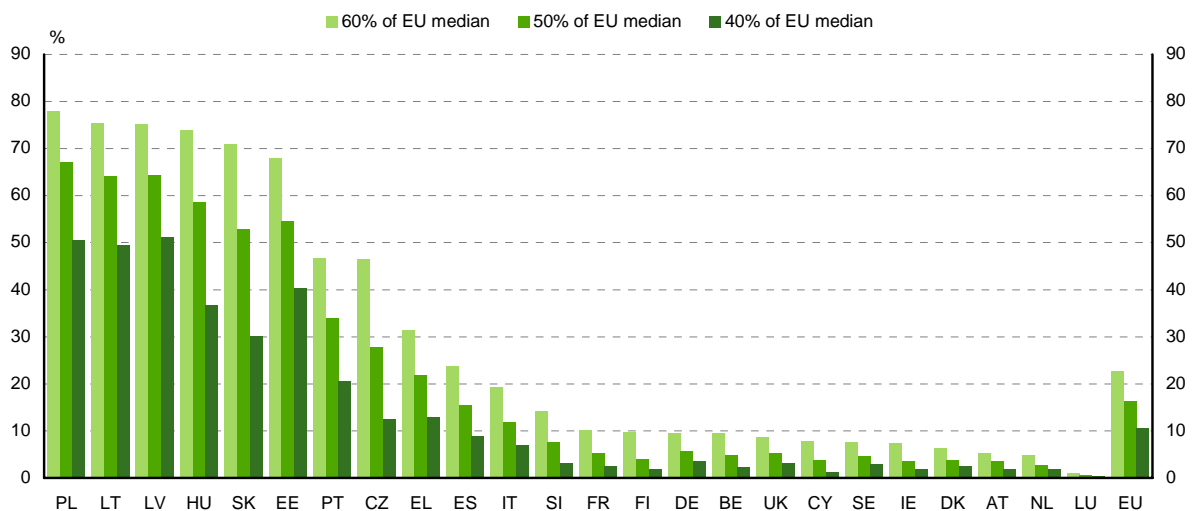
Source: Own calculations based on EU-SILC 2007.

There is not much difference in the country rankings if the poverty threshold is set at 50%, rather than 60% of the median. However, the rankings change if the threshold is set at 40% of the median. In this case, the largest proportion of people with income below the poverty threshold is to be found in Latvia (51%), while the figure is higher in Estonia (40%) than in Hungary (37%) or Slovakia (30%). In the Czech Republic, the figure is much the same as in Greece (unlike the situation when the poverty threshold is set at 60%).

When the risk of poverty is defined at an EU level, Poland stands out as the country with the largest number of people who have income below the threshold (28% of the total EU figure at the 60% threshold and 40% at the 40% threshold). Italy and Spain each have 10% at a threshold of 60% of EU median income, and Germany and Hungary have 7% apiece (see Figure 3.4).

Figure 3.4: Countries' share of total EU population with income below 40%, 50% and 60% of the EU median, 2006
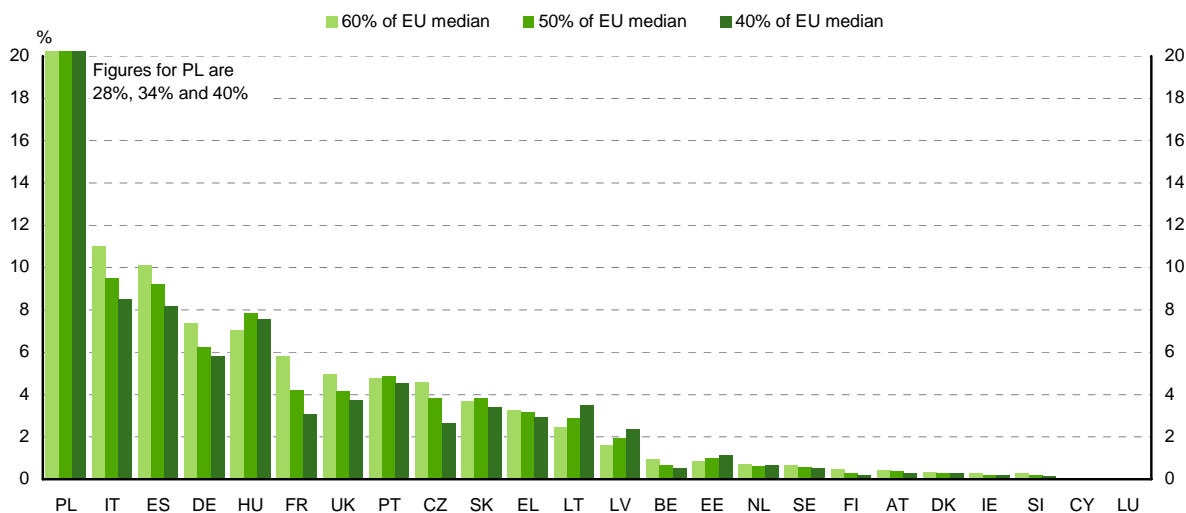
Source: Own calculations based on EU-SILC 2007.

The proportion of the EU population with income below 60% of the median defined at an EU level was much the same in 2004 as in 2006. Nevertheless, the share of countries with relatively high rates of economic growth (such as the former socialist countries and Ireland) declined over these three years (Figure 3.5).

Figure 3.5: Proportion of population with income below 60% of EU median, 2004 and 2006
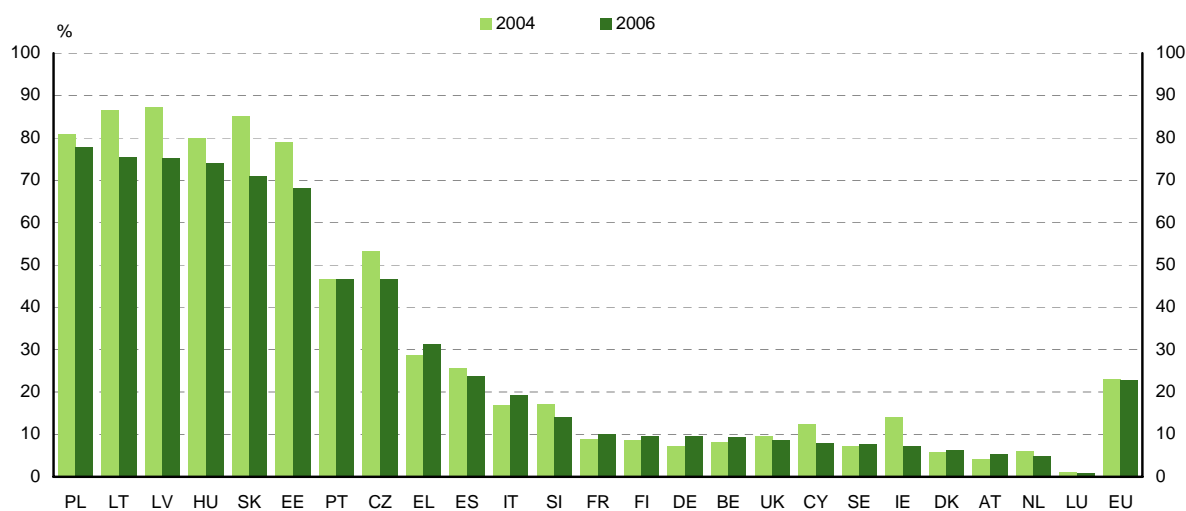
Source: Own calculations based on EU-SILC 2005 and 2007.

What proportion of the EU population has income of less than EUR 5 per day?

In Latvia, 17% of the population had income of less than PPS EUR 5 a day in 2006, while in Lithuania the figure was 16%, and in Poland 12%. Apart from Estonia, Hungary and Slovakia,

where the figure was 5-7%, in all other EU countries the proportion was below 2% (Figure 3.6).

Figure 3.6: Poverty rates with a EUR 5 a day poverty threshold, 2006
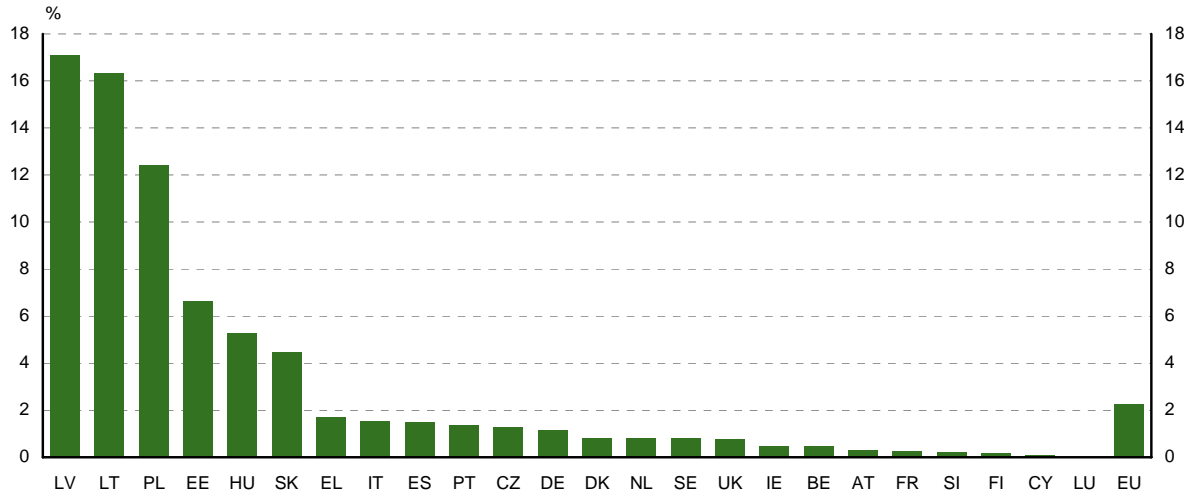
Source: Own calculations based on EU-SILC 2007.

Summary of findings

Analysis of the EU-wide income distribution shows clearly the effect of differences in income between the EU10 countries, which entered the EU in 2004, and the existing EU15 Member States. In the Baltic states, Poland, Hungary and Slovakia, only 10-15% of the population have income higher than the EU median. By contrast, in Luxembourg, the Netherlands, Austria, Germany, the UK and Cyprus, this is true of over 80% of the population. In general, those in the top income decile in the EU10 group of countries have an average level of purchasing power that is typical of middle-income earners in the EU15.

Some 23% of EU citizens have income below 60% of the EU median income; this compares with 16% who have income below the various national medians. The largest proportions of people with income below the EU threshold are to be found in Poland, Latvia and Lithuania. Of all the people in the EU with income below the threshold, some 28% are to be found in Poland and around 10% in Italy and Spain.

Around 2% of EU citizens have an equivalised income of less than EUR 5 a day. Though this is only a very small proportion, nevertheless it represents over 9 million people across the EU25. Some 17% of people in Latvia and over 10% in Poland and Lithuania have income of less than this amount.

Between 2004 and 2006, the difference in the risk of poverty measured at the EU level between the EU10 and the EU15 countries narrowed because of the above-average growth rates in the former. The gap had narrowed even more if the poverty threshold is set at EUR 5

a day. Since 2006, however, the large fall in GDP in the Baltic states in particular is likely to have widened the gap (though by how much will not become clear for another two or three years, when the results of the 2010 EU-SILC become available).

Chapter 4	Income in kind

Terry Ward and Erhan Őzdemir

Introduction

Some elements of income in kind are currently included in the measurement of disposable household income adopted by the EU–SILC (such as benefits provided as part of earnings from employment – in practice, mainly company cars), while others are not. In particular, the production of goods for one's own consumption is, in most cases, excluded from income as measured, despite the fact that this is relatively important for some households, especially those in rural areas. The concern here is to assess the scale of this element and of income in kind included in earnings from employment, and see how they vary across the EU and between households with differing income levels within different countries. In the case of the production of goods for one's own consumption, we also want to examine the effect there would be on the estimation of the risk of poverty if this element were to be routinely included as part of household income.

Production of goods for own consumption

The analysis of the production of goods for own consumption is based on the data published in the EU–SILC for 2007, and so is dependent on the extent to which the value of this element is covered and accurately reported by the survey. This is by no means clear – not just because there is no way of knowing how far the information was reliably recorded, but also because the data concerned are not shown separately for the self–employed (who are perhaps the most likely recipients of this kind of income), but are lumped together with their monetary income.[29] The question this raises is whether – and to what extent – the production of smallholdings (which are almost exclusively geared up to own consumption and which account for a significant proportion of employment in some Member States, especially Poland and Lithuania) is accurately recorded by the EU–SILC. (In both countries, a large number of smallholdings produce no output at all for the market.)

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[29] According to the description of the variable in the documentation published by Eurostat with the EU–SILC user database.

What is the scale of production for own consumption and how does it vary between households?

According to the EU-SILC, across the EU as a whole in 2006, the value of production for one's own consumption amounted, on average, to only 1% of disposable income. The figure, however, varies considerably from country to country, ranging from an average of almost 5% of disposable income in Latvia to less than 0.1% in Luxembourg and, perhaps surprisingly, Cyprus and Hungary (Table 4.1 in the Annex).

Production for own consumption is, as might be expected, more important for those with low levels of income. For those people with income below 60% of the national median, it amounts, on average, to almost 13% of disposable income in Latvia, over 6% in Poland and the Netherlands and 5–6% in Denmark, Germany, Greece, Italy and Slovenia. On the other hand, it still represents only 0.1% or less of income in Cyprus and Hungary.

The importance of production for personal consumption is even greater for those with income below 40% of the median, averaging 10% of disposable income across the EU as a whole and reaching 24% in the Netherlands (though the number of observations is small), 20% in Latvia and 19% in Denmark (where the number of observations is also small), while in a further six countries – Germany, Greece, Italy, Poland, Slovenia and Estonia – the proportion is 10% or more.

As expected, production for own consumption is especially important in rural (or sparsely populated) areas, amounting to around 10% or more of disposable income for those with income below 40% of the median in nine of the 21 Member States for which data are available and around 9% in another country (Table 4.2). Nevertheless, in a number of countries the difference between rural and urban (or densely populated) areas is small – Germany, Greece, Italy, Slovakia and Sweden. Indeed, in Greece, Slovakia and Sweden, the value of the production of goods for own consumption is greater for those people with income at this level who live in urban areas than in rural ones.

How does the at-risk-of-poverty rate change if the value of goods for own consumption is included in income?

The inclusion in disposable income of the production of goods for own consumption, by raising the effective level of income, tends to reduce the proportion of people at risk of poverty, as measured in the usual way. The reduction, however, is small in all countries. Even in Latvia, where the effect is greatest, it reduces the proportion of people below a poverty threshold of 60% by only just under 2 percentage points (from 21.2% to 19.4%) and (except for in Portugal and Slovenia) it lowers the proportion generally by less than 0.5 of a percentage point (Table 4.3).

While the reduction is slightly larger in proportionate terms if the poverty threshold is set at 40% of the national median, it remains relatively small in most countries: the proportion of people with income below this level across the EU as a whole declines only marginally, from 5.3% to 5.2%.

What is the contribution of earnings in kind to disposable income?

Income received by employees in the form of company cars or other benefits provided by employers as part of their earnings is included by the EU-SILC in disposable income and, accordingly, enters the measurement of income distribution in different countries. The amount concerned averages only just under 1% of total disposable income in the EU as a whole, and in only four countries – Belgium, the Czech Republic, Estonia and Slovakia – is it much over 1% (reaching 3.5% in Slovakia). It is particularly small in France, at just 0.1% of disposable income on average.

Most of the income in kind consists of company cars (which, until the 2007 survey, were the only item counted as earnings in kind in the EU-SILC). These represent over 90% of such income in the data compiled by the EU-SILC; in Germany and the UK they represent 99–100%. In all countries, this element accounts for over 60% of earnings in kind. It makes up less than 85% only in Poland (61%), Belgium and Slovakia (65–66%) and Italy and Latvia (75–76%).[30]

As might be expected, the value of earnings tends to vary with income. In proportionate terms, it contributes more in nearly all countries to the income of those at the upper end of the income scale than those lower down (Table 4.4). The only exceptions are Greece (where the value is similar across the income distribution) and France (where it is small at all income levels). The difference is particularly marked in Belgium, the Netherlands and the UK, where, for those in the top income quintile (the top 20% of income recipients), earnings in kind account for over 2% of disposable income, whereas for those in the bottom quintile they account for under 0.5%.

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[30] How far these figures reflect the true position in different countries and how far they merely reflect differences in the efforts made to collect information on elements of earnings in kind other than company cars is open to question.

| Chapter 5 | Measuring wealth and the implications for measures of distribution and the risk of poverty |

Eva Sierminska

Introduction

As was indicated above, the risk of poverty, as conventionally measured, and indicators of inequality tend to be based solely on estimates of annual household income and take no account of accumulated wealth or the effect of this on purchasing power and living standards. This is a potentially serious source of distortion, which is liable to lead to misleading conclusions being drawn as regards the extent of inequality and the relative number of people at risk of social exclusion (with obvious implications for policy).

Understanding of differences in economic well-being can be enhanced by including an additional dimension – wealth. The stock of wealth is important in explaining the level of consumption of goods and services and for generating income. It can also serve as a source of reserve funds, allowing for consumption 'smoothing' during periods of income fluctuation. An analysis of cross-country levels and distribution of wealth is an important complement to an analysis of income levels and distribution.

Estimating the scale of wealth in different EU countries – and its distribution between individuals and households – has of late increased in importance, in the wake of several developments: there was a sharp rise in stock and house prices, followed by a dramatic collapse in many countries; the shrinking of the welfare state has shifted risk from governments to individuals; and there have been changes to health insurance and to retirement programmes.

One of the difficulties that wealth analysis has had to contend with is data availability: the data are sparse and difficult to collect. Nevertheless, efforts have been made in the recent past to provide researchers as far as possible with cross-national comparisons of the importance of wealth in measuring the economic well-being of households and individuals.

How is wealth defined in different countries?

There are many ways of defining wealth. Here the focus is on net worth, which measures the value of all non-human assets less liabilities (debt). The problem lies not so much in defining the general concept of wealth or net worth, as in actually measuring it.[31]

In order to be able to compare wealth levels across countries, not only do we need to know about the differences in the definitions of wealth used in the different countries, but we also need to have information about surveys. Differences in sampling and data collection, while highly technical in nature, can be very important for cross-country comparisons of wealth. For instance, whether or not a particular survey over-represents the wealthy can have a very large impact on the estimated level of wealth, as well as on its distribution. There is also a need to choose a common metric to compare wealth. In what follows, national currencies are converted to 2007 Euros.[32]

The exact definition of net worth varies, depending both on what is available in the data and on the purpose of each study. In Italy, Brandolini *et al.* (2004) define household wealth as the total market value of dwellings, consumer durables and financial assets, net of debt. The value of small unincorporated businesses is excluded, as is the value of life insurance and private pension funds.

In Finland, net worth includes financial and non-financial assets, including housing and consumer durables, net of debt. The main omission in this definition is the value of forests – a very common asset among the population. The sample is based on income distribution surveys, which oversample high-income earners, but do not specifically target the wealthy. In the case of Finland, a comparison of interview data and register data suggests that average gross wealth from tax data is estimated to be about a half of that based on detailed interviews (Jäntti, 2006). When it comes to debt, the administrative data put it a little higher than the interview information: tax data thus tend to undervalue assets and to value debt at close to its true value. Using tax assessment is cost-effective for data-gathering purposes, but is associated with many well-known problems, such as major undervaluation of different assets and the fact that whatever is not included in the tax assessment is missed altogether. The Swedish sample is based on a household panel survey – the so-called 'HUS'.

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[31] Many current net worth definitions seem to be data driven, but are not consistently used across studies (Sierminska, 2005).

[32] We use OECD price indices and purchasing power parities (PPPs) for actual private consumption to convert the data to 2007 US Dollars (USD). Then we use the exchange rate to convert to Euros (1 USD = EUR 0.7306).

Banks *et al.* (2002) look at the distribution of financial wealth in Great Britain and provide some analysis of pensions and housing wealth. Their concept of net worth includes savings, investments (excluding pensions and housing) and debt. A more comprehensive analysis of British wealth is not yet possible due to the lack of a survey that would measure all dimensions of wealth.[33]

The USA has the most comprehensive wealth survey in the world – the Survey of Consumer Finances (SCF). As well as asking multiple wealth questions, it oversamples the wealthy, which allows for more accurate measurement of wealth at the top of the distribution and, therefore, also of both total and mean wealth. The SCF also imputes missing values, which improves its accuracy. To highlight the sensitivity of results to different sampling frames and data-collection techniques, we also include results from another US survey – the Panel Survey of Income Dynamics (PSID). The PSID uses some imputation methods, but has substantially fewer wealth questions and does not oversample the wealthy. Even though the SCF is more comprehensive, the PSID is often used, since it is more comparable to the European surveys available.

Sampling is particularly important in wealth surveys, since wealth is much more highly concentrated than income. Questions about wealth are often deemed to be sensitive, and this can lead to large non-response rates. If non-response rates increase with the level of wealth, the total level of wealth can be seriously underestimated, unless special care is taken to ensure sample responses at the higher end of the wealth distribution.

The 1998 German data we report come from the income and expenditure surveys conducted by the Federal Statistical Office of Germany. The data are top-coded for income and are obtained from self-assessments of wealth,[34] which are considered to understate true wealth (Eymann and Börsch-Supan, 2002). The data from 2002 come from the German Socio-Economic Panel (SOEP) and include seven wealth components: main residence, other real estate property (including debt), financial assets, private pensions, business assets, tangible assets and consumer credit (Frick *et al.*, 2007). The Dutch data in turn stem from the DNB Household Survey, an annual panel that has a substantial oversampling of high-income earners. The data have quite comprehensive information on different components of household wealth.

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[33] The Wealth and Asset Survey will be made available in late 2009 by the UK Office for National Statistics.

[34] In most surveys, the data on wealth are self-declared.

In Spain, the data come from the Spanish Survey of Household Finances (EEF) and the net worth concepts include financial assets, pension wealth, real estate wealth, business equity, vehicles and jewellery and other valuables net of all outstanding debt (Bover, 2008).

Thus, available wealth data have been collected in many different ways and differ in their scope and sampling methodology. These differences should be considered whenever cross-national comparisons are carried out.

Wealth levels across EU countries

A comparison of average household wealth levels for the late 1990s and the early years of this decade is shown in Table 5.1 in the Annex. European countries have been grouped to the left and other countries to the right. According to the broadest measure of wealth (net worth) in Europe, there are striking differences in average wealth levels. Average wealth in the richest country (Italy) is over four times that in the poorest country (Finland). The highest levels of wealth can be found in Italy and Spain, then in Germany and the Netherlands, and finally in Sweden and Finland. Thus the ranking of these countries can be summarised as follows – the highest level of wealth is in the Mediterranean countries, then the Continental countries and finally the Nordic countries.

The wealth levels in other, non-European, countries are, for the most part, higher than those in Spain (with the exception of Canada). There is also a big difference in the measurement of average wealth using different surveys in the US. These numbers are skewed upwards by a relatively small number of wealthy households, as the difference disappears once we look at the median level of wealth.

As mentioned before, differences in sample design (and, in particular, whether the wealthy are oversampled) may have a great impact on the estimated average wealth levels. The analysis of median, rather than mean, wealth levels is therefore warranted.

There is far more evidence on the typical or 'median' household in non-European than in European countries. Median net worth is much closer (and the dispersion smaller) in European countries. In non-European countries, the richest households are in Japan, followed by Australia and the USA. If we switch to this measure of wealth, it matters little to the conclusions which of the US surveys we use. We can also gain some idea of wealth inequality in the USA, for example, by noting that median US net worth is much closer to that of Sweden, whereas the mean was 2.5–3 times more (Table 5.1).

It is tempting to speculate that, in some European countries, the low levels of net worth and the differences between countries can in part be explained by the presence of statutory earnings–related pensions.[35] While the details vary from country to country and also change over time within the individual countries, the existence of pensions legislation that makes future benefits a function of earnings or, in some cases, lifetime earnings (e.g. Sweden and Finland) will almost certainly affect the perceived need for savings and therefore of wealth accumulation. A partial correction for this in cross–national studies would be to impute, based on labour market characteristics, some measure of the net present value of future expected pensions for those who have not yet retired. Such corrections are not possible without access to individual–level microdata, which are rarely collected.

Because of the non–negligible differences in the potential definitions of net worth concepts, it may be more meaningful to examine the most comparable specific components of net worth across countries – for example, the value of the main residence. The owned home is the main component of assets in most countries, amounting to roughly two–thirds of the value of the wealth portfolio. In Europe, the highest average home values are to be found in the UK, Italy, Sweden, Germany and Finland.

The rankings change once we compare average values for homeowners (rather than for the whole population, as above), because of differences in ownership rates across countries. Bicakova and Sierminska (2008) find, in a five–country study, that the highest home values among homeowners are in Germany, the UK and Italy, followed by the United States and Finland. If we take medians conditional on ownership, a similar ranking prevails.

Turning next to debt, the lowest levels in Europe are to be found in Italy, Finland, Germany, Sweden and the Netherlands. In other countries it is much higher, with the USA leading, followed by Australia and Canada.

Distribution of wealth

Evidence as to the distribution of wealth between households is provided by two international studies on wealth inequality. The Davies *et al.* (2008) study assembles estimates clustered around the year 2000. The sources of these data are mostly household surveys, but there are three from wealth registers (Denmark, Sweden and Switzerland) and two from estate multiplier estimates (France and the UK). The Luxembourg Wealth Study

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[35] This has been the case for Australia and Germany, for example. Frick and Headey (2009) show that wealth levels in households with retired heads are equalised once estimates of future social pension income flows are included. Without social pension entitlements, the wealth level in Australia is more than double that in Germany.

(LWS) is a data archive of household surveys, the goal of which is to harmonise wealth and income data, in order to provide a definition of wealth that is comparable across countries. It should be noted that, in order to achieve a common wealth definition across countries, some components (such as business assets and retirement accounts) have not been included in the figures presented in the table. In addition, survey techniques differ in countries (for example, some include the very rich and others do not). In other words, care must be taken when comparing two estimates of the same statistics because aspects of the data may limit their comparability.

The results of these studies are summarised in Table 5.3. To give some idea of the differences in the distribution of wealth and income, the Gini coefficient for household disposable income from the Luxembourg Income Study (LIS) is included in the last column. Note that the coefficient for income is half (or often only a third) the size of the coefficient for wealth, suggesting very great wealth inequality and confirming the characteristics of wealth distribution: great skewness of the data and a large concentration of very low and zero values.

The wealth Gini coefficients in Davies *et al.* (2008) and the LWS show similarities as well as differences (which may be the result of different surveys, different wealth definitions or different survey years). The two sets of Gini coefficients suggest a similar ranking of the countries, but different magnitudes. For instance, Sweden has the highest Gini coefficient in the LWS and the second-highest Gini coefficient in the estimates of Davies *et al.* (2008). At the same time, it has one of the lowest values based on the mean and median results.

On all available measures, Finland has one of the lowest levels of net worth inequality, and the USA has one of the highest.

These differences in the levels of net worth inequality from different sources underline the importance of allowing researchers to make their own data definitions and their own choices, using microdata from several countries when they draw conclusions about wealth levels and distribution.

The picture revealed by the 'top shares' is similar to that shown by the Gini coefficient. In Europe, Sweden has one of the highest shares of wealth held by the top 10%. It is followed by Germany and the UK, Finland and Italy.

It is interesting to note that Sweden and Germany appear to be the most unequal countries in Europe in terms of wealth distribution, which is not at all the case in terms of income. One of the reasons for this is that a large proportion of households have very little or negative wealth – in Germany around 38% and in Sweden 32% (Sierminska *et al.*, 2006). Low wealth levels can reflect measurement errors, but also the low rates of home ownership (in

Germany) and high debt (in Sweden), as well as the dampening effect of public pensions on savings.[36]

Implications of taking account of wealth in inequality and poverty measures

The social indicators that are used to monitor social cohesion and inequality over time and across countries (such as quintile shares and poverty rates) are routinely computed from data on household income. This is not, however, so often the case with wealth. However, there is little doubt that it is a relevant measure of living standards and one that can capture long-term economic resources better than monthly or annual income flows. The main reason for the unbalance between the use of income-based social indicators and wealth-based indicators up until now has been the availability of reliable data. Although many standard tools used in income analysis can also be used for wealth analysis, certain features of wealth distribution make the measurement of inequality rather more challenging. These include the presence of a substantial amount of negative net worth in most sample data on wealth, the strong skewness and the fat tails of the distributions, and the large proportion of the population with little or no wealth.

There is also no consensus as to how to define wealth poverty. In the USA, there have been some attempts to incorporate wealth into the income measure, either by annuitising it over the expected remaining years of life (Weisbrod and Hansen, 1968; Rendall and Speare Jr., 1993) and adding it to annual income, or treating it as stock. Studies suggest that when this income net worth measure is used to calculate poverty rates in the USA, the rate is lower than the rate of income poverty, with substantial reductions in the poverty rates of older families (Haveman and Wolff, 2004).

A recent study (*ibid.*) has attempted to define wealth poverty, calling an asset-poor household one 'with insufficient assets to enable it to meet basic needs for a period of time (three months)…' To provide a joint measure of income and assets, the poor are defined as those that have neither annual income in excess of the poverty line nor assets in excess of 25% of the poverty line. Haveman and Wolff find that, while there has been a decrease in income poverty, asset poverty increased slightly over the last two decades of the previous century. In addition, asset poverty falls steadily with age and education, while it is more prevalent among renters than homeowners.

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[36] On pensions, see Domeij and Klein (2002) for Sweden and Frick and Headey (2009) for Germany.

More recently, there have been several studies that also apply the concept of asset poverty in cross-national comparisons, albeit with a slight modification. Here households are considered to be asset poor if their financial asset holdings are less than 25% of annual median income (Gornick *et al.*, 2009a, b). The cross-national findings for elderly women indicate that asset poverty is very prevalent (between 30% and 55% are asset poor) in European countries and between 43% and 56% of households are either income or asset poor, or both.

Relatively little is known about the relationship between income and wealth, especially outside the United States (Kennickell, 2009). Initial work using the Luxembourg Wealth Study (Jäntti *et al.*, 2008), however, indicates that net worth and disposable income are highly, but not perfectly, correlated across people within countries.

Concluding comments

It is difficult to provide descriptive statistics for the level, composition and distribution of wealth across countries because of differences in definitions and measurement. There are certain features of wealth distribution that provide an additional challenge in offering meaningful indicators. Nevertheless, there has been some recent progress – through, for example, the construction of the Luxembourg Wealth Study (Sierminska *et al.*, 2006). It remains undisputable that wealth represents an additional dimension in the measurement of economic well-being and should be taken explicitly into account when assessing overall well-being across Europe.

| Chapter 6 | Redistributive policies – The effects of taxes and benefits on income distribution |

Holly Sutherland, Francesco Figari, Alari Paulus

Introduction: Description of major policy questions

One of the main ways in which governments can influence income distribution is through the system of cash benefits and personal taxes. Taxes tend to be progressive, in the sense that people with higher incomes pay a higher proportion of their income in tax. Benefits may be targeted at the poor, but even if they are flat rate they will tend to narrow the proportional difference between the incomes of the rich and the poor. When benefits are paid to people in particular circumstances, these tend to be correlated with low income or greater need (such as childhood, disability, etc.) or are benefits that are specifically intended to replace income from work (unemployment benefit, pension). In seeking to understand the distributional effects of government programmes and their effectiveness in reducing income inequality and risk of poverty, it is necessary to take account of the distinct (but sometimes interacting) effects of taxes and benefits. Specifically, it is important to take account of the taxes paid on benefits when considering the impact of these on household income levels.

Moreover, it is of interest to explore whether instruments that are designed to support those on low incomes (means-tested benefits) are, in fact, as effective in this respect as benefits that have other functions (non-means-tested benefits). In particular, while the main purpose of public pensions is to redistribute personal income over the individual's life cycle, they do nevertheless have an inter-personal redistributive role, and it is interesting to establish the size of this role relative to that of non-pension benefits.

Finally, it is usually assumed that personal incomes are shared within the household and that each income source can be treated equivalently, regardless of its recipient or function. One aspect of this is whether payments intended specifically for children are as effective in reducing child poverty as are benefits intended for others in the household or for the household as a whole.

Each of these issues is examined below.

Methodology and measurement

The standard EU approach to understanding the effects of redistributive systems is to deduct the sum of social benefits from household disposable income, as recorded in surveys such

as the EU-SILC, and to examine the effect on indicators of inequality and income distribution (European Commission, 2008).[37] Here, we build on this approach, exploiting the possibilities offered by the multi-country tax-benefit microsimulation model EUROMOD. This currently covers 19 EU countries – the 15 pre-2004 Member States plus Estonia, Hungary, Poland and Slovenia. The estimates are based on the latest available policy year for each country, ranging from 2001 to 2005. See the Appendix to this chapter for further information and details of the EUROMOD input datasets.

We use EUROMOD to build on the standard EU approach in three ways that are not possible using the EU-SILC database alone.

Treatment of taxes

Although efforts are made in surveys to capture the direct taxes paid by households, it is often difficult to measure these in a precise and consistent way in each country. For example, gross incomes and taxes may need to be imputed from net income; the information may be available only for withholding taxes rather than final tax liability, and the difference might be substantial in some countries, in particular if an individual has more than one income source.

In the EU-SILC, information on taxes paid on each income component is not available consistently across countries. It is also unclear whether final tax liability in the year in question is captured consistently using the EU-SILC methodology. EUROMOD allows us to calculate final tax liability based on gross income. Furthermore, in assessing the effects of cash benefits on poverty, one aspect to be taken into account is the fact that benefits are subject to income tax in some cases, but not in others. In order for the results to be comparable across countries, it is necessary to measure the effect of **net** benefits rather than gross benefits. Estimates of the tax paid on benefits are obtained using the following procedure. First, the taxes on non-benefit income are identified by setting the value of benefits to zero and using EUROMOD to recalculate taxes on the remaining income. Then taxes on benefit income are calculated by subtracting taxes on non-benefit income from all taxes. Finally, this amount is deducted from the gross benefits.[38]

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[37] The standard approach in the OECD and in most of the literature is to deduct taxes from, and add transfers to, gross market income. For example, see OECD (2008).

[38] Thus we assume that taxable benefits are the 'top slice' of the relevant tax base (i.e. subject to marginal taxes).

Child-contingent incomes

In analysing the effects of benefits on child poverty, it is relevant to consider not only net benefits as a whole, but also those intended for the support of children. Identifying these benefits should not depend simply on how they are labelled or on the fact that their main function is family support. Other benefits (such as housing or social assistance benefits) contain components for children, and in some countries support is channelled through tax concessions. To ensure comparability of estimates, each of these elements needs to be taken into account. Child-contingent payments are those that depend on the presence of children, and the primary way of identifying these in our analysis is to remove children (defined as being under the age of 18) from the EUROMOD input database and then recalculate taxes and benefits. The difference between the amounts with and without children present is the 'child-contingent' payment, net of any taxes, for that household.[39]

Detail of benefits

In seeking to understand the different roles of each type of benefit (such as those that are means tested), it is necessary to define and identify comparable types across countries. This is laborious in the case of non-harmonised national surveys, and impossible with the EU-SILC user database, where benefits have been categorised in a particular way into harmonised variables. Using EUROMOD, which identifies each separate component of the cash-benefit system – and has the types of benefit that are useful for comparison pre-defined – it is possible to analyse the effects of different types in a way that is comparable across countries. For the definitions of 'public pensions', 'means-tested benefits' and 'non-means-tested benefits' used here, see the Glossary.

The estimates of household disposable income calculated by EUROMOD consider simulated income, with an assumption of full benefit take-up and absence of tax evasion. This needs to be borne in mind when interpreting the results (see the Appendix to this chapter for more discussion).

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[39] Certain other benefits that are not simulated by EUROMOD but are taken from information recorded in the survey are added in manually. See Figari *et al.* (2007; 2009) for more information.

Analysis of the latest data

The composition of incomes

The redistributive effect of a tax–benefit system depends on the size and structure of the various components. As Figure 6.1 shows, these vary considerably across countries. This figure presents the composition of (unequivalised) disposable incomes at the household level in terms of the average size of each income component, as a percentage of average household disposable income. As such, it shows how much original income is necessary, on average, to achieve a given level of disposable income; also how much is added as (cash) benefits and deducted in (direct) taxes.

Overall, original income equal to 100% of disposable income means that direct taxes and cash benefits balance each other. Among the 19 EU countries considered, average household original income ranges from 91% of disposable income (in Estonia) to 131% (in Denmark). In other words, (net) cash support (i.e. benefits less taxes) contributes 9% of household disposable income, on average, in Estonia, while taxes and contributions exceed benefits on average in Denmark by an amount equal to 31% of average household disposable income.

Figure 6.1: Household income composition, whole population, 2001/2005

Note: Estimates apply to various years 2001-05. For definitions of income components, see the Glossary.
Source: EUROMOD.
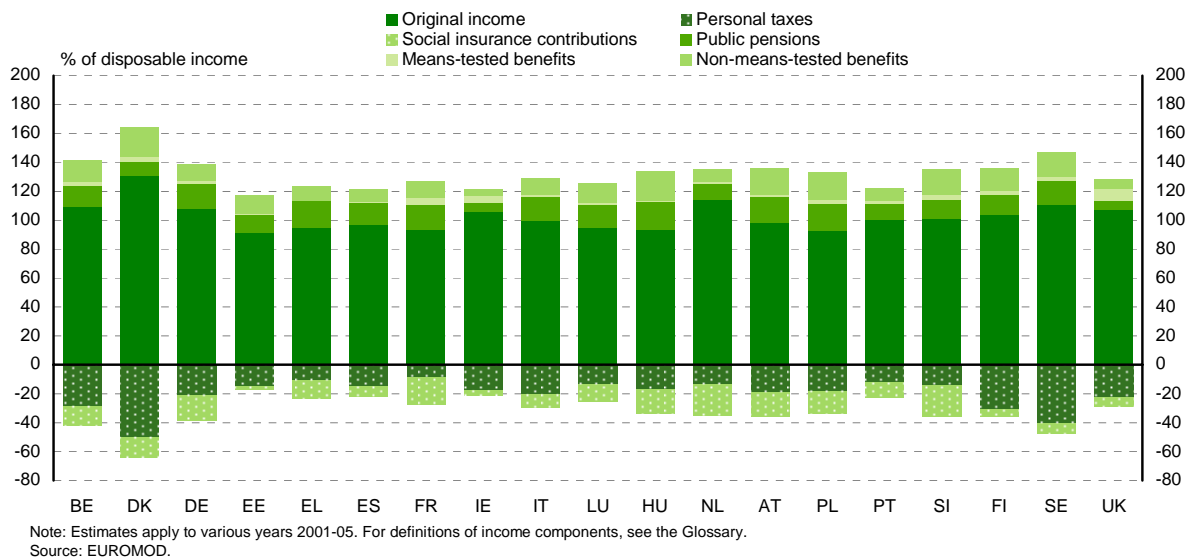
On the deduction side, income taxes are greater than social insurance contributions, except in Greece, France, the Netherlands and Slovenia. Denmark and Sweden tax incomes the most, while Estonia, Ireland and the Southern European countries tax the least. Taken together, taxes and social contributions range from 64% of disposable income in Denmark to 17% in Estonia. In terms of benefits, the bulk of spending is made up of public pensions and non–means–tested benefits, except in the UK and Ireland, where means–tested benefits are

as important as non-means-tested benefits. Public pensions are noticeably low in Ireland, the UK, Denmark and the Netherlands: most pensions are provided through the private sector in these countries (except in Denmark, where the 'citizen's pension' guarantees a relatively small income to all people aged 65 and over). Ireland, the UK, the Netherlands and the Southern European countries have the smallest shares of income from non-means-tested benefits, while Hungary, Denmark, Poland and Austria have the largest. Cash benefits (including pensions) range from 41% of disposable income in Poland to 16% in Ireland.

The composition of incomes differs for the rich and the poor across countries, because taxes tend to be progressive and benefits are more targeted on those with fewer financial resources. This targeting by income takes place both directly (in the case of means-tested benefits) and indirectly (in the case of non-means-tested benefits, which tend to replace earnings or compensate for higher living costs – e.g. due to disability or child dependants). But the extent to which low-income households are targeted varies from country to country. Figure 6.2 shows the same information as Figure 6.1, but for the households in the bottom decile group of the equivalised disposable income distributions.

Figure 6.2: Household income composition, bottom decile group, 2001/2005
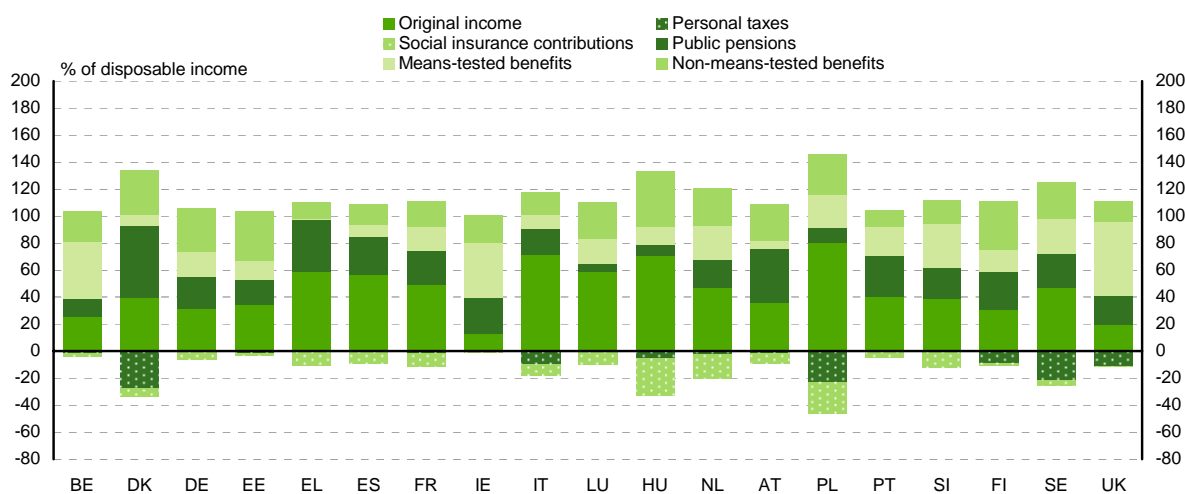
Note: Decile groups are based on equivalised household disposable income, each including 10% of the population.
Estimates apply to various years 2001-05. For definitions of income components, see the Glossary.
Source: EUROMOD.

As expected, all types of benefit are much more important for low-income households. Net cash support (benefits less taxes) varies from 87% in Ireland and 81% in the UK to 29% of disposable income in Italy and Hungary, and only 20% in Poland.[40] Social benefits and

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[40] The results for Poland are partly due to the agricultural tax that is based on imputed earnings from farm land. In our calculations, we do not consider these imputed earnings to be part of disposable income, though the tax is

pensions as a whole represent a share of disposable income that varies from 46% in Italy to between 50% and 75% in the majority of countries, over 75% in the Nordic countries and Belgium, and as much as 92% in the UK and 94% in Denmark at low income levels. Entitlement to means-tested benefits plays a major role in Ireland and the UK, and is at least as important as non-means-tested benefits in Belgium, Luxembourg, Hungary, the Netherlands, Poland, Slovenia and Sweden. As already mentioned, estimates take no account of the non-take-up of benefits, which is a particular problem for those subject to a means test (Matsaganis *et al.*, 2008). Thus these estimates provide an upper bound on the contribution of means-tested benefits that will, in practice, tend to be smaller than that shown in Figure 6.2.

Although most income taxes are progressive, people with low income still pay some taxes, particularly in Poland, Denmark and Hungary, where taxes and social insurance contributions together make up as much as 46%, 34% and 33%, respectively, of the disposable income of the poorest decile group.

At the top of income distribution, the relative impact of taxes and benefits on disposable income is reversed (see Figure 6.3). In all countries, the taxes and contributions paid in the top decile group are much greater than the benefits received. The share of social benefits is still relevant in a few countries – 35% in Austria and around 25% in others – while it accounts for only 2% of disposable income in the UK and Ireland, where social transfers are more targeted on those with low levels of financial resources. Households in the high-income group pay most taxes in Denmark and least in Estonia, along with the Southern and the Anglo-Saxon countries.

taken into account. Therefore, there are a number of households with a tax liability that is significant (compared to disposable income) that end up in the bottom of the income distribution. In the case of Hungary, the results are influenced by relatively high average social insurance contributions for the self-employed, and further accentuated by a fixed-amount component, making the incidence of contributions rather regressive.

Figure 6.3: Household income composition, top decile group, 2001/2005
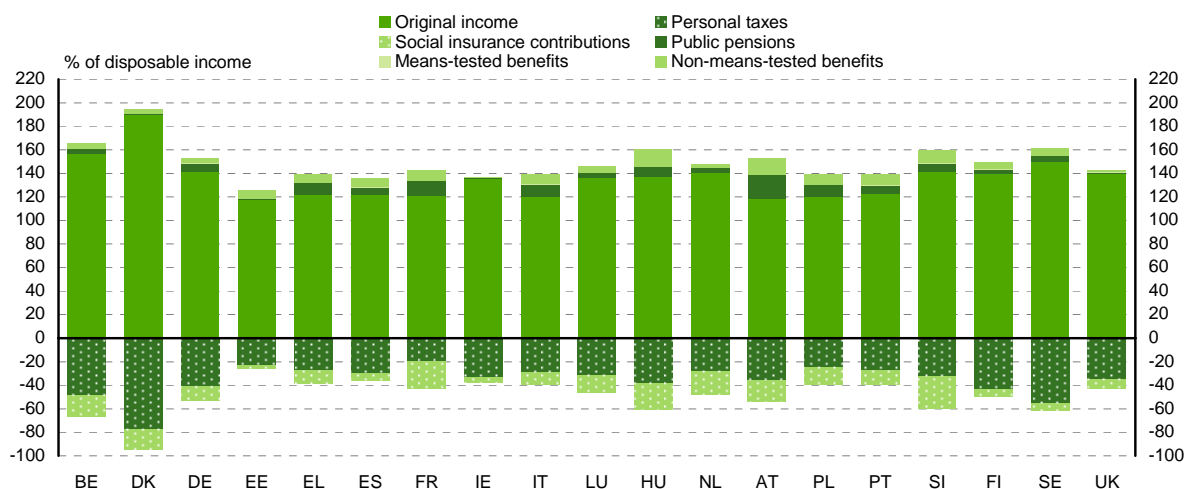
Note: Decile groups are based on equivalised household disposable income, each including 10% of the population.
Estimates apply to various years 2001-05. For definitions of income components, see the Glossary.
Source: EUROMOD.

Income inequality (Gini) before and after taxes and benefits

Across European countries, the distribution of original income varies as much as the contribution of the tax-benefit systems to reducing inequality levels. Figure 6.4 shows the Gini coefficient for original income, original income with public pensions, gross income and disposable income, equivalised using the modified OECD scale (see the Glossary for an explanation of the income definitions). The difference between original income inequality and disposable income inequality represents the total redistributive effect of benefits and taxes. Alternatively, if public pensions are excluded from the measure of redistributive policy instruments, the total redistributive effect is limited to the difference between inequality in original incomes plus public pensions and inequality in disposable incomes.

Inequality in original incomes across these 19 EU countries, measured by the Gini coefficient, ranges from 0.39 to 0.55. The country with the lowest original income inequality is the Netherlands (0.39), followed by Sweden and Austria (both 0.44). At the other extreme, Hungary and Poland have the largest inequality in original income (both 0.55).

Figure 6.4: Income inequality (Gini coefficient) before and after taxes and benefits, 2001/2005
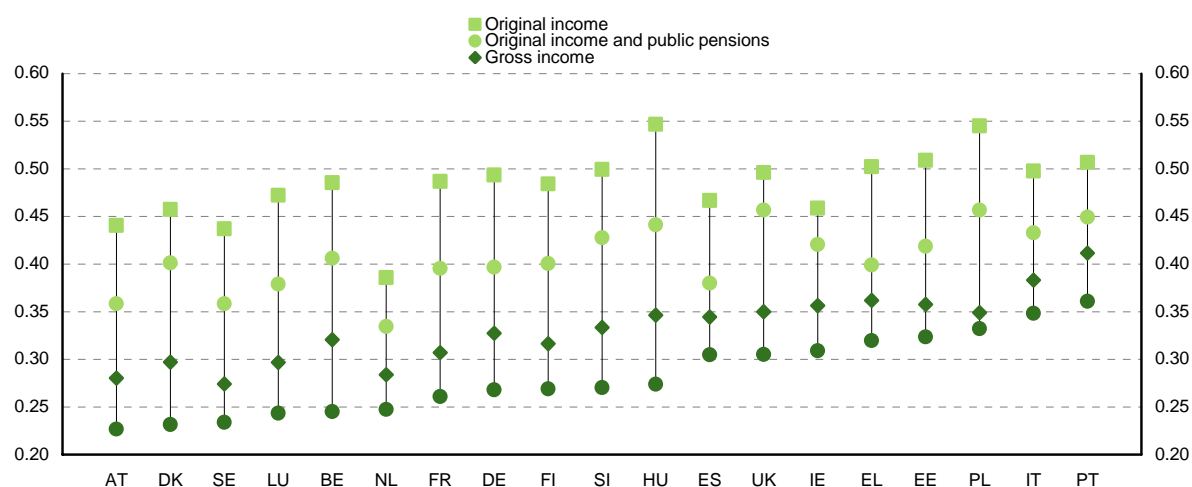
Note: Countries are ranked by the Gini coefficient for (equivalised) disposable income.
Estimates apply to various years 2001-05. For definitions of income components, see the Glossary.
Source: EUROMOD.

Taxes and benefits play complementary roles in reducing the inequality of original income. The total redistributive contribution of taxes and benefits is largest, in absolute terms, in Hungary (with an absolute change in the Gini equal to 0.27), Belgium (0.24) and Denmark, Luxembourg, France, Germany and Slovenia (0.23 each), and is smallest in the Netherlands (0.14) and Portugal, Italy and Ireland (0.15 in each). The countries with the lowest disposable income inequality (led by Austria, Denmark and Sweden, with a Gini of 0.23 in each) do not have the most redistributive tax-benefit systems: they tend to be around the average in this respect. In cases where disposable income inequality is highest – in Portugal (0.36) and Italy (0.35) – redistribution is among the lowest considered. Generally, the redistributive effect is not strictly correlated with inequality in original income, as is indicated by the extent to which countries are re-ranked when the Gini coefficients before and after taxes and benefits are compared.

Benefits are more effective in Poland and Hungary (with Gini coefficients falling by 0.20), while they have a weaker effect in Portugal, Ireland and the Netherlands (with corresponding Gini coefficients falling by 0.10). Although benefits and taxes always have an equalising effect on incomes, the extent to which they contribute to a reduction in inequality differs significantly from country to country. The absolute contribution of benefits (including public pensions) is substantially higher than that of taxes in all countries. Public pensions and other benefits each individually have effects that are comparable in size to those of taxes (and in some cases larger). (See Table 6.1 in the Annex for more detail.)

Effect of taxes and benefits on income poverty

In the following section, we explore the extent to which benefits and taxes reduce the risk of poverty for the population as a whole in each country, as well as for an important subgroup – children. We show how much higher poverty rates would be if, first, net benefits were excluded from disposable incomes and, second, if gross benefits were excluded, thereby capturing the effect of taxes paid on the benefits. (Here, benefits include public pensions.) In each case, (national) poverty thresholds are held constant at the baseline levels, i.e. 60% of the median equivalised household disposable income.[41]

Table 6.2 shows the EUROMOD estimates of the risk of poverty among the population as a whole, with countries ranked in order of the risk of poverty, using the measure of standard equivalised household disposable income. This ranges from around 9% in Sweden to 22% in Ireland. Benefits (including public pensions) net of taxes reduce the risk of poverty from the 30–50% mark, depending on the country. Taxes on benefits do have an impact on the poverty-reducing effect of the benefits in all countries, but the effect is relatively small: around 3 percentage points in Finland, Poland and Italy, and more than this only in Sweden (6 percentage points) and Denmark (4). The poverty-reducing effect of net benefits in aggregate is quite well correlated with the ranking of countries according to the disposable-income poverty rate: countries with the lowest poverty rates have benefit systems that achieve most in terms of poverty reduction, and vice versa. The highest **proportional** reductions are achieved in Denmark, France, Austria, Sweden, Luxembourg and Belgium, all achieving a proportional poverty reduction above that of the 19 countries as a whole, which is 63% (based on the national poverty lines). The smallest proportional reductions are achieved in the Southern European countries and Ireland.

Finally, we consider child poverty and show (Figure 6.5) the EUROMOD estimates of the risk of poverty among people aged below 18 and the role played by public support in child poverty reduction. This is measured in two ways. First, it is shown in terms of the reduction due to all net benefits; and secondly, as the reduction due to net child-contingent payments (as described above). Without net benefits, the child poverty rate would range from 23% in the Netherlands to as high as 49% in Hungary. The **proportional** reduction in the child poverty rate is largest in five of the same six countries as for the whole population (Denmark, France, Austria, Sweden and Belgium; the exception is Luxembourg); they also have the lowest baseline child poverty rates.

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[41] For a different approach, see Nelson (2004).

Without net child–contingent benefits and tax concessions, child poverty would also be much higher in all countries except Greece, Spain and Portugal, where such payments are minimal and are generally not targeted at low–income households. Child–contingent payments offer the most protection, in terms of absolute reduction in poverty risk, in France, Hungary, the UK and Austria. The proportional reduction in the child poverty rate is notably large in France (74%). In many countries, the additional effect of other benefits (shown by the green square) is relatively small. It is less than 30% of the total poverty–reducing effect in Finland, Hungary, Belgium, Germany, the Netherlands, Luxembourg, the UK and France. However, in Denmark and Poland, non–child–contingent benefits play a role that is similar in scale to that of child–contingent benefits, while in the Southern European countries (except Italy) non–child–contingent benefits produce the main effect (albeit a modest one).

Figure 6.5: Poverty rates for children (0–17) based on equivalised household disposable income in the baseline, without net benefits and without net child–contingent payments, 2001/2005
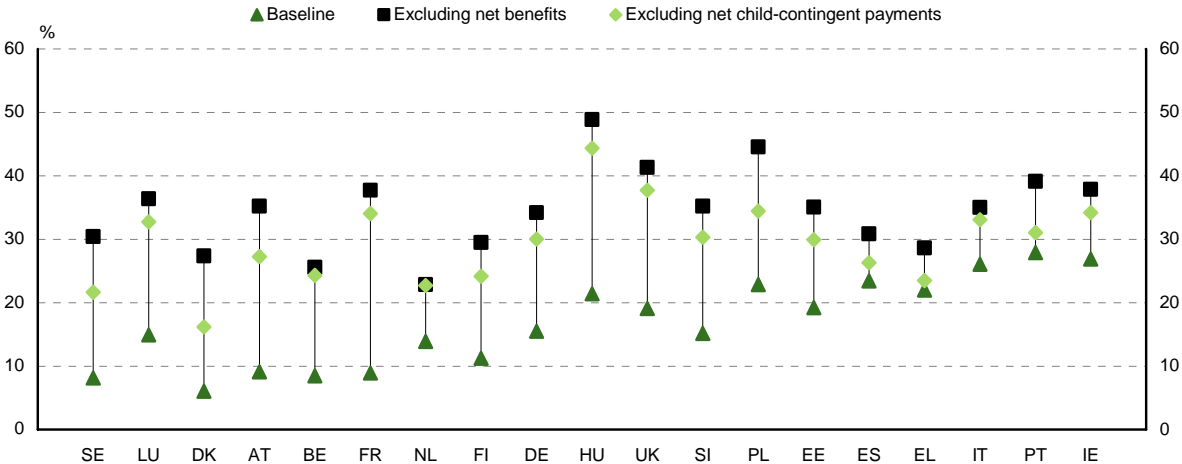
Note: Countries are ranked by the baseline poverty rate for the whole population, using national poverty lines, defined as 60% of median equivalised disposable income. Estimates apply to various years 2001-05.

Source: EUROMOD.

Summary of main findings

In summary, then, there are substantial differences in the composition of household disposable incomes and in the relative size of taxes and benefits across countries. As a proportion of disposable income, taxes and social contributions together range from 64% in Denmark to 17% in Estonia. Cash benefits (including pensions) range from 41% in Poland to 16% in Ireland.

In general, a large share of benefits is made up of public pensions and non–means–tested benefits, while income taxes dominate social insurance contributions within the calculation

of the overall tax burden. While, on average, people with low income pay much less tax, and while the share of income from benefits is relatively minor at the top of the distribution, the tax burden at the bottom of the distribution can still be quite high, and benefits can account for a considerable share of income for the rich households in certain countries.

Means-tested benefit entitlements can play a relatively large role in the income of households in the bottom decile group – especially in the UK and Ireland, but also in Belgium, Luxembourg, Hungary, the Netherlands, Poland, Slovenia and Sweden.

Taxes and benefits play a complementary role in reducing income inequalities. The absolute contribution of benefits, including public pensions, is substantially higher than that of taxes in all countries. However, the effects are of comparable size if public pensions are considered separately from other benefits. The extent to which all three components contribute to reducing inequality varies significantly from country to country. It is largest in Hungary and Belgium and smallest in the Netherlands, Portugal, Ireland and Italy.

Benefits as a whole, when measured net of taxes, reduce the overall risk of poverty from 30–50% to 10–20%. The countries with the lowest rates (Denmark, France, Austria, Sweden and Belgium) have net benefit systems that achieve most in terms of proportional poverty reduction, both for the whole population and specifically for children. Taxes on benefits have a relatively small impact on the gross effect (less than 3 percentage points for most countries); nevertheless, this results in some re-ranking of countries in terms of the reduction in poverty that is measured as being achieved.

Public cash support plays an important role in child poverty reduction in all countries except for Spain, Greece and Portugal. Without net benefits, the child poverty rate would reach 23–51% (instead of 6–28%). In most countries, child poverty is reduced mainly by child-contingent payments. In Denmark and Poland, other benefits have an equally important role, and in Portugal, Spain and Greece they have the main effect.

Appendix: EUROMOD

EUROMOD is a static tax–benefit microsimulation model, which calculates direct taxes, social contributions and cash benefits on the basis of the tax–benefit rules in place in EU countries.[42] It currently covers the 15 pre-2004 European Union Member States, plus Estonia, Hungary, Poland and Slovenia.

Policy instruments that are not simulated are taken directly from the data, as are original incomes (see Glossary for definitions of income concepts). The datasets that are used in the current version of EUROMOD are shown in the table below. The tax–benefit systems simulated refer to different years in different countries, ranging from 2001 to 2005, as shown in the table. In most cases, the input datasets of household circumstances refer to a period a few years prior to the policy year, and the original incomes derived from them are updated to this date. This process relies on indexing each income component (which is not simulated) by appropriate growth factors, based on actual changes over the relevant period.[43] In general, no adjustment is made for changes in population composition. EUROMOD estimates include all households in the sample without any top- or bottom-coding of their incomes.

The estimates provided here take no account of non-take-up of any benefits, nor of any tax avoidance or evasion. It is assumed, therefore, that the legal rules are universally respected and that the costs of compliance are zero. This can result in an overestimation of taxes and benefits and an underestimation of inequality. It can also result in an underestimation of poverty rates – although this depends on the relationship between the level of income provided by benefits and the poverty line (potential claimants may be poor whether or not they receive the benefits to which they are entitled).[44] (See Matsaganis *et al.*, 2008.)

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[42] See Immervoll *et al.* (1999) and Sutherland (2007) for general descriptions. Sutherland (2005) provides descriptions and discussions of technical issues. The version of EUROMOD used here is D24.

[43] This process is documented in EUROMOD Country Reports, see:
www.iser.essex.ac.uk/research/euromod/documentation/country-reports

[44] For a comparison of poverty rates estimated using simulated incomes from EUROMOD with those calculated directly from survey data by the OECD or available through the Luxembourg Income Study, see Corak *et al.* (2005).

Table A6.1: EUROMOD input datasets and simulated tax-benefit systems

	Country	Dataset	Date of collection	Income reference period	Tax-benefit system
BE	Belgium	Panel Survey on Belgian Households	2002	annual 2001	2003
DK	Denmark	ECHP	1995	annual 1994	2001
DE	Germany	German Socio-Economic Panel Study	2002	annual 2001	2003
EE	Estonia	Household Budget Survey	2005	monthly 2005	2005
ES	Spain	EU-SILC	2005	annual 2004	2005
FR	France	Enquête sur les Budgets Familiaux (EBF)	2000/01	annual 2000/01	2001
GR	Greece	Household Budget Survey	2004/05	monthly 2004	2005
IE	Ireland	Living in Ireland Survey	1994	monthly 1994	2001
IT	Italy	Survey of Household Income and Wealth	1996	annual 1995	2001
LU	Luxembourg	Socio-Economic Panel (PSELL-2)	2001	annual 2000	2003
HU	Hungary	EU-SILC	2005	annual 2004	2005
NL	Netherlands	Sociaal-economisch panelonderzoek	2000	annual 1999	2003
AT	Austria	Austrian version of ECHP	1998+1999	annual 1998	2003
PL	Poland	Household Budget Survey	2005	monthly 2005	2005
PT	Portugal	ECHP	2001	annual 2000	2003
SI	Slovenia	A sub-sample of population census merged with administrative records	2005 (2002)	annual 2004	2005
SE	Sweden	Income Distribution Survey	2001	annual 2001	2001
FI	Finland	Income Distribution Survey	2001	annual 2001	2003
UK	UK	Family Expenditure Survey (FES)	2000/01	monthly 2000/01	2003

National Statistical Service of Greece; the Living in Ireland Survey, made available by the Economic and Social Research Institute; the Survey of Household Income and Wealth (SHIW95), made available by the Bank of Italy; the Socio-Economic Panel for Luxembourg (PSELL-2), made available by CEPS/INSTEAD; the Sociaal-economisch panelonderzoek (SEP), made available by Statistics Netherlands through the mediation of the Netherlands Organisation for Scientific Research – Scientific Statistical Agency; the Polish Household Budget Survey (HBS), made available by the Economic Department of Warsaw University; a sub-sample of population census merged with personal income tax database, pension database and social transfers database, made available by the Statistical Office of Slovenia; the Income Distribution Survey, made available by Statistics Sweden; and the Family Expenditure Survey (FES), made available by the UK Office for National Statistics (ONS) through the Data Archive. Material from the FES is Crown Copyright and is used with permission. Neither the ONS nor the Data Archive bears any responsibility for the analysis or interpretation of the data reported here. An equivalent disclaimer applies to all other data sources and their respective providers cited in this acknowledgement.

Chapter 7 | Material deprivation and access to services

Erhan Őzdemir and Terry Ward (Material deprivayion)
Orsolya Lelkes and Eszter Zolyomi (Access to services).

Introduction

The focus here is on aspects of well-being that are not necessarily reflected in disposable income, which is used as the main measure of the risk of poverty across the EU. These aspects are important for assessing both relative and absolute levels of well-being and living standards, and for comparing these between individuals and households within particular countries and in different parts of the EU. The aspects in question include access to reasonable standards of education and healthcare and to decent housing, as well as to support services of various kinds. These are considered in the various sections below.

A related issue, however, quite apart from these aspects, is the extent to which the concept of income, used as a measure of the relative availability of resources, is reliable as an indicator – i.e. even leaving aside consideration of non-monetary dimensions of well-being – and how far other indicators can usefully supplement the relative income measure. These indicators relate, in particular, to direct measures of deprivation (in a sense, the relative income concept is intended to capture this indirectly).

The indicators of deprivation (and what they show) are examined below, after a general consideration of, first, the limitations of income as a measure of resources or spending power and the alternative approaches to tackling these limitations; second, the development of indicators of material deprivation to complement the relative income indicator; and third, the importance of taking explicit account of the other dimensions of well-being.

Limitations of income as a measure of well-being

Although disposable income is the primary indicator of the resources available to people, allowing them to maintain an acceptable standard of living and to participate fully in society, there are a number of problems associated with the use of income alone to measure the risk of poverty and social exclusion. This is particularly the case if income is measured on an annual basis: for those whose income fluctuates from year to year, or whose present income is significantly out of line with their income in previous years, this may provide a misleading indicator of their current financial resources or purchasing power. Income as such, therefore, takes no account of accumulated savings and wealth (except in the form of the interest they generate), which equally form part of the financial resources that people have to draw on.

Nor, conversely, does it take account of the debt that people might have accumulated and that they need to service out of current income.

Equally, because of the way in which income is usually defined for practical purposes, it leaves out of consideration many goods or services in kind that contribute to well-being – either because they are difficult to measure or because there is some uncertainty about whether (or to what extent) they should be included. The goods and services in question include access to free or subsidised care for children and the elderly, housing or transport, as well as food and other goods produced for personal consumption. These effectively add to people's resources, by reducing the amount that they, or their households, need to spend in order to attain a given standard of living. As such, leaving them out of consideration is liable to distort comparisons of purchasing power, or living standards, both across countries and between individuals or households.

Alternative and complementary measures to income

Because of these deficiencies (which are either inherent in income as a measure of resources or are difficult to correct), it has been suggested that **expenditure** should instead be used as an indicator, so that the focus is directly on outcomes – i.e. on the resources that are used to purchase – rather than on incomings; on the living standard attained by people, rather than on the resources they have to attain it.[45]

Shifting the focus to expenditure, however, raises another set of issues that have to do with the fact that expenditure is only an approximate indicator of potential purchasing power, since it leaves out of consideration variations in the extent to which, on the one hand, people choose to save from their income and, on the other, how far borrowing is used to finance expenditure. Moreover, shifting the focus in this way does not overcome the problem of measuring the consumption of goods and services that are obtained free of charge or at a subsidised rate, and so involve either no expenditure or expenditure that is less than for other households, either in the country concerned or in other countries.

Equally, it has been suggested that, instead of using income as a measure of resource availability, a more complete picture would be obtained by using an indicator of wealth, since this would overcome the problem of income (as conventionally measured) relating only to the resources received in a particular year. It would, accordingly, encompass the resources available from income received in previous years as well, whether in the form of liquid assets

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[45] See, for example, Halleröd (1995)

(which can be used directly to finance expenditure) or less liquid ones (such as property) that can be used as collateral for borrowing to fund spending. It would also take explicit account of any outstanding debt and the costs of servicing this.

However, while, in principle, there are strong arguments in favour of using wealth rather than income as an indicator of well-being (or potential well-being), there are, at present, equally strong practical reasons against doing so: the serious difficulties of measurement, given the prevailing dearth of statistics. Nevertheless, given the importance of taking account of accumulated wealth when assessing living standards, there is an ongoing need to explore the possibility of developing a suitable indicator that can provide an insight into how wealth varies across households and in different parts of the EU, and how it affects comparisons based on income alone. The possible use of an indicator of wealth is considered in Chapter 5.

Instead of seeking to **replace** income as a measure, an alternative (and more pragmatic) approach – adopted at the EU level as part of the system for monitoring developments in Member States – is to construct indicators specifically designed to address the deficiencies of the use of income as a measure of living standards. These can then be used **alongside** income to give a more complete and satisfactory insight into differences between households and countries. Such indicators are intended to directly identify people who suffer deprivation (in the sense of not being able to enjoy a standard of living that is generally considered acceptable), instead of doing so indirectly, through their relative income level.

This approach has been advocated by many academics and researchers over the years, and more recently has been taken up by a number of experts, who have suggested that indicators of deprivation should be developed from survey data to supplement the use of income as a measure of the risk of poverty (see Box 7.1).

These suggestions were given added weight by the entry into the EU in mid-2004 of 10 new countries, eight of which were Central and Eastern European states with transition economies, most of them with very much lower levels of income per head than the existing Member States. Their entry served to highlight the limitations of a measure to identify and compare the risk of poverty across the EU that is based on income levels relative to national medians and that takes no account of the substantial differences in those national medians. This was reinforced by the fact that the risk of poverty, as measured, is lower in many of the countries concerned than in the EU15 countries, so that, after enlargement, the average risk of poverty across the EU was calculated to be less than before.

Box 7.1: Indicators of deprivation

The development of indicators of deprivation dates back to a seminal study by Townsend (1979), who interpreted deprivation in the wide sense of not being able to live a decent life, and who suggested how this could be measured in terms of a lack of relevant goods and services. The concept was subsequently redefined as not having adequate resources to lead a minimum acceptable way of life in the country in the question (Callan *et al.*, 1993; Nolan and Whelan, 1996; Kangas and Ritakallio, 1998; Layte *et al.*, 2001; Whelan *et al.*, 2002; Perry, 2002) or, alternatively, as lacking the necessities which society regards as essential (Bradshaw and Finch, 2003; Nolan and Whelan, 1996). A number of empirical studies of material deprivation have been undertaken in the EU in recent years, largely based on data from the European Community Household Panel (see Boarini and Mira d'Ercole (2006) for a summary of these).

The development of indicators to monitor the situation across the EU was first suggested by Atkinson *et al.* (2002) in a report to the Belgian Presidency. This was the origin of the social inclusion review process at the EU level, based on the so-called Laeken indicators. It was subsequently expanded upon by the same authors (Atkinson *et al.*, 2005) in their follow-up report prepared for the Luxembourg Presidency, which argued the case for a multi-dimensional indicator of deprivation. This case was taken up at the end of 2006 by Anne-Catherine Guio and Isabelle Engsted Maquet, who demonstrated that a measure of those affected by material deprivation could usefully complement the present income-based indicator of the risk of poverty in order to capture the people missed by the latter (Guio and Maquet, 2007).

A good deal of effort, therefore, has been devoted by Eurostat over the past year or two (encouraged by the Indicators Sub-Group of the Social Protection Committee, representing Member States) to developing indicators of deprivation that could provide additional insights into the extent of the problem across the EU and, to a certain degree, could compensate for the absence of an absolute measure of poverty. As stated in a recent report, the concern has been to examine:

> different complementary measures to deepen our understanding of poverty…to compare the poverty picture that can be drawn on the basis of the relative monetary approach, with an alternative view based on material deprivation, defined as the enforced lack of a combination of items depicting material living conditions, such as housing conditions, possession of durables and capacity to afford basic requirements.[46]

Two new indicators have, therefore, been adopted – in addition to the existing set – to monitor the social situation across the EU: an indicator of material deprivation and an indicator of housing deprivation – or rather, two indicators of the latter, one of which incorporates a measure of shortage of space.

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[46] Eurostat (2009) *What can be learned from deprivation indicators in Europe*, Methodologies and Working papers.

These indicators, the extent to which they vary across the EU and their relationship to the risk of poverty, as measured by relative income levels, are examined here.

Additional dimensions of well-being

In addition to material deprivation, there are other dimensions of well-being and living standards that should be taken into account when assessing the situation of different people in different parts of the EU, and that are not necessarily reflected in the measure of disposable income or in other measures of resources that are used to draw comparisons between households and between countries. These are communal services of various kinds, which are generally provided by the state in European countries. They include, in particular, education and healthcare, access to which is free of charge or, in the case of the latter, either free or heavily subsidised, depending on an individual's ability to pay. It is not usual, therefore, to take account of the provision of these services when assessing the extent of inequalities in living standards and how far those at the bottom end of the scale are falling below an acceptable level in relative terms.

However, while these services tend to be universally available to everyone across the EU, there may be variations in the quality or the standard of the service that people enjoy, both between and within countries. In the case of healthcare, this may be because access (or rapid access) to certain treatments involves the payment of an additional fee, or because geographical variations dictate the physical availability of care.

In the case of education, it may either be because of geographical variations in the standard of teaching and the availability of teaching aids (which themselves may reflect variations in the prosperity of the areas in which schools are located), or because of the constraints that young people need to overcome if they are to continue in education beyond basic schooling. These constraints are partly academic (the need to obtain a particular grade in examinations in order to proceed further), partly financial (including the opportunity costs of continuing to study, as well as the need perhaps to cover the fees and/or maintenance costs involved) and partly cultural (the extent to which continuing in education is considered the norm). All three, however, are related in varying degrees – varying between countries and regions within countries – to the circumstances of the person concerned, to their background and to the household and local environment in which they live.

Since access to healthcare and (particularly) education not only contributes to well-being but is also an important determinant of life chances, and since neither form of access is necessarily reflected in disposable income, there is a need to take both into account when assessing living standards and comparing these across social groups within and between countries. This, however, is by no means straightforward, given the data available.

Outline of analysis

The sections below deal, in turn, with:

- indicators of material deprivation and the relationship between material deprivation and relative income level (in individual countries) and average household income (in different countries);

- access to decent housing, the degree to which this varies from country to country and the extent to which those who are deprived of decent housing also have a level of income that places them at risk of poverty; and

- the extent of access to a reasonable standard of education and healthcare.

Material deprivation

The EU–SILC contains a number of questions that are relevant for assessing the extent of deprivation in each country, as well as for comparing this across the EU. These questions relate to the ability of households to afford certain consumer items that most households across the EU (and in most Member States, though not necessarily in the country concerned) possess or are able to enjoy, as well as to households' capacity to cover essential financial costs and to meet unexpected expenses. They, therefore, bear directly on the purchasing power available to households and their financial situation, in the sense of the extent to which they are subject to financial stress.

The specific questions included in the EU–SILC that are most relevant in assessing deprivation, and that have been included in the new indicator adopted as part of the process of monitoring social inclusion across the EU under the Open Method of Coordination, concern the ability of households to afford:

- a telephone (including a mobile phone);
- a colour TV;
- a washing machine;
- a car;
- one week's annual holiday away from home;
- a meal with meat, chicken, fish (or vegetarian equivalent) at least every other day; and
- to keep the house adequately warm.

In addition, there are two questions that relate specifically to a household's financial situation:

- whether it is in arrears with mortgage or rent payments, utility bills, hire purchase instalments or other loan payments; and

- its capacity to face unexpected financial expenses, the amount in question being set at 60% of the national median monthly income in the previous year (i.e. the monthly equivalent of the poverty threshold in the country concerned).

In practice, the indicator adopted by the EU consists of the proportion of the population in each Member State that lives in a household which is deprived of at least three of these nine items ('deprived' here being defined to include being in arrears with the payments listed above and being unable to face unexpected expenses).

Nevertheless, since the items vary markedly in terms of the relative number of households that possess or enjoy them, that are up to date with bills or that are able to face unexpected outlay, there is some merit in examining them one by one. This is because the importance of being deprived of any particular item depends on its prevalence across society. The more widely possessed an item is, therefore, the more the sense of deprivation felt by someone who is unable to afford it. Conversely, the fewer the households that have or enjoy an item, the less the perceived sense of deprivation. For example, if most people have a colour TV, being unable to afford one is more of an issue than being unable to afford a week's holiday a year if most other people cannot afford one either.

How many people across the EU are deprived of these items?

There are only very few people in most Member States who live in households that cannot afford a colour TV, washing machine or telephone, according to the EU-SILC for 2007. (See Table 7.1 in the Annex, in which countries are ranked in terms of their median household income, starting with those with the lowest levels, and in which the items are ordered in terms of the proportion of people in the population who possess them, starting with the most widely possessed item.) The largest proportions unable to afford particular items are, in most cases, in the three Baltic States, Hungary and Portugal – countries that have among the lowest levels of median household income in the EU.

In all countries, the proportion concerned is larger for those with income below the poverty threshold of 60% of the national median than for those with higher income levels: in Lithuania, this figure amounts to 15% in the case of those who report being unable to afford a washing machine, and in Latvia to 19%.

In all countries, there are more people who are unable to afford a car. Again, the proportion is relatively large – above 10% – in the Baltic states and Hungary, though the figure is also fairly high in Poland and Slovakia, countries that also have relatively low levels of household income. In all countries, the share of people on low incomes who cannot afford a car is far greater than the share of people with higher levels of income, the proportion climbing to around 48% in Latvia and Slovakia and to 42–43% in the Czech Republic, Hungary and Slovakia.

There are slightly larger numbers who report not being able to afford a meal of meat or fish every other day (with the proportions being relatively large in all the countries listed above in respect of cars). In Estonia, however, the figure is well below the EU average. The proportions are also large, however, in Germany and Austria, countries with relatively high levels of household income, as well as in Slovenia (Table 7.2, in which countries and items are ordered in the same way). The figure is especially large in Slovakia, particularly among those with low incomes (62%).

The relative numbers who report being unable to afford to keep the house warm enough show a similar pattern, though with more differences. The proportion is again relatively large in Latvia, Lithuania (but not Estonia), Hungary, Poland and Portugal, but not the Czech Republic, Slovakia, Slovenia, Germany or Austria. In this case, however, the proportions are also relatively large (above 10%) in Cyprus, Denmark, Belgium, Italy and Greece. Once more, the problem is especially acute among those with income below the poverty threshold – the proportion reporting being unable to keep the house warm amounting to 63% in Cyprus and 65% in Portugal, both countries with warm climates for much of the year.

The proportions who reported being in arrears with the mortgage, rent, utility bills or other regular payments show a somewhat different pattern, perhaps reflecting the differing levels of priority attached to avoiding debt in the various countries. Here the proportion is largest in Greece, Cyprus, Hungary and Poland; it is below average in Lithuania (marginally), Portugal and Slovakia, as well as Estonia. The proportion of households with income below the poverty threshold that are in arrears with their bills is particularly high in Greece (53%) and Hungary (43%), while in Cyprus, though still above average, it is only slightly greater than among people with higher incomes.

The remaining two items – being unable to meet unexpected expenses and being unable to afford an annual holiday – show similar patterns. In both cases, a significant proportion of people in each country report not being able to afford to cover these items. Only in Denmark does the figure for being unable to afford an annual holiday fall below 10%.

The proportion of those who report being unable to meet unexpected outlays is above 20% – even among those with income above the poverty threshold – in all countries apart from Belgium, Denmark, Luxembourg, the Netherlands, Sweden and, surprisingly, Estonia and Portugal. Only in Latvia and Hungary does the figure reach 50%, though. Among those at risk of poverty, the proportion is over half in most countries, the only exceptions being Denmark, Sweden, the Netherlands and, more surprisingly, Spain and Portugal; the figure climbs to over 80% in Latvia, Hungary, Poland, the Czech Republic and Cyprus (despite its relatively high level of household income measured in purchasing power standard (PPS) terms).

There is slightly more of a variation in the relative numbers unable to afford an annual holiday. In all of the new Member States, with the sole exceptions of the Czech Republic and Slovenia, over 45% report not being able to afford such a holiday (even among those people with income above the poverty threshold), while the proportion rises to 88–90% among those with income below the poverty line in Latvia, Lithuania, Hungary, Poland and Portugal, and is over 80% in Estonia, Slovakia and Cyprus (again despite its relatively high household income).

However, because of the relatively large numbers in most countries who report being unable to afford either a holiday or to meet unexpected expenses, the people concerned can (arguably) be regarded as less deprived than those who are unable to afford the other items discussed above – items that are much more widely enjoyed.

How many people are 'materially deprived' across the EU, and how does this relate to the proportion at risk of poverty?

The indicator adopted as part of the EU-level process of monitoring social inclusion in Member States relates to the proportion of the population living in a household that is deprived of any three of the nine items listed above. No distinction is drawn between the items, even though some are much more widely possessed or enjoyed than others, and so lack of those is more of a deprivation (and is likely to contribute more to social exclusion) than lack of the others. At the same time, given that part of the interest in the indicator is to compare the extent of deprivation in different countries across the EU (and to use it to compensate to some degree for the lack of an indicator of absolute poverty), weighting the various items to reflect their prevalence becomes problematic, unless this is done at an EU rather than a country level.

The proportion of the population deprived according to the indicator, again based on the EU-SILC data for 2007, varies from 3% in Luxembourg and around 5% in the Netherlands and Sweden to around 37–38% in Hungary and Poland and 45% in Latvia (Figure 7.1).

Figure 7.1: The proportion of the population materially deprived and at risk of poverty, 2007
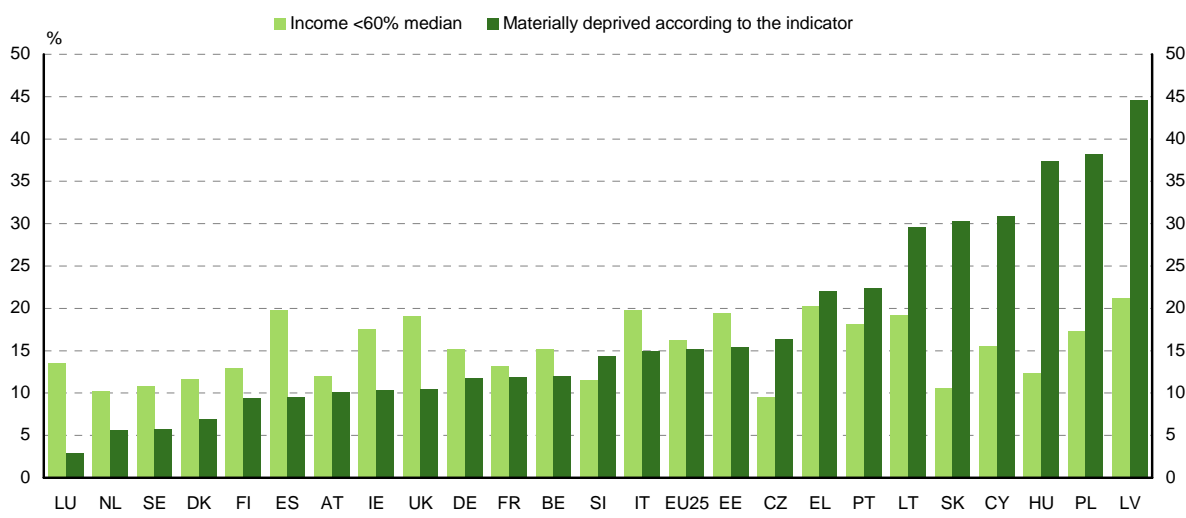
Source: EU-SILC 2007.

There is very little relationship between the proportion measured as being deprived and the relative number at risk of poverty in the sense of having an income below 60% of the median. A number of countries that have a relatively low material deprivation rate have a relatively high at-risk-of-poverty rate – Spain, Ireland and the UK, in particular; meanwhile, conversely, a number of countries with an above-average deprivation rate have a below-average risk of poverty, specifically the Czech Republic, Hungary and Slovakia. It is evident, therefore, that the indicator of material deprivation does not duplicate the risk-of-poverty indicator, at least across countries, but instead provides new information about the social situation in different Member States.

What is the relationship between rates of material deprivation and household income?

While there is little relationship between rates of material deprivation and relative poverty rates across the EU, there is a relationship between rates of deprivation and the average level of household income. Countries with a relatively large proportion of the population who are materially deprived according to the indicator also tend to have relatively low levels of household income. Moreover, the relationship seems to be an exponential one, in the sense that the rate of material deprivation tends to rise faster as the level of income declines (Figure 7.2).

Figure 7.2: Relationship between median household income and the proportion of the population materially deprived, 2007
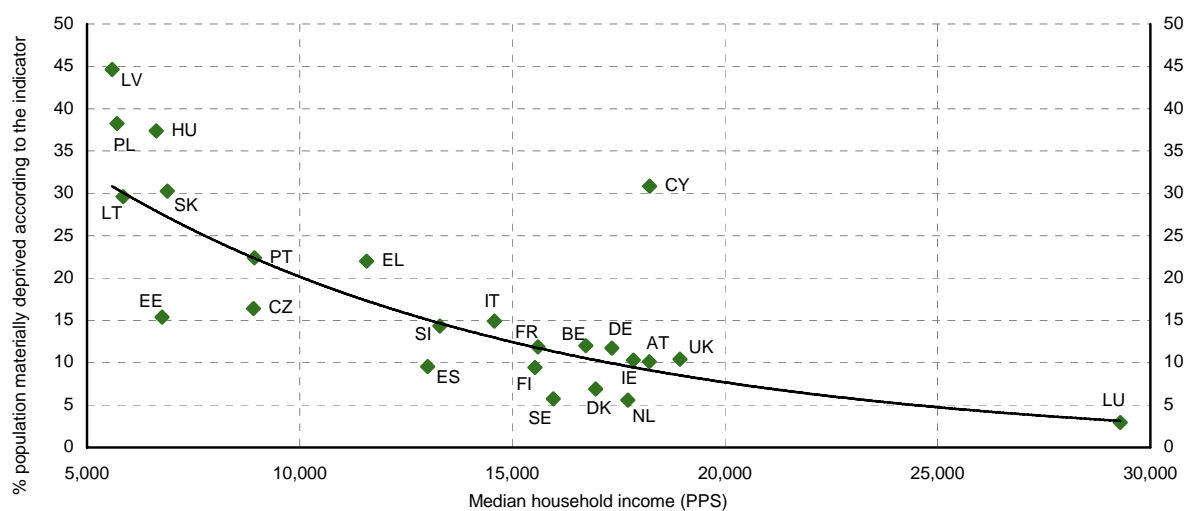
Source: EU-SILC 2007.

The relationship is not entirely systematic. In particular, Estonia has a much lower rate of material deprivation than its level of household income would suggest, while Cyprus has a much higher rate than is suggested by its income level. In this case, though, the relatively high median level of household income – the third highest in the EU – is largely due to the purchasing power adjustment made, which implies that prices are especially low, compared to those in other high-income countries. Nevertheless, the relationship is fairly close, which suggests that the indicator of material deprivation may indeed be a reasonable reflection of differences across countries in absolute rates of poverty.

How does the rate of material deprivation vary with income levels within countries?

Just as the rate of material deprivation tends to vary across countries in line with household income levels, so too does it vary between households with different income levels within a country. In all Member States, therefore, the proportion of people who are materially deprived declines as household income rises, albeit at varying rates – markedly in Cyprus and Portugal, less so in Spain and the Netherlands (Table 7.3).

Whereas in most countries, the proportion of people who are materially deprived declines to well below 10% in the fourth income quintile, in Hungary and Poland, it is around 23–24%, and in Latvia it is 30%. Moreover, in all three of these countries, even among the top 20% of income earners, some 10–12% are materially deprived.

Nevertheless, the tendency for material deprivation to vary with income is much less apparent at the bottom end of the income scale. Indeed, in many countries, as the income of

households declines, so the rate of deprivation also tends to decline. Thus in several countries, the proportion of people who are measured as being materially deprived is smaller among those with income below 40% of the median than among those with income below 50% (Table 7.4).

In the EU as a whole, therefore, the rate of material deprivation is only marginally higher among those with income below 40% of the median than among those with income below 50%. In 11 of the 24 countries for which data are available, the rate is lower – much lower in Denmark, Ireland and the Netherlands (where the rate among those with income below 50% of the median is, in turn, less than among those with income below 60%). In many of the other countries, moreover, the increase is relatively small.

This reflects the failure of income, as defined in the EU-SILC, to measure purchasing power in many cases, as was indicated earlier. Those living in households with the lowest levels of annual disposable income, therefore, are not necessarily the people who are least well-off in the country in question. Accordingly, the indicator of material deprivation once again highlights its value as a complement to the income measure of relative poverty, compensating for deficiencies in the latter. It indicates, for example, that in four countries – Denmark, Ireland, the Netherlands and Sweden – only around 20% or less (in the Netherlands much less) of people with income below 40% of the median are materially deprived according to the indicator.

It also indicates, on the other hand, that the proportion of people identified as being deprived is around three-quarters in Latvia, Lithuania, Hungary, Poland and Slovakia. In these cases, in consequence, low income levels are associated in most cases with deprivation.

How far are the results of the deprivation indicator altered if more or fewer items are included?

The choice of the number of items to include in the deprivation indicator is, to some extent, arbitrary: three is not a 'magic' number. In practice, however, the results do not change greatly for most countries (at least in terms of their ranking) if a different number of items is chosen – at least up to five, after which point the proportion of people who are deprived of so many items declines in all countries to (at most) 5%, and in most cases to less than 1% (Table 7.5). There are, however, some notable exceptions, especially if the indicator is fixed at two items instead of three. In this case, Spain would move up in the rankings and Belgium would move down.

How far is the assessment of material deprivation affected by the differing rates of possession of items?

As noted elsewhere, the relative importance of being deprived might be expected to vary with the prevalence of the item in question. If the great majority of people possess the item (or can enjoy it) – such as a meal with meat or fish every other day or an annual holiday – are not behind with their bills or are able to make ends meet, then **not** being able to afford to do so is likely to involve a greater sense of deprivation than would be the case with other items.

In order to examine the extent to which taking this into consideration changes the results in terms of the rate of deprivation across countries, we can weight the items according to their prevalence, giving a larger weight to items in common usage (or commonly enjoyed) and a smaller weight to those less widely used. The result is shown in Table 7.6 in terms of the average number of items that people are deprived of.

The first point to note is that there is a very high degree of correlation between the average number of items people report being deprived of and the indicator of material deprivation – in only a few cases would the rank order of countries change if the indicator were couched in terms of the average number of items. Second, this also applies to the average weighted number of items. This implies that it would not make much difference to the results if weights were applied to the items when we judge the extent of deprivation.

Third, if people are deprived of one item, then in many cases they are also deprived of two. In most countries, therefore, if people are deprived of at least one item, then in fact the average number of items of which they are deprived is two or more. The average number, moreover, tends itself to vary according to the rate of material deprivation.

Fourth, this picture changes somewhat if the items are weighted. In this case, although Latvia, Poland and Cyprus show a high rate of deprivation for those who are deprived of at least one item, measured by the average weighted number of items they are deprived of, in most other countries there is relatively little variation in the average number. This implies that, for countries where the average unweighted number is relatively high, a comparatively large number of people tend to be deprived of items that are not so widely enjoyed, and therefore their sense of deprivation may be less than might be expected from the deprivation rate.

Does the extent of material deprivation vary between men and women and between age groups?

Across the EU, more women are materially deprived according to the indicator than are men. This is the case in all Member States, which is line with women's tendency to be more at risk of poverty (Table 7.7). Given that deprivation is measured at a household level, this implies

that women living alone are especially vulnerable to material deprivation – as they are to the risk of poverty.

The proportion of children who are deprived is also, on average, larger than the proportion of the population as a whole across the EU. The only countries where this is not the case are Greece, Estonia, Cyprus and Slovenia (Table 7.8). In all these cases, however, the risk of poverty among children is higher than the country average, suggesting that their relative living standards may be overstated. The rate of deprivation, however, is even higher in most countries among young people aged 18–24, especially in Denmark and Finland; this is in line with their relatively high risk of poverty.

On the other hand, in most countries the rate of material deprivation tends to be relatively low among those aged 65 and over. There are exceptions, however: the three Baltic states, Greece, Portugal and Cyprus, in all of which the risk of poverty among people aged 65 and over is also relatively high.

In a number of countries, however, the proportion of the elderly who are materially deprived is lower than among other sections of the population, though their risk of poverty is significantly higher. This is the case in Belgium, Denmark, Finland, Sweden and, most especially, in Ireland and the UK: in these last two, the rate of material deprivation is only 4–5%, compared to 29–30% who have income below the poverty threshold. This implies that their relatively low level of income may overstate their vulnerability to social exclusion and understate their living standards, perhaps because it leaves out of account the possessions they have accumulated over their lives, such as the house they live in (which correspondingly reduces their housing costs), and the goods and services in kind they are entitled to.

The relatively low rate of material deprivation among those aged 65 and over extends to those with income below 60% of the median. In Ireland and the UK, as well as in Sweden, the proportion measured as being materially deprived is only 6–7% of the total in this group. And in Denmark, the figure is under 2% – less than in the case of those with higher income levels (Table 7.9).

In stark contrast, the proportion of the elderly with income this low and who are materially deprived is 80% in Latvia, over 75% in Slovakia and over 70% in Poland – in each case well above the rate for the rest of the population (also the case in Greece and Slovenia).

What is the relationship between the indicator of material deprivation and the ability to make ends meet?

The reliability of the material deprivation indicator that has been developed can be gauged by comparing the results that it generates with other indicators of hardship. As we see elsewhere, though the results are largely consistent with those obtained from relative

income measures, there are some interesting, and illuminating, differences. The results can also be compared with the responses to the question included in the EU–SILC on the ability to make ends meet, which may be regarded as an indicator of financial strain. In practice, the results are, for the most part, closely aligned to one another (Table 7.10).

Thus, across the EU25 as a whole, some two-thirds of those people who are identified as being materially deprived, according to the indicator, report difficulty in making ends meet; this compares with just 14% of those who are not materially deprived. The difference between the two figures is pronounced in all Member States: the share of the materially non-deprived who report difficulty is below 30% in all of them (apart from Greece) and below 10% in half; among the materially deprived, the proportion is over 50% in all countries (apart from Germany, Finland and Denmark) and over 80% in Cyprus, Italy and Greece.

The pattern is much the same if those with income above the poverty threshold and those with income below are examined separately. For those in the latter group, with income below 60% of the national median, the proportion of the non-deprived who have difficulty making ends meet is around a third (or less) in most countries, the only exceptions being Greece, Italy, Cyprus and Portugal; the proportion of those on low incomes and identified as being materially deprived is 75% or more in half the countries – and over 60% in all, apart from Denmark, Finland, Germany and the UK.

What is the relationship between material deprivation and housing deprivation?

Many of those who are identified as being materially deprived also seem to be deprived in terms of housing. The indicator of housing deprivation recently adopted at the EU level as part of the monitoring of social inclusion relates to those who report housing problems in at least one of three respects: that the household has no indoor bath or toilet; that it suffers from a leaking roof, damp walls, rotten floors or window-frames or other defects; or that it is too dark. Those who are materially deprived according to the indicator are more than twice as likely across the EU as a whole and in most Member States to report at least one these problems than are those who are not materially deprived (Table 7.11).

This is equally the case for those people with income above the poverty threshold, considered separately. It is less the case for people with income below the poverty threshold, for whom the difference between the materially deprived and the non-deprived is slightly narrower, but is nevertheless still significant (Cyprus being the only country where there is only a small difference between the two proportions).

The figures also show that, in most countries, there is a higher probability of being deprived both materially and in terms of housing if a person has income below the poverty line than if they do not. The only countries where this is not the case are the three Nordic countries and

the Netherlands. These countries apart, therefore, deprivation among those with low income tends to be cumulative.

Access to decent housing

The quality of housing is an important aspect of living standards. To live in an attractive and spacious house or apartment in a pleasant and convenient location is one of the main aspirations of most people. The quality of housing, therefore, is a major element of a person's well-being. Conversely, housing deficiencies – defined in a broad sense to encompass environmental factors and the lack of accessibility of essential services – are a significant indicator of deprivation.

Although the quality of housing tends to be positively related to income, the relationship is by no means perfect – especially at the lower end of the income scale, where the standard of accommodation depends not only on relative income but, more generally, on the housing available in the location in question and prevailing levels of house prices and rents.

The quality of housing is, accordingly, an important means of assessing living standards and the extent of deprivation in different parts of the EU. As such, it adds an extra dimension to comparisons that can be made of material deprivation, based on what people can afford to purchase, and one that is of major importance in its own right.

Living in poor housing conditions

The EU-SILC contains a set of questions relating to housing conditions, and specifically to the physical condition of the accommodation – whether it has a leaking roof, damp walls or floor, rotten window-frames and so on; the existence of a bath or shower or indoor flushing toilet for the sole use of household members; and problems with it being too dark. In addition, there is a question about the number of rooms in the house. This can, in principle, be compared against the number of people living in the house, in order to obtain an indication of whether or not the house is overcrowded. (This, however, poses certain difficulties, since no information is included on the size of the rooms concerned – especially relevant in the case of someone living alone in one room, which might be either small and cramped or large and spacious.)

The questions on housing conditions and a measure of shortage of space (based on the number of rooms and the number of household members) have been combined into an indicator of housing deprivation, which was recently agreed at the EU level. Specifically, someone is considered to be deprived in this respect if their home suffers from any one of the first three problems listed above (i.e. it is in poor physical condition, has no bath and indoor toilet, or is too dark) and is also short of space.

In practice, very few people outside the Baltic states live in housing without a bath or shower and an indoor toilet. However, in Estonia, for those at risk of poverty, the proportion amounts to around 25%, in Latvia it is over a third, and in Lithuania, close to 40%. More people in all countries report problems with a leaking roof, damp walls and so on, and again the proportion is larger for those at risk of poverty. Relatively few report problems with their homes being too dark – less than 15% in most cases, even among those at risk of poverty.

Taking these three aspects together, the number of people who report a problem in at least one of the respects varies from just under 10% in Slovakia and Finland to close to 40% in Lithuania, Latvia and Poland. In the latter three countries, around 33–37% of people with income above the poverty threshold report at least one problem of this kind, and the same goes for 58–60% of those with income below the threshold. The proportions are also relatively high in Estonia and Portugal (50% and 47%, respectively, for those at risk of poverty; 27–28% for those with higher incomes), two other Member States with relatively low levels of per capita income.

Apart from Lithuania, Latvia, Poland, Estonia and Portugal, however, there is only a limited tendency for the extent of housing problems to be related to the prosperity of households (Figure 7.3, in which countries are ordered in terms of per capita income, measured in PPP terms to allow for differences in price levels across countries). Nevertheless, there is a systematic tendency in nearly all countries for the proportion of people who report at least one of the housing problems concerned to decline as income rises.

Figure 7.3: Proportion of people with income above and below the poverty threshold experiencing housing problems, 2007
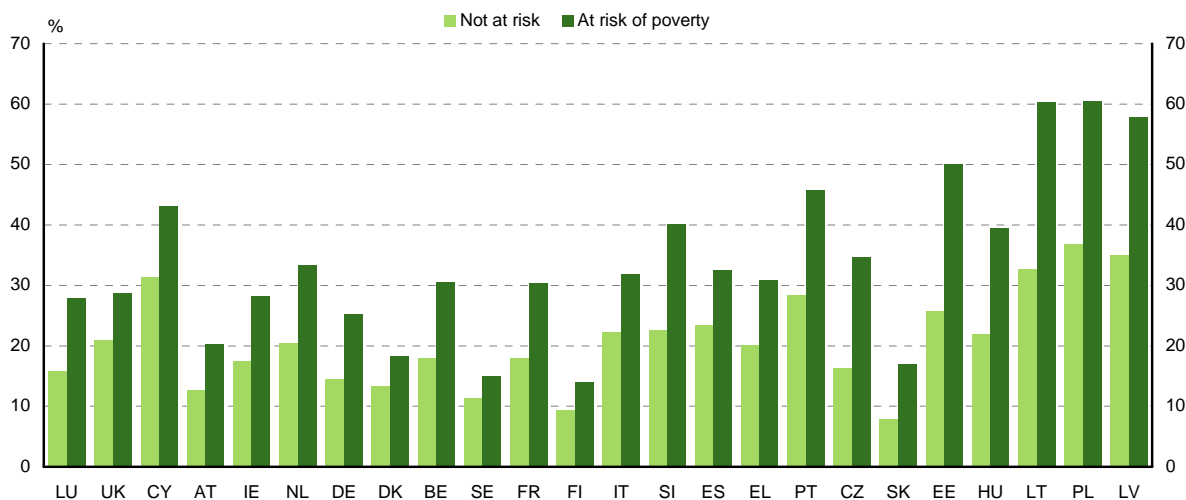
Note: Experiencing at least one of the three types of housing problem indicated in EU-SILC.
Source: EU-SILC 2007.

Shortage of space

There is a tendency across all countries for housing with potential space problems to vary with the level of per capita income. The indicator adopted to gauge such problems – which relates the number of rooms in the house to the number of people, taking account of their age and sex (see Box 7.2) – suggests that problems of overcrowding are particularly acute in many of the former socialist countries that entered the EU in 2004, where per capita income is, in most cases, well below the EU average (Figure 7.4). In seven of the eight formerly socialist new Member States, even among those with income above the poverty threshold, some 40% or more of people live in housing which, by this measure, is cramped. The sole exception is the Czech Republic, were the figure is almost 30%. This is far more than in any of the other Member States, except Greece (27%); and only it and Italy have a figure of over 15%. Indeed, in many of these other countries, overcrowding seems to affect only a small number of people, especially among those with income above the poverty threshold (under 5% in nine of the 16 countries concerned – the EU15 plus Cyprus).

Box 7.2: Definition of space shortages

The indicator of space shortages agreed at the EU level specifies that there is a shortage if a house or apartment does not contain at least the following:

- one room for the household (in addition to the other rooms below);
- one room for each couple;
- one room for each single person aged 18 and over;
- one room for two single people of the same sex aged between 12 and 17 years;
- one room for each single person of different sex aged between 12 and 17 years;

–   one room for every two children under the age of 12.

To be counted as such, rooms must be at least 4 square metres in size, have a height of over 2 metres and be accessible from inside the unit. Kitchens used solely for cooking, bathrooms, toilets and corridors are not counted.

In all countries, however, overcrowding seems to go hand in hand with having a low level of income. In the Czech Republic, Hungary and Poland, well over 60% of those at risk of poverty are identified as having a problem with shortage of space; and in Latvia, Lithuania and Slovakia, the figure is over 55%. In the EU15, the figure is around 35–37% for this group in Greece and Italy, and around a third in Austria; in Denmark, Sweden, France, Portugal and Luxembourg, it is over 20%.

At the same time, those identified as being short of space according to this measure do not always consider themselves to be living in cramped conditions. According to the responses to a question included in the special EU–SILC *ad hoc* module (conducted at the same time as the 2007 survey), in those countries where the measure described above indicated most overcrowding, far fewer people reported a shortage of space in their homes than might have been suggested by the measure, especially in the Central and Eastern European countries. In consequence, the difference between countries in terms of the number of people who report a shortage of space is much smaller than if shortage of space is reckoned on the basis of the more 'objective' indicator.

Figure 7.4: Shortage of space, according to different measures, 2007

a) Short of space according to the number of rooms relative to people in the household
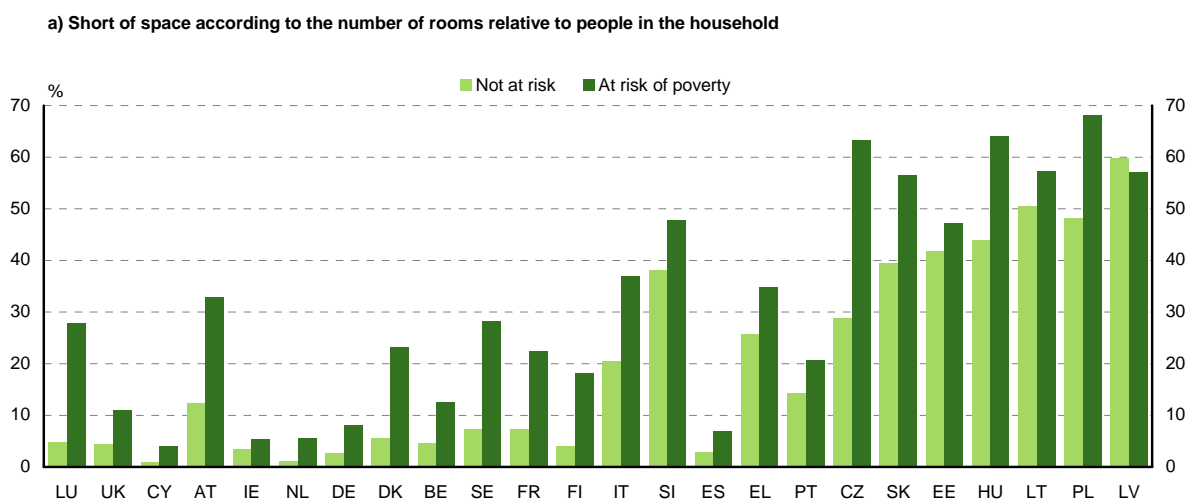
Source: EU-SILC 2007.

b) Short of space according to self-assessment
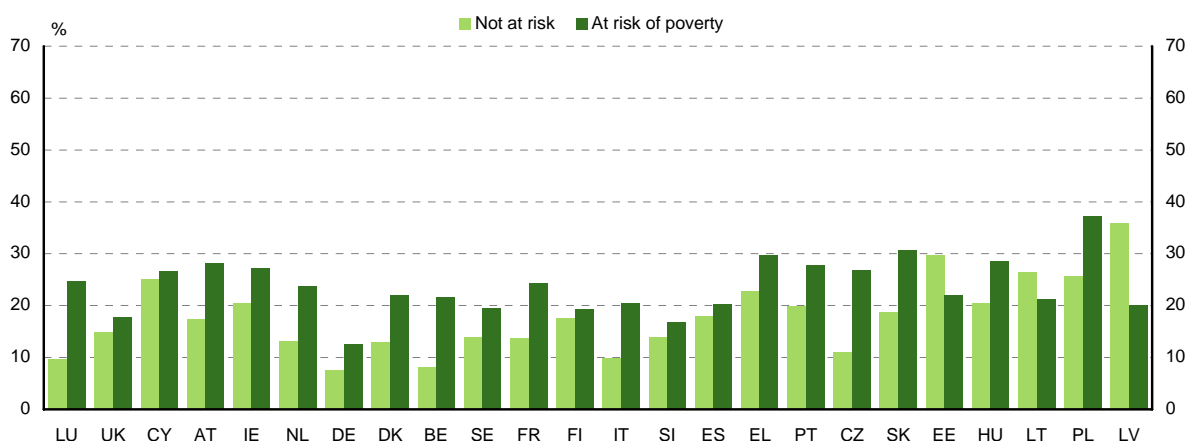
Source: EU-SILC 2007.

The difference between the proportion of people at risk of poverty who consider themselves to be short of space and the proportion of those with higher income levels who do so is also generally narrower than in the case of the indicator.

Poor housing conditions and shortage of space

An indicator of extreme housing deprivation is to have at least one of the three housing problems described above **and** to be short of space. This indicator shows a relatively wide variation across the EU – though mainly between six countries (Slovenia, Hungary, Estonia, Lithuania, Latvia and Poland, where the proportion so deprived exceeds 10%) and the rest. There is a further divide, however, albeit less marked, between the Czech Republic, Greece, Italy and Portugal, where the proportion amounts to 7–8%, and the remaining countries, where it is below 5% (Table 7.12).

In all countries, the proportion assessed as being extremely deprived by this measure is larger among those at risk of poverty than among those with higher incomes. Except for the 10 countries listed plus Slovakia, however, the proportion for those at risk is under 10%. On the other hand, in seven countries, it is over 20%; and in three – Poland, Lithuania and Latvia – over a third.

The replies to the special *ad hoc* module on housing problems can also be contrasted with those to the standard EU–SILC questions. The proportion who reported that their home suffered from at least three of the five main problems covered by the module (inadequate electrical installations and/or plumbing, the house being uncomfortably warm in summer and/or cold in winter and being short of space) is also small in most countries. However, the countries where the share is relatively large are not always the same as those highlighted by the indicator adopted. Thus, there are only three countries where the proportion is over 10%

- Cyprus, Portugal and Latvia – but apart from Latvia, these do not figure when the agreed indicator is applied. Equally, many of the countries shown by the indicator to have a relatively large proportion – such as Slovenia or the Czech Republic – do not show up in the module as having especially serious problems. The same is broadly the case if the comparison is confined to those with income below the poverty threshold.

Finally, it is also possible to compare the relative number assessed as being deprived in terms of housing with the relative number who reported being **dissatisfied** with their housing. This shows much greater variation across countries, and is broadly in line with relative levels of household income. There are some countries, however, with above-average levels of household income, but where the proportion of people who are dissatisfied with their housing is also relatively high. Cyprus (where the share of people who reported housing problems in the module is relatively large, but where the same is not true of the main survey) is one of these, as are Portugal, Ireland and Germany (where housing problems seem to be relatively rare, judging by both the indicator and the other questions asked in the module).

In Hungary, Lithuania and Latvia, those who expressed dissatisfaction with their housing exceeded 30% even among those with income above the poverty threshold. Among those with income below this level, the proportion was around 40% or more in these three countries, and over 30% in a further four – all countries that entered the EU in 2004. Even outside Central and Eastern Europe, the proportion at risk of poverty who report dissatisfaction with their housing is over a quarter in Ireland, Italy and Portugal, and below 10% only in the UK, the Netherlands and Sweden.

Access to essential services

Although access to services is not intrinsically part of the quality of housing, it is an important aspect of the location in which people live and, therefore, of their living standards. In practice, as was indicated by the *ad hoc* module on housing included as part of the EU-SILC for 2007, such access tends to vary not only between those at risk of poverty and those with higher income levels, but also between those living in densely populated (or urban) areas and those living in rural (or sparsely populated) areas. Difficulty of access seems to be particularly widespread in countries where household income is relatively low. Consequently, someone with income below the poverty threshold who lives in a rural area is likely to find it substantially more difficult to access a range of essential services than is someone who lives in a city and has income above the poverty threshold. This is even more the case if they live in a low-income country.

This is illustrated by the proportion of people who report difficulty in accessing more than one of the essential services covered by the *ad hoc* module – grocery, banking and postal services, public transport and primary healthcare.

In most countries, in the case of people living in urban areas, the proportion who report difficulty of access to at least two of these services is greater if they have income below the poverty threshold than if they do not (though this is not the case in Luxembourg, Austria, Spain, the Czech Republic or Slovakia) (Table 7.13). In Italy, for those at risk of poverty, the figure reaches 44%; however, it is below 30% everywhere else – and indeed is below 25% except in Latvia, Lithuania, Cyprus and Hungary. In Italy, a third of those on low income in densely populated areas reported difficulties of access to at least three services – almost twice the figure for any other country – and 15% reported difficult access to all five services.

In rural areas, the share of those people who report difficulties of access to more than one service is much higher. For those with income below the poverty threshold, it amounts to 35% across the EU as a whole, while a quarter report difficulty in accessing three or more services (Table 7.14). In Greece, over half of those at risk of poverty in rural areas report having difficult access to at least two services; over 40% to at least three; and over 15% to all five. In Italy, Austria, Ireland and Estonia, the proportion reporting difficulties in accessing all five is even higher – 18–19%. In all of these countries, 30% or more reported difficulty in accessing three or more services. This is also the case in the other two Baltic states and in Poland, which serves to emphasise the relatively widespread problem of access to services across the EU, especially among those with low income.

Access to healthcare[47]

As the US experience demonstrates – recently highlighted by President Obama's initiative to extend health insurance coverage and the ensuing controversy – lack of access to healthcare except on market terms can leave a deep scar on many people's lives: it can generate serious anxiety, create huge gaps in coverage and turn low income into exclusion from essential medical treatment.

By contrast, universal access to health services is a vital component of the European social model. The social institutions designed to place quality healthcare within reach of all citizens, irrespective of income (such as national health services or social health insurance), enjoy a very long tradition in Europe.

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[47] Manos Matsaganis, Terry Ward and Erhan Őzdemir.

Nevertheless, while the institutions of publicly financed (and, in some cases, publicly provided) healthcare have reduced inequalities in access, they have not completely eradicated them. This is demonstrated by the most recently available evidence, which confirms that residual obstacles to accessing healthcare still persist.

The extent of the unmet need for care

The EU-SILC contains information on the unmet need for medical care – specifically, on those who report that at least once in the 12 months leading up to the survey, they had not received the care that they considered they needed, for various reasons. According to the 2007 survey, just over 6% of respondents across the EU25 as a whole reported an unmet need for care, the proportion varying from 24% in Latvia to less than 1% in Belgium and Slovenia. In half of the 24 countries covered, the proportion was less than 5%, and in all but six countries it was less than 10%. The proportions of men and women who reported an unmet need were very similar in most countries; equally, there was relatively little difference across age groups – except that the proportions generally tended to be less for children and for people aged 65 and over.

The relative number reporting an unmet need, however, was larger for those with income below the poverty threshold (defined as 60% of the national median) in all countries apart from Denmark (Table 7.15). This was especially the case in Latvia (36% of those with income at this level) and Portugal (22%). Nevertheless, in 10 of the countries, the proportion was less than 5% even among those with income this low.

Although the reasons for experiencing an unmet need varied from country to country, in most cases a significant proportion of people cited an inability to afford treatment, a lengthy waiting list or travel difficulties. Across the EU as whole, therefore, around 30% of people who reported an unmet need cited affordability as the main reason. This, however, rose to over 50% for those with income below the poverty threshold (Table 7.16). In Greece, some 78% of people with income below this level and with an unmet need reported this as the main reason; in Cyprus around 80%; in Portugal 84%; and in Belgium 86% (though here only 2% of people reported an unmet need at all).

The length of waiting lists was generally a less frequently cited reason – except in Estonia and Lithuania (where over half the people with income above the poverty threshold reported this as the main cause), and in the UK, where (along with Spain) affordability was not an issue. Problems with taking time off work (or time off from caring for children or others) was cited by a large proportion of respondents in Denmark, especially among those at risk of poverty (though again the number reporting an unmet need was very small), and in Spain. Travel difficulties seemed to be an issue only in Estonia and Lithuania.

The affordability of healthcare – further evidence

The evidence from the EU–SILC suggests that, though there are a number of potential barriers to accessing healthcare, lack of affordability seems to be the main one across the EU. It is also the one that poses the greatest challenge to the aspiration of universal access for all, irrespective of income. At the same time, in many of the countries, access to healthcare does not seem to be a significant problem.

Perceptions of affordability were recently the focus of a Special Eurobarometer on health and long–term care in the European Union (no. 283, December 2007). There the question was framed in fairly general terms: 'thinking now about the affordability of health care services in [our country], please tell me if for you personally, or for your close ones, hospitals are very affordable, fairly affordable, not very affordable or not at all affordable'. Much the same question was asked with respect to medical or surgical specialists and to family doctors or GPs.

The results show that, so far as hospitals are concerned, the proportion of those surveyed who responded 'not very affordable' or 'not at all affordable' was over 40% in six Member States (Malta, Bulgaria, Hungary, Romania, Greece and Portugal),[48] as against an EU27 average of 21% (Table 7.17). Conversely, the proportion of those who responded spontaneously with 'nothing to pay' or 'free' was 63% in the UK, 45% in Denmark, 35–36% in Spain, the Czech Republic and Slovenia, and 30% in Poland (against an EU27 average of 20%).

A larger proportion of respondents found medical or surgical specialists to be unaffordable (35% in the EU27 as a whole). These were in the clear majority in Portugal, Greece, Cyprus, Bulgaria, Romania and Finland (more than 70% in Portugal and Greece), as well as in Malta and Ireland. By contrast, 50% of those interviewed in the UK responded 'nothing to pay' or 'free', as against an EU average of 15%.

The proportion of people who thought family doctors or GPs were unaffordable was generally smaller (less than 25% in most countries, with an EU average of 11%), though the proportion was around a third or more in Greece, Cyprus, Portugal and Ireland. Again, in the UK, 69% of respondents answered 'nothing to pay' or 'free', while the figure was also quite high in Denmark (45%), the Czech Republic, Spain, Slovenia and Poland (all between 32% and 37%), as against an EU27 average of 21%.

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[48] As well as one candidate country, Croatia.

A further piece of evidence comes from the results of the Survey of Health, Ageing and Retirement in Europe (SHARE) project. The survey collects data for households in which the head is someone aged 50 or over (in 10 EU countries plus Switzerland in 2004) on, among other things, out-of-pocket spending on health services. The amount concerned was below 3.5% of income in all countries, except Italy (6%), Belgium (7%) and Greece (just over 7%) (Table 7.18).

For those in the bottom 20% of the income distribution, the figures were higher, though still around 7% of income or less in all countries, except for Italy, Belgium and Greece (where people aged 50 or more spent 14–15% of their income on healthcare). For a considerable number of people in this age group, out-of-pocket health expenses account for a very substantial share of their income. This is especially true of Belgium and Greece, where such expenses amount to over 25% of income for around 5% of respondents (Table 7.19).

Information on out-of-pocket spending on health services, at a macro level, is also collected by the OECD and the World Health Organization. In 2006, out-of-pocket spending as a proportion of total expenditure on health was around 30% in Lithuania (and Switzerland); 35–39% in Bulgaria, Latvia and Greece; and around 47% in Cyprus (Table 7.20, where spending as a proportion of total expenditure is given by combining the two columns, i.e. by multiplying the first column by the second).

The evidence, therefore, suggests that a significant number of European citizens face barriers in accessing affordable health services. Clear patterns are discernible. Problems of access appear to be largely contained in the UK, Denmark and Sweden. By contrast, the ideal of universal access to healthcare seems to be furthest away in the countries of Central, Eastern and Southern Europe, with the exception of Slovenia, the Czech Republic and Spain.

Chapter 8 | Mobility

*Terry Ward, Fadila Sanoussi and Emanuela Di Falco
(Intergenerational mobility)
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Intergenerational mobility

The level of education attained is a primary determinant of a person's life chances, in the sense that it tends to be the most important influence on the employment opportunities open to them and, accordingly, the job that they are likely to be able to obtain and the income they are likely to have.

Most empirical educational research uses the effect of some measure of parents' socio-economic or social status on the educational achievement of their children as a proxy for equality of opportunity (Ammermüller, 2005; Bishop and Mane, 2004; E. Hanushek and Wössmann, 2005; Horn, 2009; Iannelli, 2002; Marks, 2005; OECD, 2005). The higher the effect of these measures on the outcome, the greater the degree of inequality in the system. These approaches assume – directly or indirectly – that educational performance (test scores) or attainment (level of completed schooling) is closely connected to future status or living standards.

Access to a high level of education for everyone on the same terms is a key feature of the European social model and is a major aim of social policy across the EU. In practice, however, although education up to upper secondary level (and, in many cases, beyond) is publicly provided and funded in all Member States, and although there are few overt obstacles to children being educated to this level, the standard of education they receive and the opportunities open to them to progress through the system can vary substantially. In particular, their background and where they live can significantly affect the school they are able to attend and how well they are likely to do there, as well as the support they are likely to receive at home.

The children of migrant parents, or those whose parents have a relatively low level of education, tend, therefore, to have less of a chance to perform well at school and to attain a high level of education. Empirical studies that have been carried out over the years have demonstrated this. The issue examined here concerns the extent of this disadvantage and how it varies between EU Member States.

The results, it should be noted, are of relevance not only in assessing how far equality of access to education at different levels exists across the EU, but also in judging the extent of social mobility and the scale of the intergenerational transmission of disadvantage. In other

words, the degree to which the characteristics of parents and their achievements affect the level of education that their children are likely to attain is a central indicator of the constraints that exist on social mobility in the country concerned.

The empirical evidence examined

There are three sets of data examined here that give insights into the extent to which children and young people from different backgrounds have equal access to education in different EU Member States and, therefore, into the extent of intergenerational social mobility that exists in each case. The data in question come, first, from the PISA survey of the academic performance of young people at age 15–16 in different countries (conducted by the OECD at regular intervals) – specifically, from the study on *Science Competencies for Tomorrow's World*, carried out in 2006.

Second, they come from the special module on the intergenerational transmission of disadvantages, which was included as part of the EU-SILC in 2005.

Third, they are taken from the EU-SILC survey for 2007 and, in particular, from the details relating to young people aged 16–29 who live with their parents. These are used to examine the link between young people's educational attainment (or the level of the programme of study they are pursuing if they are still in education or training) and that of their parents. This is intended as a check on the results of the 2005 *ad hoc* module, though that module focuses on people aged 25–64, rather than on young people under 30.

How is the academic performance of students affected by their background?

Students who come from a migrant background tend to perform less well than other students in all of the disciplines covered by the PISA survey. This applies both to the children of first-generation migrant families and to those from second-generation families, whose parents were born in the country of residence (though the latter tend to perform slightly better on average than the former, but not in all countries).

In terms of reading ability, therefore, students with a non-migrant background were awarded grades which, on average, were at least 10% higher than first-generation migrants in 12 of the 14 OECD countries covered, the only exceptions being Greece (9% higher) and Ireland (3% higher) (Table 8.1 in the Annex). In nine of these 12 countries, the difference was 15% or more – in Belgium it was 25% and in Denmark 19%. Moreover, students with a non-migrant background also obtained average grades that were at least 13% higher than those awarded to second-generation migrants in six of the nine countries for which the relevant data are available, the exceptions being France, Sweden and, most notably, the UK (where

the difference was only 1%). In Germany and Austria, second-generation students performed worse than first-generation ones.

While the difference in reading ability may, to some extent, reflect language difficulties among migrant students, similar outcomes are recorded for mathematics, where language should be less of a factor. In all countries, except for Ireland and the UK, non-migrant students were graded at least 10% higher than first-generation migrants in mathematical ability, the gap again being widest in Belgium and Denmark.

As with reading ability, there is a significant difference in performance in mathematics between non-migrant students and those from second-generation families – the gap in this instance being 9% or more in nine of the 10 countries for which data are available, with second-generation students again performing worse than first-generation ones in Germany and Austria.

A similar picture emerges from a comparison of the performance of students in science. In this case, moreover, it is possible to take account of two other factors likely to affect performance: the economic, social and cultural background of students, and whether they normally speak a different language at home to that of the country in which they live (Table 8.2).

The findings to emerge from the comparison are as follows:

- Students from a migrant background perform less well in science than other students in all the countries, even allowing for differences in language and economic, social and cultural factors (with the possible exception of Luxembourg).

- The extent of the difference in performance varies between countries in a similar way to that noted above for reading and mathematics, with the difference being widest in Belgium, Denmark, Germany and Austria, and relatively narrow in the UK (and Ireland, though the difference there is not statistically significant).

- Part of the difference in performance between migrant and non-migrant students is attributable to differences in their economic, social and cultural status, but a significant difference remains in all countries even after this difference is allowed for.

- Students who come from a home where a different language is normally spoken to the one they are taught in seem to perform worse than others, though this appears to be a consequence of their different economic, social and cultural background; once specific account is taken of this, students who speak a different language at home perform better in all countries, apart from France, where little difference in their performance is evident (Table 8.2, last column).

How is the performance of students affected by the education level of their parents?

The influence of the education level of parents on the academic performance of their children is evident in all countries. Though the scale of the effect does vary, according to the PISA results for 2006, across all EU Member States those students whose parents have a tertiary level of education perform on average significantly better in tests of science, reading and mathematics ability than do those whose parents have only basic schooling.

Thus, across these three disciplines, the average grades achieved by students with highly educated parents ranged from 7% higher than those achieved by students with poorly educated parents in Finland, to 27% higher in Poland, 29% higher in Hungary and 45% higher in Slovakia. In all countries apart from Finland, the average difference in grades between the two groups of students was over 10%, and in Germany, Austria and Belgium, as well as the three new Member States listed above, it was over 20% (Table 8.3).

In Hungary and particularly in Slovakia, the much worse performance of students with poorly educated parents reflects, in part, the high incidence of Roma among parents with a low level of education and the limited access to high-quality schooling that still exists for their children. In the other countries where there is also a wide gap in performance, this may reflect the higher incidence of students from migrant backgrounds who have poorly educated parents, though this is only part of the explanation.

How is the education level attained by people affected by the education level of their parents?

Evidence from the EU-SILC module on the intergenerational transmission of disadvantages

A further insight into the influence of a person's background, or home environment, on the intergenerational transmission of disadvantages comes from the EU–SILC for 2005. After analysis of these data, some results were included in the Social Situation Report for 2007. They confirm the findings from PISA (outlined above) that in all countries, albeit to varying extents, those people whose parents attained a tertiary level of education are much more likely to attain a tertiary level themselves than are people whose parents had a low level of education. In the EU as a whole, therefore, those people aged 25–64 whose fathers had tertiary qualifications when they were young teenagers were over three times more likely to have attained tertiary qualifications themselves than were those whose fathers had only basic schooling (Table 8.4). Much the same held true for the differences in the education level of their mothers.

There is, however, some uncertainty over the reliability of these findings, because of the difficulty of verifying the accuracy of people's recollections and the problem of identifying the level of education attained – in many cases – several decades earlier, given that most countries will have seen changes to their education systems in the intervening period. Accordingly, it is useful to try to check the findings from other evidence.

Evidence from the EU-SILC standard survey

One other source of evidence is the standard data included in the EU-SILC. Because of the household nature of the survey, the data allow the education status of young people living with their parents to be compared to that of their parents. This comparison, of course, can be made only for young people still living in the family home. This raises the possibility that the findings could be biased one way or the other, insofar as those no longer living at home might have different characteristics. Since there are differences of this kind for those aged 16–29 (the age group on which the analysis is focused), between those living at home and those no longer at home, the possibility of bias cannot be excluded (as discussed below).

On average across the EU, some 65% of young people aged 16–29 still live with their parents, according to the EU-SILC for 2007, the proportion varying from over 86% in Slovenia and Slovakia to 38% in Finland and Sweden and 34% in Denmark (Figure 8.1). However, except for in those three Nordic countries, plus France, the Netherlands and the UK, the proportion still living at home is over 60% in all countries. In most Member States, therefore, the great majority of young people of this age live with their parents; accordingly, in these terms, they make up a large enough sample on which to carry out the proposed analysis (though the variation in the proportions involved could affect comparability of the results). In countries where the proportion is relatively small, though, the findings might not be representative of young people as a whole.

Figure 8.1: Proportion of young people living with their parents, 2007
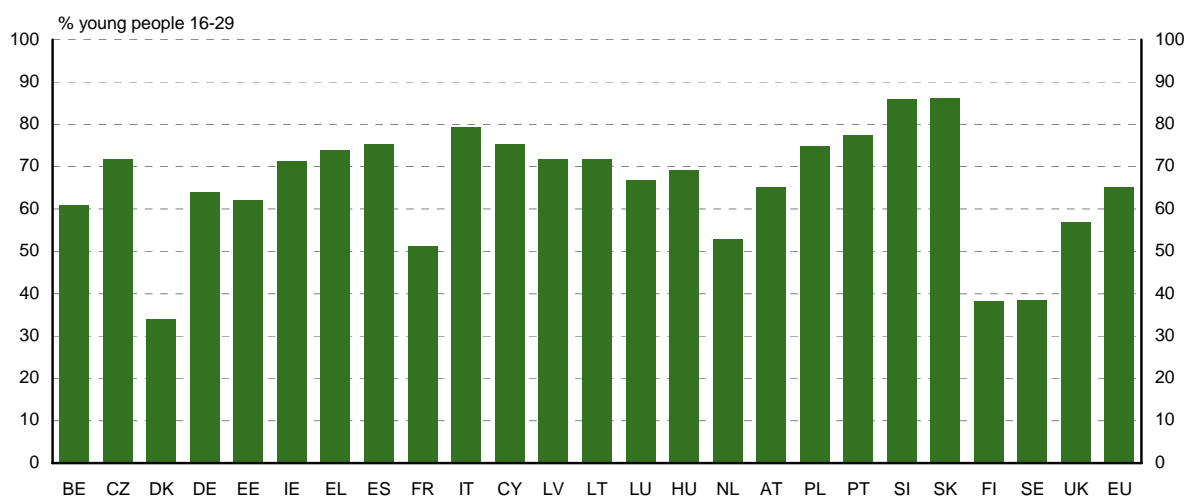
Source: EU-SILC 2007.

Given that many young people in this age group are in education or initial vocational training, and accordingly are still in the process of acquiring qualifications, the approach adopted in order to maximise the number of observations is to group young people into three categories for the purposes of the analysis:

- The first group consists of those no longer receiving education or training who have no qualifications beyond basic schooling.

- The second group consists of both those who have attained upper secondary level qualifications and are no longer receiving education or training and those who are in the process of acquiring upper secondary qualifications (in the sense that they are engaged in an education or training programme at this level).

- The third group consists of those who have attained tertiary-level qualifications or are studying at this level.

The underlying assumption is that those who are undertaking education or training programmes at a particular level either successfully complete these programmes or, if they do not, that the same proportion of students with highly educated parents will fail as those with poorly educated parents – in other words, that drop-outs do not bias the results one way or the other.

The results show that, in all countries, young people with at least one parent who has tertiary education are more likely to attain tertiary education themselves (or be in the process of so doing) than those whose parents have no qualifications beyond basic schooling (Table 8.5, in which the education of parents relates to the highest level of education attained by either the father or the mother).

The difference is particularly marked in the Czech Republic, Hungary, Latvia, Slovakia and Poland – all countries where the odds that those with parents who have a tertiary level of education will attain that level themselves were shown by the EU-SILC special module to be high, relative to those young people whose parents had only a low education level (Table 8.4). The odds are also high, however, in Estonia and Austria – countries that had below-average odds according to the module. At the same time, the difference in probability between the two groups of people of attaining tertiary-level education is relatively small in Denmark (the only country where the probability is higher for those with poorly educated parents than it is for those with tertiary-educated parents, though the population examined may well not be representative), Finland and the Netherlands. This is in line with the findings from the module. On the other hand, the difference is also small in Cyprus, and this was not the case according to the module.

Given that many of those in the age group who have acquired tertiary qualifications are likely no longer to be living with their parents and that very few of those below 18 will be undertaking a course of tertiary education, a more satisfactory comparison may be to focus on those with at least upper secondary education (or who are studying towards this level). (This includes those with, or studying for, tertiary qualifications.) Although the difference in probability between those with tertiary-educated and poorly educated parents is clearly going to be smaller, it is nevertheless the case that the odds of attaining at least upper secondary qualifications are much higher for those with tertiary-educated parents in most countries. This is especially true of the three Baltic states, Portugal and Germany. This is broadly in line with the above findings, in the sense that all these countries have above-average odds ratios in respect of tertiary education.

Persistent poverty

Having income below 60% of the national median may not have a long-term, scarring effect on people if it is a transitory phase in their lives. The longer it lasts, though, the more difficult it is to cushion the effect on living standards by spending from accumulated savings or by running down assets (if there are any), and the more likely it is to result in social exclusion and marginalisation.

The persistent-risk-of-poverty rate is measured in the EU as the share of people with an equivalised disposable income below the risk-of-poverty threshold in the current year and in at least two of the preceding three years. The measurement is based on the longitudinal data from the EU-SILC survey, which now has the minimum required number of waves (four) to calculate the rate for, in principle, 13 of the Member States (though in practice, because of data problems, the number is 10). In order to capture some aspects of the persistence of the

poverty risk for the group of countries where the longitudinal data are available for only three years, it is also possible to calculate at least a proxy indicator, which measures those who have had income below 60% of the median in all three years of the survey.

Use of the longitudinal survey, however, raises additional methodological issues. Due to the nature of the longitudinal study, there are some entries (births, new members moved to the household, etc.) or exits (deaths, out-migration or marriage break-up, as well as non-response of households). In order to account for this, everyone is excluded from the analysis who was not present in at least one of the previous or succeeding panels (i.e. who cannot be monitored from one year to the next). Note that, because of the rotating panel design, the longitudinal sample is not the same for each year. The risk-of-poverty threshold is calculated as the population with income below 60% of median income for each year (separately for 2004, 2005, 2006 and 2007), where the median relates only to the population being tracked.

Figure 8.2: Persistent-at-risk-of-poverty rates and at-risk-of-poverty rates, 2006
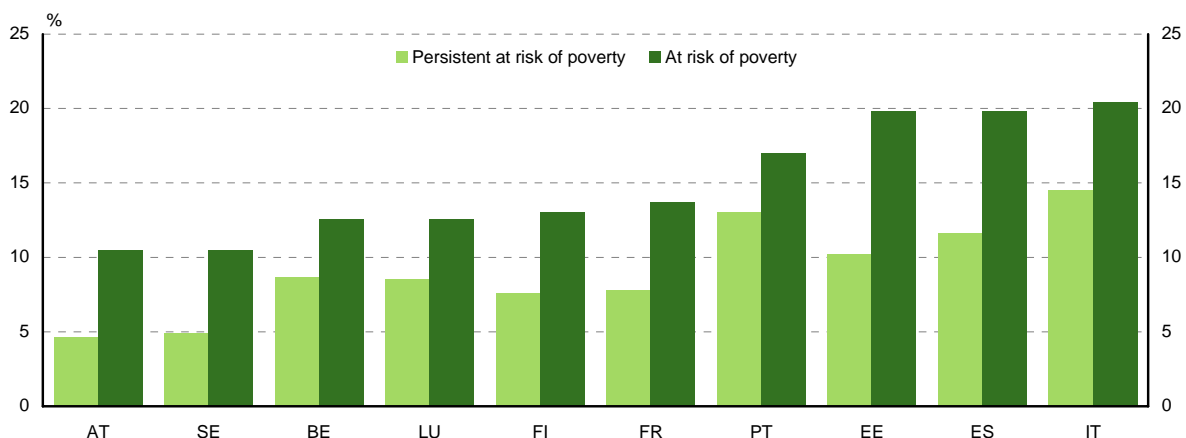
Notes: At-risk-of-poverty rates were calculated on the same population (2007 longitudinal 2005 base population) as the persistent-at-risk-of-poverty rates in order to exclude potential effects of compositional changes.
Persistent-at-risk-of-poverty rate: share of persons with an equivalised disposable income below the risk-of-poverty threshold in the current year and in at least two of the preceding three years.

Source: Own calculations based on EU-SILC longitudinal datasets, 2004-07.

Persistent-at-risk-of-poverty rates vary between 5% and 15% in the 10 countries for which such calculations are possible (Figure 8.2). The rates are lowest in Austria and Sweden, and highest in Italy. Persistent risk of poverty tends to be higher in countries where the occurrence of risk of poverty is higher, suggesting a correlation between the two at a country level. Some 44-75% of those who were at risk of poverty in 2006 were persistently at risk of poverty in at least two of the preceding three years. The risk of poverty appears to be an enduring phenomenon in Belgium, Italy, Luxembourg and Portugal, where over two people in three who are at risk of poverty are persistently so. By contrast, the share of those who are persistently at risk of poverty is below 50% in Austria and Sweden (44% and 46%, respectively), suggesting a greater mobility both into and out of poverty (Table 8.6).

Currently, persistent-at-risk-of-poverty rates, as defined at the EU level, can be calculated only for these 10 countries. For another group of 10 countries – those where the longitudinal dataset has not yet attained the required minimum length, but does include three waves – a 'proxy' indicator can be calculated (as noted above). The rates shown in Figure 8.3 illustrate the share of those who had income consistently below the poverty threshold in all three years between 2004 and 2006 (which, of course, is a stricter definition of persistent risk of poverty than that conventionally used). As might be expected, therefore, the 'sustained' at-risk-of-poverty rates for these countries tend to be lower than for the 10 countries examined above (see Table 8.6).

Between 4% and 13% of the population have been at risk of poverty for the three years in the 20 countries for which three longitudinal data waves are available (Figure 8.3 and Table 8.7). The lowest rate is in Sweden and the highest is in Portugal. According to this indicator, the countries with the smallest risk of sustained poverty among those whose income falls below the poverty threshold in any year are Hungary, Austria, Sweden and the UK, with rates of 38%, possibly reflecting greater income mobility among those with low incomes. By contrast, in Cyprus, Italy, Luxembourg and Portugal, the rate is close to 60% (or even higher), highlighting the persistent nature of poverty and the difficulties of exiting it.

Figure 8.3: 'Sustained' at-risk-of-poverty rates and at-risk-of-poverty rates, 2006
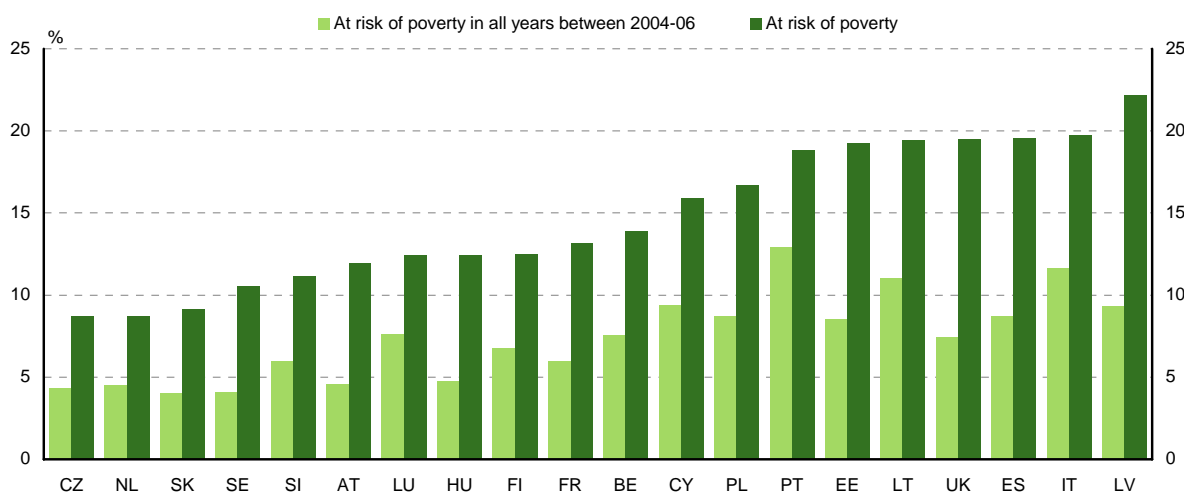
Notes: See Figure 8.2.
Source: Own calculations based on EU-SILC longitudinal datasets, 2005-07.

In the majority of countries, the persistent-at-risk-of-poverty rates tend to be consistently 1–2 percentage points higher among women than among men (Table 8.8). The difference is particularly wide (3 percentage points) in Austria, where the persistent-at-risk-of-poverty rate is twice as high among women (6%) as among men (3%). In contrast to other countries, there are no gender differences in Sweden.

Figure 8.4: Percentage of population under persistent at–risk–of–poverty threshold within population below threshold in each age group, 2006
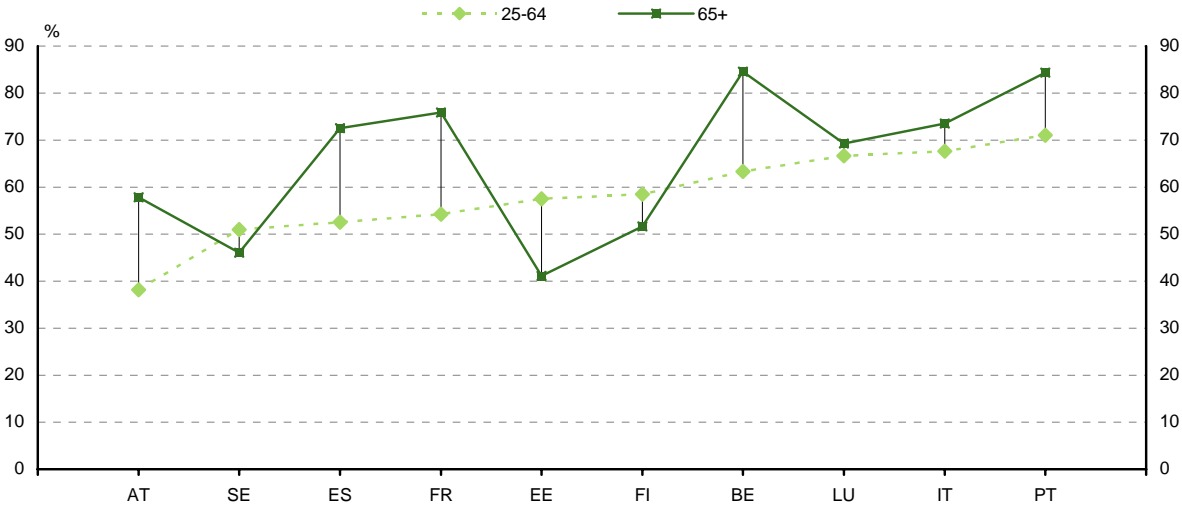
Source: Own calculations based on EU-SILC longitudinal datasets 2004-07.

Persistent–at–risk–of–poverty rates tend to be higher among the older population in the majority of countries, and these groups are also exposed to a higher risk of poverty (Table 8.9). Given that income mobility tends to be smaller in old age, and the dominant income source is pensions, it comes as no surprise that the share of those at persistent risk of poverty is higher among those aged 65 or over in Austria, Spain, France, Belgium, Italy, and Portugal (Figure 8.4). Interestingly, however, old age does not seem to result in greater exposure to a risk of persistent poverty in Estonia, Finland, Sweden or Luxembourg.

Summary of findings

Persistent at–risk–of–poverty rates vary from 5% to 15% in the 10 countries for which the appropriate data are available to estimate this. This represents between 44% and 75% of those who were at risk of poverty in 2006. Poverty, therefore, appears to be an enduring phenomenon in Belgium, Italy, Luxembourg and Portugal, where over two-thirds of those at risk of poverty in 2006 were at persistent risk. By contrast, the incidence of persistent risk of poverty is relatively low in Austria and Sweden, suggesting a greater mobility into and out of poverty. This also seems to be the case in Hungary and the UK, judging by the longitudinal data available for the three years 2004–06.

Persistent at–risk–of–poverty rates, as annual rates, tend to be higher among women than among men, and higher among those aged 65 and over than among those of working age.

Annex

Figure A.1: Gini index of income inequality over successive EU–SILC surveys
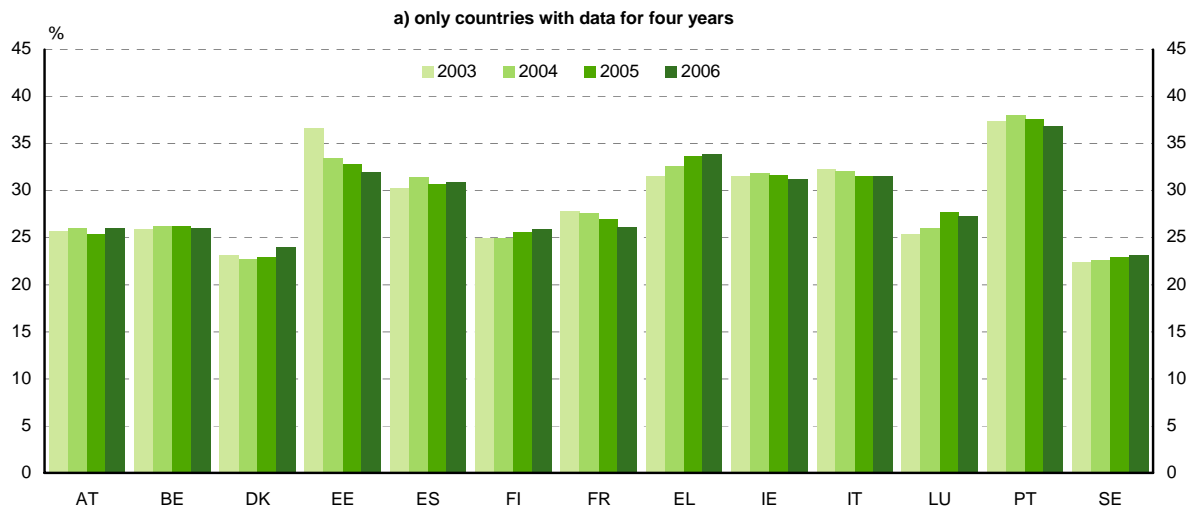
a) only countries with data for four years

Source: Own calculations based on EU-SILC 2004, 2005, 2006, 2007.

b) only countries with data for three years
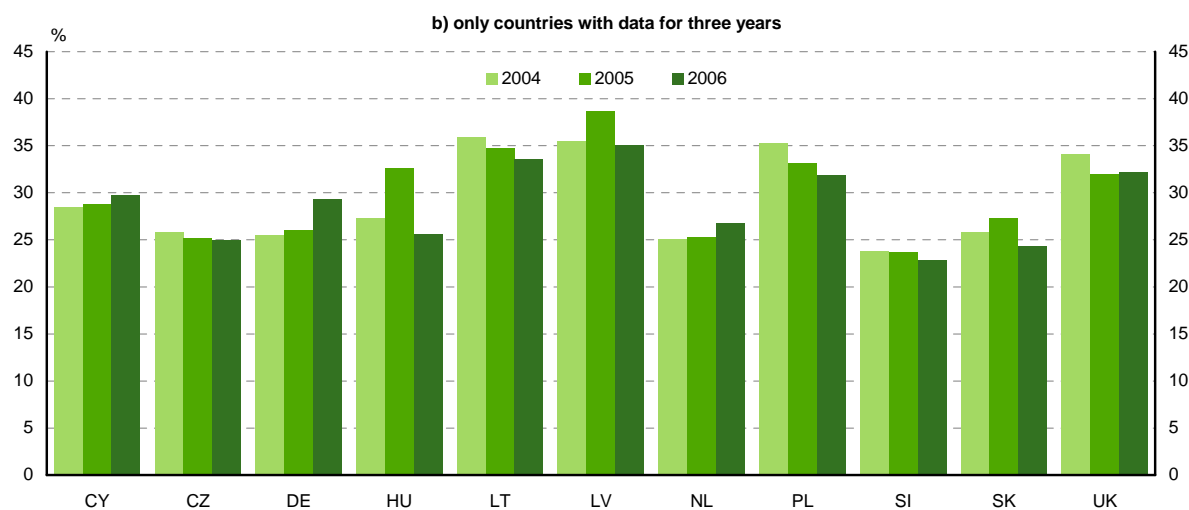
Source: Own calculations based on EU-SILC 2005, 2006, 2007.

Table 1.1: Sampling design and standard error of Gini estimates, 2004

	Gini	Standard error	Design effect	Sample size
CZ	26.0	0.4	1.2	10,333
DK	23.9	0.4	1.0	15,321
FR	27.8	0.3	1.2	24,245
CY	28.7	0.5	1.0	11,541
LV	36.1	0.7	1.1	9,699
LT	36.3	0.4	1.1	12,102
HU	27.5	0.4	1.0	17,969
MT	27.9	0.4	1.0	10,282
NL	26.7	0.3	2.8	23,756
PL	35.6	0.3	1.1	49,044
PT	38.1	1.0	1.9	12,878
SI	23.8	0.2	1.0	27,679
SK	26.2	0.5	1.0	15,418

Source: Eurostat 2008 for EU–SILC 2005.

Table 1.2: Country rankings obtained with different inequality indices, 2006

	SI	SE	DK	SK	CZ	HU	FI	BE	AT	FR	NL	LU	DE	CY	ES	IE	IT	PL	EE	UK	LT	EL	LV	PT
Gini	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
S80/S20	1	2	3	4	5	7	6	11	9	10	8	12	14	13	16	15	19	18	17	20	21	22	23	24
P90/P10	3	2	1	4	5	8	7	11	9	10	6	12	14	13	17	15	16	19	20	18	22	21	23	24
MLD	1	2	5	4	3	6	8	9	10	7	12	11	14	13	16	15	19	17	18	20	21	22	23	24
Theil	1	2	9	3	4	5	10	6	8	7	12	11	13	18	14	19	16	17	15	20	21	22	23	24
SCV	1	2	18	3	4	6	11	7	8	5	15	9	14	23	10	22	13	16	12	19	17	21	20	24
Atkinson (ε=0.5)	1	2	5	3	4	6	10	8	9	7	12	11	13	14	15	16	18	19	17	20	21	22	23	24
Atkinson (ε=1)	1	2	5	4	3	6	8	9	10	7	12	11	14	13	16	15	19	17	18	20	21	22	23	24
Atkinson (ε=2)	1	11	3	7	2	5	4	10	12	6	8	9	15	13	23	14	19	16	17	18	22	21	24	20

Note: Cases where the ranking of the country differs by more than three places from the ranking according to the Gini index are marked in grey.

Source: Own calculations based on EU–SILC 2007.

Table 1.3: Value of different inequality indices in 2006

	Gini	S80/S20	P90/P10	MLD	Theil	SCV	Atkinson (ε=0.5)	Atkinson (ε=1)	Atkinson (ε=2)
AT	0.260	3.7	3.1	0.120	0.122	0.153	0.058	0.113	0.237
BE	0.260	3.8	3.2	0.118	0.118	0.147	0.057	0.111	0.236
CY	0.297	4.4	3.5	0.151	0.178	0.308	0.078	0.140	0.245
CZ	0.249	3.5	2.9	0.104	0.111	0.138	0.052	0.099	0.186
DE	0.293	4.5	3.6	0.155	0.160	0.223	0.074	0.143	0.315
DK	0.239	3.4	2.7	0.105	0.124	0.239	0.054	0.100	0.191
EE	0.319	5.2	4.3	0.179	0.173	0.209	0.084	0.164	0.346
ES	0.308	5.1	4.2	0.173	0.160	0.185	0.079	0.159	0.384
FI	0.259	3.7	3.0	0.115	0.130	0.205	0.058	0.109	0.203
FR	0.261	3.7	3.2	0.115	0.118	0.145	0.056	0.109	0.209
EL	0.339	5.7	4.6	0.203	0.206	0.283	0.096	0.183	0.360
HU	0.255	3.7	3.1	0.112	0.117	0.145	0.055	0.106	0.209
IE	0.311	4.7	3.8	0.167	0.181	0.296	0.082	0.153	0.298
IT	0.316	5.2	4.1	0.180	0.174	0.219	0.084	0.165	0.356
LT	0.336	5.7	4.7	0.200	0.193	0.237	0.093	0.182	0.369
LU	0.273	3.9	3.4	0.124	0.130	0.164	0.061	0.117	0.220
LV	0.350	6.1	5.0	0.218	0.209	0.260	0.100	0.196	0.434
NL	0.267	3.7	2.9	0.143	0.177	0.224	0.064	0.117	0.216
PL	0.319	5.2	4.2	0.177	0.177	0.226	0.084	0.162	0.323
PT	0.368	6.4	5.2	0.227	0.241	0.340	0.110	0.203	0.359
SE	0.231	3.3	2.7	0.102	0.099	0.124	0.048	0.097	0.236
SI	0.228	3.2	2.8	0.088	0.087	0.096	0.043	0.084	0.168
SK	0.243	3.4	2.8	0.104	0.105	0.126	0.051	0.099	0.211
UK	0.322	5.2	4.2	0.183	0.185	0.248	0.087	0.167	0.352

Source: Own calculations based on EU–SILC 2007.

Table 1.4: Country rankings for the Gini index obtained with different equivalence scales, 2006

	SI	SE	DK	SK	CZ	HU	FI	BE	AT	FR	NL	LU	DE	CY	ES	IE	IT	PL	EE	UK	LT	EL	LV	PT
OECD II	1	2	4	5	6	7	8	9	10	11	12	13	15	16	17	18	19	20	21	22	23	24	25	26
e=1	1	4	3	2	6	9	7	8	11	10	12	14	16	15	17	19	20	23	18	22	21	24	25	26
e=0.75	1	2	4	5	6	9	8	7	11	10	12	13	15	16	17	18	20	21	19	22	23	24	25	26
e=0.5	1	2	4	5	6	7	10	9	11	8	12	13	15	16	17	19	20	18	21	22	23	24	25	26
e=0.25	1	2	6	4	8	5	12	11	10	7	13	9	15	16	17	20	19	18	22	21	23	24	25	26
e=0	1	2	10	3	8	5	13	12	11	7	9	6	17	14	15	20	19	18	24	21	22	23	25	26

Note: Cases where the ranking of the country differs by more than three places from the one obtained with the OECD II equivalence scale are marked in grey.

Source: Own calculations based on EU–SILC 2007.

Table 1.5: Size of income groups, defined relative to the median income (%)

	2004					2006				
	Less than 50%	50–80%	80–120%	120–200%	Over 200%	Less than 50%	50–80%	80–120%	120–200%	Over 200%
AT	6	24	38	26	6	6	23	38	27	6
BE	8	26	33	28	5	8	25	33	29	5
CY	9	23	32	28	8	9	24	33	27	7
CZ	5	21	40	27	6	5	22	40	27	6
DE	7	22	40	26	6	9	22	34	27	8
DK	5	25	40	27	3	5	23	40	28	3
EE	11	23	27	26	12	11	25	27	26	11
ES	13	23	27	28	10	13	23	28	27	9
FI	5	26	37	27	5	5	26	36	28	5
FR	6	25	34	27	8	6	24	36	27	6
EL	12	22	29	26	11	13	23	27	26	11
HU	7	22	38	27	6	7	22	38	27	5
IE	11	25	27	29	8	9	27	27	28	10
IT	12	23	29	27	9	12	23	29	27	9
LT	14	21	27	24	14	12	22	27	26	12
LU	7	23	37	27	7	7	24	33	29	8
LV	12	23	27	26	13	14	23	23	26	14
NL	6	23	38	27	6	5	25	38	27	7
PL	14	22	27	25	12	11	22	30	26	11
PT	13	22	28	22	15	12	23	26	25	15
SE	5	22	42	27	4	6	23	41	27	3
SI	7	21	40	27	5	6	22	41	27	4
SK	8	21	39	28	5	6	22	41	27	5
UK	12	23	27	27	11	11	24	28	26	10

Source: Own calculations based on EU–SILC 2005 and 2007.

Table 1.6: Income structure in different parts of the income distribution (%)

	Low-income group (less than 50% of median income)			Middle-income group (between 80–120% of median income)			High-income group (more than 200% of median income)		
	Market income	Pensions	Social transfers	Market income	Pensions	Social transfers	Market income	Pensions	Social transfers
AT	44	14	42	71	19	10	81	16	2
BE	29	21	50	75	14	11	92	4	4
CY	36	50	15	87	7	6	78	16	5
CZ	34	10	56	69	21	10	96	2	2
DE	41	21	38	71	20	9	90	8	2
DK	39	12	49	77	8	15	94	3	4
EE	42	33	25	82	12	7	95	2	3
ES	60	27	12	76	18	6	92	6	2
FI	28	19	53	72	14	14	93	4	2
FR	36	19	45	70	20	10	79	16	5
EL	69	22	9	73	20	7	88	11	1
HU	37	7	56	63	22	15	89	7	4
IE	24	8	68	75	8	17	92	4	4
IT	63	26	12	70	25	5	83	14	3
LT	51	25	24	79	14	7	94	3	3
LU	60	5	35	68	22	11	89	8	3
LV	47	35	18	79	12	9	92	4	4
NL	45	15	40	78	15	8	90	8	2
PL	62	11	27	67	24	9	90	9	2
PT	55	22	24	76	14	11	82	16	2
SE	44	18	38	69	15	16	93	4	2
SI	36	15	50	74	13	13	92	5	3
SK	46	13	41	71	20	9	90	6	3
UK	32	28	40	77	14	8	91	8	1

Source: Own calculations based on EU–SILC 2007.

Table 1.7: Economic growth and earnings dispersion, 1994–2001

Annual average real GDP growth, 1994–2001	Change in Gini index of gross wages				
	Decrease (> –2.5 points)	Small decrease (–1 to –2.5 points)	No change (–1 to +1 point)	Small increase (1 to 2.5 points)	Increase (> 2.5 points)
Below 2.5%		BE	LT, IT	DE, CZ	
2.5–3.7%	AT	FR, PT	DK, UK, ES, SE	EL	NL, HU
Over 3.7%	IE		LV, FI	PL	EE, SI

Notes: No data on the evolution of wage inequality were found for Luxembourg, Slovakia or Cyprus. Data on earnings inequality are for the period 1994–99 for Poland, 1997–2001 for Estonia, 1995–2001 for Austria and 1996–2001 for Finland.

Sources: For EU15 countries, GDP growth data are from OECD, wage dispersion data were taken from Moisala (2004) and are based on ECHP and show inequality in hourly wages. For new Member States, data come from the UNICEF TransMonee database and show inequality in monthly wages, with bonuses, for full-time employees, as reported by employers.

Table 1.8: Growth and inequality during the period 1994–2001

	Average annual GDP growth rate	Gini index of gross wages	
		1994	2001
AT	2.52%	0.260	0.226
BE	2.49%	0.225	0.214
DK	2.94%	0.193	0.196
FI	4.28%	0.207	0.213
FR	2.53%	0.283	0.266
DE	1.98%	0.263	0.275
EL	3.19%	0.250	0.272
IE	8.63%	0.334	0.269
IT	2.04%	0.222	0.219
NL	3.53%	0.243	0.291
PT	3.45%	0.361	0.345
ES	3.66%	0.299	0.292
UK	3.37%	0.291	0.282
CZ	2.18%	0.260	0.273
EE	3.96%	0.336	0.388
HU	3.54%	0.324	0.386
LV	4.40%	0.325	0.322
LT	1.90%	0.390	0.382
PL	4.84%	0.281	0.305
SI	4.27%	0.275	0.310

Notes: No data on the evolution of inequality were found for Luxembourg, Slovakia or Cyprus. Data on earnings inequality are for the period 1994–99 for Poland, 1997–2001 for Estonia, 1995–2001 for Austria and 1996–2001 for Finland.

Sources: For EU15 countries, GDP growth data are from OECD, wage inequality data were taken from Moisala (2004) and were based on ECHP. For new Member States, data come from the UNICEF TransMonee database.

Table 1.9: Economic growth and gross earnings inequality, 2004–06

Annual average real GDP growth, 2004–06	Change in Gini index of gross annual earnings of full-year, full-time workers		
	Small decrease	No change	Small increase
	(–1 point or lower)		(1.5 points or more)
Below 2.5%	FR	DE	
2.5–4%		BE, DK, UK, FI, SE	AT, NL
4–5.5%	PL, SI	CY, LU	
Over 5.5%	SK	CZ, LT, EE	IE

Notes: Data on gross earnings were not available for 2004 for Spain, Greece, Portugal, Italy or Latvia. Hungary is missing because of data problems.

Sources: Data on GDP growth come from Eurostat NewCronos database, figures on earnings inequality are own calculations from EU-SILC 2005 and 2007.

Table 1.10: Gini indices of gross annual earnings

	Full-year, full-time workers, 2004	Full-year, full-time workers, 2006	All employed, 2004	All employed, 2006
AT	0.283	0.305	0.358	0.389
BE	0.230	0.229	0.292	0.317
CY	0.315	0.315	0.384	0.396
CZ	0.261	0.263	0.305	0.320
DE	0.288	0.296	0.419	0.417
DK	0.226	0.228	0.348	0.346
EE	0.338	0.333	0.386	0.379
ES		0.286		0.363
FI	0.245	0.255	0.397	0.398
FR	0.274	0.262	0.363	0.358
EL		0.311		0.379
HU		0.315		0.387
IE	0.294	0.310	0.410	0.459
IT		0.281		0.362
LT	0.356	0.347	0.408	0.391
LU	0.327	0.331	0.386	0.391
LV		0.349		0.418
NL	0.266	0.287	0.418	0.433
PL	0.340	0.328	0.409	0.396
PT		0.396		0.433
SE	0.260	0.263	0.391	0.377
SI	0.311	0.299	0.430	0.424
SK	0.260	0.248	0.299	0.321
UK	0.323	0.321	0.392	0.387

Note: No data on gross earnings in 2004 for Italy, Portugal, Spain, Greece or Latvia.

Source: Own calculations based on EU-SILC 2005 and 2007.

Table 1.11: Change in inequality of gross earnings among all working-age individuals

	Proportion of working-age people with positive earnings		Gini of positive earnings		Gini of earnings among working-age people		Change in earnings dispersion among working-age people (Gini points)
	2004	2006	2004	2006	2004	2006	
AT	66.1%	65.0%	0.358	0.389	0.576	0.603	2.7
BE	55.0%	57.9%	0.292	0.317	0.611	0.604	−0.7
CY	60.7%	62.9%	0.384	0.396	0.627	0.620	−0.6
CZ	56.4%	57.4%	0.305	0.320	0.608	0.610	0.2
DE	61.1%	66.0%	0.419	0.417	0.645	0.615	−3.0
DK	79.6%	80.6%	0.348	0.346	0.481	0.473	−0.8
EE	64.9%	70.7%	0.386	0.379	0.601	0.561	−4.0
FI	75.4%	76.5%	0.397	0.398	0.545	0.539	−0.6
FR	65.2%	65.8%	0.363	0.358	0.584	0.578	−0.7
HU	59.8%	59.3%	0.420	0.387	0.653	0.637	−1.7
IE	56.9%	60.1%	0.410	0.459	0.664	0.675	1.1
LT	56.9%	64.6%	0.408	0.391	0.663	0.607	−5.7
LU	64.4%	65.8%	0.386	0.391	0.605	0.599	−0.6
NL	72.3%	72.5%	0.418	0.433	0.580	0.589	1.0
PL	42.6%	50.0%	0.409	0.396	0.748	0.698	−5.0
SE	82.3%	82.1%	0.391	0.377	0.499	0.488	−1.1
SI	72.1%	70.7%	0.430	0.424	0.589	0.593	0.4
SK	56.7%	60.9%	0.299	0.321	0.602	0.586	−1.6
UK	60.3%	65.0%	0.392	0.387	0.633	0.602	−3.1

Note: No data on gross earnings in 2004 for Italy, Portugal, Spain, Greece or Latvia.

Source: Own calculations based on EU-SILC 2005 and 2007.

Table 1.12: Structure of equivalent market income for the working-age population (16-65 years old), 2006

	Earnings of household head	Earnings of other household members	Self-employment income	Capital income
AT	55%	30%	12%	3%
BE	55%	32%	8%	5%
CY	49%	32%	14%	5%
CZ	44%	34%	19%	2%
DE	59%	25%	12%	5%
DK	57%	31%	8%	4%
EE	60%	36%	3%	1%
ES	51%	36%	10%	3%
FI	56%	32%	7%	5%
FR	55%	31%	10%	4%
EL	39%	24%	31%	6%
HU	45%	41%	12%	2%
IE	45%	33%	16%	6%
IT	43%	26%	27%	4%
LT	50%	40%	7%	2%
LU	64%	27%	5%	4%
LV	50%	44%	5%	1%
NL	61%	25%	8%	6%
PL	45%	40%	14%	2%
PT	45%	37%	16%	2%
SE	61%	32%	4%	3%
SI	44%	48%	7%	1%
SK	44%	45%	10%	1%
UK	53%	32%	11%	4%

Source: Own calculations based on EU-SILC 2007.

Table 1.13: Population shares and relative means, in groups, by age of household head

	Population shares								Relative means							
	2004				2006				2004				2006			
	18-35 years	36-49 years	50-64 years	65-max years	18-35 years	36-49 years	50-64 years	65-max years	18-35 years	36-49 years	50-64 years	65-max years	18-35 years	36-49 years	50-64 years	65-max years
AT	18	40	28	13	18	39	30	14	92	98	110	95	89	99	110	93
BE	20	39	26	14	19	38	29	14	96	104	110	77	98	104	106	78
CY	20	40	31	9	19	40	33	9	96	99	115	66	95	96	115	71
CZ	24	32	33	11	23	33	32	12	100	102	106	78	100	100	109	77
DE	15	38	30	17	18	36	27	18	86	101	112	90	86	104	111	88
DK	23	36	26	15	22	36	26	15	85	104	121	77	84	104	121	79
EE	26	34	27	13	25	35	27	13	112	99	104	70	116	104	97	66
ES	18	39	31	11	19	39	31	11	108	99	106	76	104	102	107	77
FI	22	35	29	14	22	34	29	15	90	103	113	80	90	104	113	79
FR	22	35	27	15	22	36	27	15	91	98	113	95	92	99	111	94
EL	17	37	32	14	17	37	34	12	96	104	105	81	96	99	110	78
HU	23	33	32	12	21	35	33	11	96	96	110	92	95	97	109	92
IE	25	35	31	9	24	35	32	9	100	99	110	70	94	104	108	72
IT	15	37	34	14	15	37	33	15	92	97	114	82	94	99	110	86
LT	25	38	25	12	22	39	27	12	107	99	107	75	112	99	106	70
LU	18	40	31	11	17	40	30	13	93	97	108	98	90	98	111	96
LV	23	38	28	11	23	38	28	10	105	102	104	72	110	101	103	64
NL	20	39	28	13	19	39	29	13	93	97	111	95	91	98	115	86
PL	20	38	33	9	19	36	35	9	101	97	103	102	101	97	103	98
PT	20	37	31	12	19	36	32	13	103	99	107	81	95	96	111	89
SE	23	34	27	16	23	34	27	16	87	100	120	84	87	100	121	84
SI	15	39	35	11	15	40	35	11	97	99	107	83	97	99	106	86
SK	17	39	34	10	15	37	37	11	99	95	111	82	104	95	110	78
UK	24	35	25	15	21	38	27	14	96	108	109	74	96	106	108	75

Source: Own calculations based on EU-SILC 2005 and 2007.

Table 1.14: Population shares and relative means, in groups, by household structure, 2006

	Population shares						Relative means					
	Single adult	2 or more adults, no children	Single parent	2 parents, 1–2 children	2 parents, 3 or more children	Other household with children	Single adult	2 or more adults, no children	Single parent	2 parents, 1–2 children	2 parents, 3 or more children	Other household with children
AT	15	35	5	26	8	12	93	112	70	100	79	96
BE	15	34	6	26	12	7	86	108	70	111	92	92
CY	5	30	3	38	9	15	82	104	70	102	82	109
CZ	9	38	4	32	5	11	84	110	68	101	77	98
DE	18	37	5	28	7	5	88	110	69	104	90	96
DK	22	30	7	29	10	2	79	112	75	111	90	122
EE	14	32	6	29	6	13	77	109	65	112	89	98
ES	6	42	2	33	3	13	90	107	76	101	85	88
FI	18	35	5	27	12	4	78	112	71	109	90	104
FR	15	32	5	30	11	6	91	111	75	104	90	83
EL	7	44	2	34	3	10	88	106	86	100	90	89
HU	9	35	4	28	9	14	89	116	77	96	77	98
IE	8	28	10	25	15	15	80	114	61	110	101	94
IT	12	38	3	31	5	10	94	111	81	98	73	89
LT	11	30	5	32	6	17	71	114	68	110	69	94
LU	12	30	4	39	7	7	102	113	69	98	84	87
LV	10	32	6	26	4	23	66	108	74	113	64	102
NL	16	33	4	30	12	5	90	112	64	104	84	96
PL	9	30	3	27	7	25	96	114	82	108	70	87
PT	6	37	3	33	3	17	81	108	82	104	84	89
SE	19	31	7	29	10	4	80	118	71	106	87	94
SI	7	33	3	32	6	18	74	107	79	103	88	100
SK	9	34	2	26	6	22	82	113	81	101	75	95
UK	13	37	7	27	8	8	86	111	62	109	77	96

Source: Own calculations based on EU–SILC 2007.

Table 1.15: Population shares and relative means, in groups, by education of household head

	Population shares						Relative means					
	2004			2006			2004			2006		
	Primary	Upper secondary	Tertiary	Primary	Upper secondary	Tertiary	Primary	Upper secondary	Tertiary	Primary	Upper secondary	Tertiary
AT	17	61	22	16	64	20	82	97	122	75	98	125
BE	29	37	33	25	39	36	78	95	124	76	93	124
CY	35	39	26	33	39	27	76	95	140	74	97	137
CZ	9	77	13	10	76	14	69	97	140	69	97	136
DE	10	47	43	8	48	44	76	89	117	69	88	119
DK	29	47	24	29	47	24	85	98	122	83	99	123
EE	17	59	24	17	59	24	68	95	137	72	95	131
ES	55	21	24	53	21	26	81	106	139	81	102	136
FI	27	44	29	26	43	31	84	92	127	82	91	129
FR	24	53	24	32	45	23	88	92	129	84	96	130
EL	48	33	19	46	34	20	78	101	152	77	100	153
HU	29	57	15	21	63	16	77	96	161	74	96	150
IE	48	29	24	45	29	26	79	97	146	77	98	142
IT	57	32	11	55	33	12	83	110	160	81	110	160
LT	19	62	19	15	64	21	69	89	164	64	91	152
LU	37	41	22	36	41	23	78	98	141	77	97	143
LV	23	62	15	22	61	17	70	97	156	73	97	144
NL	30	39	31	29	40	30	84	94	124	83	92	128
PL	20	68	12	18	70	13	71	94	181	71	93	177
PT	79	11	10	77	13	9	79	134	226	79	130	229
SE	20	55	25	18	54	27	86	97	118	88	98	113
SI	24	66	10	22	61	17	76	100	160	76	96	144
SK	10	74	16	9	73	18	73	97	130	66	97	127
UK	24	45	31	21	54	24	69	95	131	69	95	139

Source: Own calculations based on EU–SILC 2005 and 2007.

Table 1.16: Population shares and relative means, in groups, by work intensity of household

	Population shares						Relative means					
	2004			2006			2004			2006		
	WI<0.5	0.5<=WI<1	WI=1	WI<0.5	0.5<=WI<1	WI=1	WI<0.5	0.5<=WI<1	WI=1	WI<0.5	0.5<=WI<1	WI=1
AT	17	37	46	19	38	43	82	93	112	79	93	116
BE	24	26	50	23	28	49	67	95	118	67	97	117
CY	12	42	46	12	41	47	70	93	114	84	90	112
CZ	18	34	48	18	36	46	63	92	119	65	95	117
DE	22	37	41	19	29	52	72	100	115	64	96	115
DK	16	22	62	16	20	65	69	96	109	67	97	109
EE	17	32	52	13	36	51	46	96	119	46	98	115
ES	18	45	37	17	43	40	67	91	126	68	90	124
FI	19	35	46	17	35	49	68	97	115	68	94	115
FR	18	32	50	19	30	51	79	93	112	80	93	112
EL	19	44	37	20	42	38	77	92	121	75	92	122
HU	17	28	55	23	39	38	75	92	112	74	98	118
IE	22	38	40	20	37	43	57	96	127	55	99	121
IT	24	40	36	23	39	37	78	93	122	73	91	126
LT	19	32	49	15	32	53	51	90	125	50	90	120
LU	14	40	46	13	39	48	80	90	115	80	90	114
LV	17	36	47	13	36	51	48	93	123	49	90	120
NL	17	31	52	18	37	45	75	94	111	78	97	111
PL	30	37	33	23	40	37	71	96	130	71	93	125
PT	15	38	48	17	37	46	78	89	116	70	94	116
SE	12	25	63	10	23	67	72	94	108	75	93	106
SI	21	33	46	18	33	49	76	98	112	77	96	111
SK	18	38	44	16	34	49	74	100	111	69	98	112
UK	9	14	77	18	19	64	62	88	107	61	91	113

Note: WI stands for work intensity. For a definition of the variable, see 'Methodology and measurement' in the section on 'Income inequality between population subgroups'.

Source: Own calculations based on EU–SILC 2005 and 2007.

Table 1.17: Population shares and relative means, in groups, by degree of urbanisation

	Population shares						Relative means					
	2004			2006			2004			2006		
	Densely populated	Inter-mediate	Sparsely populated	Densely populated	Inter-mediate	Sparsely populated	Densely populated	Inter-mediate	Sparsely populated	Densely populated	Inter-mediate	Sparsely populated
AT	35	24	41	35	25	39	107	101	94	103	103	95
BE	54	42	4	53	43	4	99	101	98	99	101	98
CY	58	12	30	57	13	30	108	94	88	107	96	88
CZ	35	23	41	35	24	41	106	102	93	108	99	94
DE	47	36	17	51	35	15	103	100	91	103	99	90
DK	33	29	37	33	42	25	103	104	94	105	100	94
EE	47	0	53	49	0	51	111	0	90	109	0	92
ES	52	20	27	52	20	27	110	96	83	111	95	83
FI	27	17	56	27	16	57	111	99	95	113	101	94
FR	48	35	17	47	35	18	105	98	90	103	100	91
EL	40	0	59	40	14	46	112	102	92	111	122	83
HU	31	24	45	32	21	48	120	99	87	117	105	86
IE	34	28	38	34	29	37	115	102	85	114	98	89
IT	43	39	17	44	40	16	107	98	87	107	97	89
LT	41	0	59	42	0	58	125	0	82	123	0	84
LU	47	32	20	46	32	22	96	107	98	95	109	97
LV	46	0	54	48	0	52	120	0	83	118	0	84
PL	41	13	46	40	13	47	120	95	83	121	92	84
PT	44	32	25	44	31	25	121	87	80	116	88	86
SE	20	14	67	20	11	69	110	107	96	110	101	97
SK	26	48	25	26	34	40	115	97	91	115	99	92
UK	77	18	5	76	19	5	97	105	123	98	106	111

Source: Own calculations based on EU–SILC 2005 and 2007.

Table 2.1: At-risk-of-poverty rates by gender, 2006

	Male	Female	Total
BE	14.4	15.9	15.1
CZ	8.6	10.4	9.5
DK	11.3	12.1	11.7
DE	14.1	16.2	15.2
EE	16.7	21.6	19.4
IE	16.1	18.9	17.5
EL	19.6	21.0	20.3
ES	18.6	20.9	19.7
FR	12.3	13.7	13.0
IT	18.4	21.2	19.8
CY	13.6	17.4	15.5
LV	19.3	22.7	21.1
LT	16.7	21.3	19.2
LU	12.9	14.1	13.5
HU	12.3	12.3	12.3
NL	9.7	10.7	10.2
AT	10.6	13.4	12.0
PL	17.4	16.9	17.2
PT	17.2	19.0	18.2
SI	10.0	12.9	11.5
SK	9.8	11.1	10.5
FI	12.1	13.8	13.0
SE	10.7	10.9	10.8
UK	18.2	20.3	19.3

Source: Own calculations based on EU-SILC 2007.

Table 2.2: Distribution of housing costs as a share of disposable income, 2006 (% population with income above/below threshold)

	Above 60% of median			Below 60% of median		
	<25%	25-40%	>40%	<25%	25-40%	>40%
BE	81.2	13.9	4.9	28.8	32.9	38.3
CZ	70.8	21.9	7.3	23.4	37.8	38.8
DK	59.2	33.2	7.6	7.7	34.3	58.0
DE	52.0	31.3	16.8	8.3	19.3	72.4
EE	93.2	4.8	2.0	55.1	25.8	19.1
IE	93.9	4.9	1.2	75.5	12.3	12.1
EL	70.3	26.4	3.3	7.8	26.6	65.6
ES	89.6	7.4	3.1	60.7	16.8	22.5
FR	85.1	11.4	3.6	65.1	16.0	18.9
IT	88.2	8.9	2.9	51.9	21.4	26.8
CY	94.2	5.1	0.7	76.2	15.7	8.0
LV	84.8	11.2	4.0	42.3	26.3	31.4
LT	93.5	5.3	1.2	53.9	25.9	20.2
LU	90.2	8.8	1.0	43.8	33.2	23.0
HU	82.9	13.3	3.8	36.6	31.3	32.0
NL	47.3	38.8	13.9	10.7	28.0	61.3
AT	88.5	9.7	1.8	36.4	33.0	30.6
PL	75.6	18.4	5.8	35.3	31.1	33.6
PT	84.9	10.9	4.2	57.3	20.8	21.9
SI	91.8	5.6	2.6	58.8	21.3	19.9
SK	59.8	25.3	14.9	18.9	28.3	52.8
FI	87.3	10.0	2.7	61.4	20.3	18.3
SE	83.2	13.6	3.2	29.5	25.7	44.8
UK	65.5	24.6	9.9	22.2	30.4	47.3
EU25	74.0	18.5	7.4	37.1	23.5	39.5

Source: Own calculations based on EU–SILC 2007.

Table 2.3: At–risk–of–poverty rate by household type (individuals living in these households), %

	1 person household	2 adults, no children, <65	2 adults, no children, >65	Other household, no children	Single parent, 1+ children	2 adults, 1 child	2 adults, 2 children	2 adults, 3+ children	Other household, with children	Total
BE	25.6	7.9	20.5	6.3	35.8	9.3	8.4	18.0	11.9	15.1
CZ	15.9	4.9	2.4	1.7	37.5	6.9	8.1	29.4	12.0	9.5
DK	24.9	4.9	14.1	3.3	16.6	4.3	4.2	14.6	3.4	11.7
DE	27.5	13.0	13.2	9.2	34.1	10.0	7.7	11.9	10.2	15.2
EE	49.0	14.4	10.9	7.5	43.9	11.5	11.9	21.4	10.5	19.4
IE	45.0	12.8	14.4	8.1	39.9	11.9	10.1	19.9	9.2	17.5
EL	27.3	15.0	21.3	14.6	34.2	19.8	22.1	29.7	22.9	20.3
ES	34.6	11.3	27.2	12.2	34.1	16.4	22.3	36.8	20.0	19.7
FR	17.4	7.7	9.2	10.1	27.2	8.0	10.3	17.8	22.9	13.0
IT	27.3	11.0	18.9	10.6	31.2	14.8	23.0	41.2	23.1	19.8
CY	46.0	14.1	48.7	7.4	33.0	9.0	9.1	15.7	4.3	15.5
LV	59.0	19.7	22.2	9.8	34.4	11.8	16.4	46.3	12.8	21.1
LT	49.5	10.6	13.4	6.6	41.5	14.0	12.7	38.2	14.4	19.2
LU	14.9	8.2	4.9	5.6	45.5	9.5	14.4	25.4	15.0	13.5
HU	15.7	8.4	4.1	3.7	28.6	11.8	14.3	27.8	10.0	12.3
NL	14.6	5.7	9.2	7.2	30.3	7.0	5.2	19.5	5.1	10.2
AT	20.3	10.2	9.5	4.4	31.1	8.9	10.8	18.7	6.8	12.0
PL	15.6	12.0	6.2	9.8	31.0	15.3	19.7	36.2	19.5	17.2
PT	33.2	17.6	26.4	9.4	33.6	12.2	17.0	43.3	16.5	18.2
SI	39.4	12.6	12.3	5.9	28.6	9.9	7.2	15.2	6.5	11.5
SK	17.3	3.7	3.9	3.7	25.9	5.9	12.3	25.7	12.6	10.5
FI	31.9	6.1	11.5	5.6	21.9	6.0	5.3	12.5	12.5	13.0
SE	20.6	6.6	5.6	5.1	24.3	6.0	5.5	13.4	9.3	10.8
UK	29.9	10.5	25.8	11.4	43.9	10.6	13.0	30.6	12.9	19.3

Source: Own calculations based on EU–SILC 2007.

Table 2.4: At-risk-of-poverty rate by work intensity (by those in these specific households), using a new breakdown of work intensity (WI), 2006

	WI= 0	WI= 0.01–0.49	WI= 0.5	WI= 0.51–0.80	WI= 0.81–0.99	WI= 1
BE	46.1	21.6	11.7	4.2	1.2	2.4
CZ	34.8	28.5	9.2	3.3	1.3	1.6
DK	37.7	22.3	10.2	6.3	2.1	3.5
DE	45.7	23.8	9.9	7.4	3.4	5.2
EE	68.7	44.8	18.1	7.3	4.5	6.0
IE	62.5	29.7	10.7	5.7	0.9	3.3
EL	31.3	35.4	20.9	14.1	20.3	8.0
ES	46.0	32.1	27.5	10.3	5.7	6.8
FR	32.3	27.4	13.2	8.3	3.2	3.0
IT	41.1	33.6	24.4	8.0	4.1	3.7
CY	52.0	19.8	16.5	5.4	5.2	4.6
LV	71.6	45.9	22.6	11.9	9.6	6.0
LT	56.6	46.6	18.1	11.7	5.3	4.2
LU	28.6	22.1	19.3	11.6	5.4	7.0
HU	29.5	29.2	11.0	6.7	4.8	3.0
NL	27.6	15.9	15.8	4.0	2.6	5.2
AT	31.2	19.7	13.4	7.0	1.5	4.7
PL	32.0	32.0	21.5	13.4	13.0	7.1
PT	46.6	35.6	25.6	9.2	8.0	4.7
SI	36.7	19.0	11.8	4.0	5.3	2.5
SK	30.8	27.1	11.1	5.5	2.2	3.7
FI	37.6	31.1	10.1	6.7	3.3	3.0
SE	33.5	28.9	11.4	8.8	5.6	5.6
UK	50.1	39.1	19.8	10.2	7.2	4.4

Source: Own calculations based on EU–SILC 2007.

Table 2.5: Share of the migrant population by country, 2006

	EU	Non-EU	Local
BE	5.6	6.3	88.1
CZ	2.4	1.0	96.7
DK	1.5	4.0	94.6
DE	:	8.5	91.5
EE	:	15.9	84.2
IE	8.1	3.5	88.4
EL	1.1	7.0	91.9
ES	1.0	5.6	93.4
FR	3.2	8.1	88.7
IT	0.9	5.4	93.7
CY	4.4	8.0	87.6
LV	:	13.2	86.8
LT	*0.3*	4.9	94.8
LU	32.4	6.7	60.9
HU	0.3	1.5	98.3
NL	1.4	4.3	94.4
AT	4.7	11.5	83.8
PL	0.5	0.7	98.9
PT	1.1	1.8	97.1
SI	:	7.9	92.1
SK	1.4	*0.3*	98.4
FI	1.3	1.8	96.9
SE	4.1	7.6	88.4
UK	1.1	9.6	89.4
Total	1.4	6.3	92.2

Notes: Estimates based on a low number of observations
(20–49) are marked in italics.

Source: Own calculations based on EU–SILC 2007.

Table 2.6: Self-defined economic status of the migrant population of working age, by region of origin, 2006

	Employed			Unemployed			Inactive		
	EU	Non-EU	Local	EU	Non-EU	Local	EU	Non-EU	Local
BE	48.0	41.0	50.8	9.4	16.0	5.3	42.6	43.0	44.0
CZ	41.9	45.1	53.3	8.1	10.0	6.7	50.0	44.9	40.0
DK	54.6	53.3	56.7	2.1	11.3	2.6	43.3	35.4	40.7
DE	:	28.3	52.4	:	6.0	6.1	:	65.7	41.5
EE	:	48.5	60.3	:	2.6	3.3	:	49.0	36.4
IE	61.6	51.9	52.7	5.0	12.3	4.8	33.4	35.8	42.5
EL	51.5	60.1	47.2	5.3	7.2	5.3	43.2	32.7	47.5
ES	60.5	66.4	50.9	3.9	8.8	6.0	35.6	24.8	43.1
FR	44.0	44.0	51.7	5.3	11.4	4.9	50.8	44.6	43.4
IT	49.8	64.7	44.1	7.0	6.0	4.4	43.2	29.3	51.5
CY	53.9	70.3	56.2	3.7	5.7	2.6	42.4	24.0	41.2
LV	:	47.8	58.2	:	3.7	4.7	:	48.6	37.1
LT	40.4	52.1	56.1	4.3	4.5	4.1	55.3	43.4	39.8
LU	65.2	53.3	48.3	3.7	8.4	1.5	31.1	38.3	50.1
HU	21.3	57.1	47.9	4.8	3.7	5.7	73.9	39.1	46.4
NL	59.5	54.5	57.5	1.0	2.9	1.3	39.6	42.5	41.2
AT	44.7	54.1	52.2	5.2	11.9	3.4	50.1	34.0	44.4
PL	9.4	14.4	47.7	1.3	2.9	7.8	89.3	82.7	44.5
PT	71.3	60.9	54.6	6.7	10.0	6.2	22.0	29.1	39.2
SI	:	51.4	49.5	:	9.5	6.9	:	39.1	43.6
SK	34.8	52.5	53.7	3.8	0.0	5.2	61.4	47.5	41.1
FI	63.9	43.2	54.0	9.3	16.8	5.2	26.7	40.0	40.8
SE	50.0	55.5	60.6	2.0	7.4	2.4	48.0	37.0	37.0
UK	52.0	62.3	58.3	2.1	3.9	1.9	45.9	33.8	39.8

Notes: Italics denote low number of observations (20–49).

Source: Own calculations based on EU-SILC 2007.

Table 3.1: Comparative price levels (as % of EU average)

	2004	2006
AT	103.3	102.0
BE	106.7	106.7
CY	91.2	90.5
CZ	55.4	61.4
DE	104.7	103.0
DK	139.5	138.4
EE	63.0	67.4
ES	90.9	91.8
FI	123.8	122.6
FR	109.9	108.8
EL	87.6	88.8
HU	62.0	60.3
IE	125.9	124.0
IT	104.9	104.3
LT	53.5	57.1
LU	103.0	111.8
LV	56.1	60.5
NL	106.1	104.1
PL	53.2	62.1
PT	87.3	84.9
SE	121.4	118.5
SI	75.5	76.8
SK	54.9	57.4
UK	108.5	110.3

Note: Dividing income expressed in EUR by the indices shown converts income into purchasing power parity terms.

Source: Eurostat.

Table 3.2: Average income by decile (EUR at PPS), 2006

	Deciles										Overall mean
	1	2	3	4	5	6	7	8	9	10	
PL	1,966	3,172	3,937	4,632	5,300	6,052	6,917	8,118	10,022	16,562	6,667
LV	1,742	2,876	3,600	4,267	5,074	6,100	7,216	8,559	10,831	17,558	6,775
LT	1,814	3,103	3,928	4,644	5,343	6,255	7,229	8,495	10,668	17,667	6,911
HU	2,827	4,152	4,937	5,597	6,207	6,862	7,627	8,641	10,038	15,527	7,240
SK	3,068	4,584	5,369	5,982	6,598	7,299	8,058	8,980	10,426	15,825	7,618
EE	2,309	3,623	4,473	5,239	6,140	7,144	8,187	9,594	11,865	18,862	7,741
CZ	4,172	5,971	6,893	7,627	8,392	9,292	10,383	11,722	13,829	21,317	9,959
PT	3,106	4,925	6,180	7,242	8,365	9,647	11,587	13,932	18,424	33,480	11,679
EL	3,678	6,136	7,644	9,112	10,639	12,374	14,292	16,950	20,916	35,578	13,726
SI	6,063	8,683	10,264	11,545	12,639	13,854	15,334	17,121	19,794	27,661	14,294
ES	4,247	7,080	8,796	10,460	12,236	14,107	16,195	18,811	22,674	34,474	14,900
IT	4,752	7,797	9,712	11,555	13,520	15,458	17,725	20,567	24,811	40,179	16,606
SE	6,717	10,333	11,996	13,529	14,947	16,470	18,045	20,093	23,019	32,937	16,806
FI	6,977	9,491	11,206	12,825	14,408	16,080	17,907	20,086	23,362	36,824	16,915
FR	6,675	9,523	11,324	12,817	14,372	16,036	17,959	20,442	24,274	36,429	16,982
BE	6,839	9,871	11,813	13,625	15,560	17,459	19,498	21,969	25,450	37,668	17,972
DK	7,586	10,982	12,850	14,601	16,167	17,795	19,564	21,559	24,488	37,883	18,344
DE	6,481	10,333	12,595	14,453	16,299	18,278	20,596	23,647	28,280	46,982	19,793
AT	7,612	11,453	13,513	15,225	17,003	18,877	20,908	23,741	28,109	43,321	19,972
NL	8,248	11,546	13,325	15,008	16,654	18,484	20,605	23,340	27,430	46,272	20,089
CY	7,336	10,426	12,677	14,691	16,684	18,716	21,038	24,033	28,601	50,088	20,423
IE	7,188	10,253	12,193	14,190	16,474	19,102	22,360	25,987	31,109	51,308	21,010
UK	6,574	10,413	12,924	15,206	17,697	20,386	23,298	27,215	33,396	55,659	22,276
LU	11,785	16,633	19,672	22,601	25,524	28,519	32,472	36,662	44,104	68,087	30,580

Source: Own calculations based on EU–SILC 2007.

Table 3.3: Proportion of population below the poverty threshold defined at the EU level, 2006

	40% of EU median	50% of EU median	60% of EU median	5 EUR at PPS per day
AT	1.7	3.4	5.3	0.3
BE	2.3	4.8	9.4	0.5
CY	1.2	3.7	7.9	0.1
CZ	12.3	27.8	46.5	1.3
DE	3.4	5.7	9.4	1.2
DK	2.4	3.7	6.3	0.8
EE	40.2	54.5	68.0	6.7
ES	8.8	15.5	23.7	1.5
FI	1.8	4.0	9.6	0.2
FR	2.5	5.2	10.1	0.3
EL	12.9	21.8	31.3	1.7
HU	36.6	58.7	73.9	5.3
IE	1.9	3.5	7.3	0.5
IT	6.9	11.9	19.3	1.5
LT	49.4	64.2	75.4	16.3
LU	0.4	0.6	0.8	0.0
LV	51.2	64.2	75.1	17.1
NL	1.9	2.8	4.7	0.8
PL	50.6	67.1	77.8	12.4
PT	20.5	33.9	46.6	1.3
SE	2.9	4.6	7.6	0.8
SI	3.1	7.5	14.1	0.2
SK	30.1	52.7	70.9	4.5
UK	3.0	5.2	8.6	0.8
EU	10.4	16.2	22.7	2.3

Source: Own calculations based on EU–SILC 2007.

Table 4.1: The value of production for own consumption, by level of household income, 2006 (mean % disposable income)

	Total	At-risk-of-poverty threshold of 60% of median income		At-risk-of-poverty threshold of 40% of median income	
		Above threshold	Below threshold	Above threshold	Below threshold
BE	0.3	0.0	1.8	0.0	7.5
CZ	1.1	1.0	1.8	1.1	2.9
DK	0.6	0.0	5.2	0.0	18.9
DE	0.9	0.2	5.1	0.2	14.4
EE	1.6	0.8	4.7	1.0	10.1
IE	0.1	0.0	0.4	0.0	1.6
EL	1.5	0.5	5.2	0.7	10.5
ES	1.0	0.3	3.6	0.3	8.5
FR	0.4	0.2	1.9	0.3	6.8
IT	1.3	0.3	5.0	0.4	12.6
CY	0.0	0.0	0.0	0.0	0.2
LV	4.7	2.5	12.7	3.3	20.0
LT	0.3	0.0	1.5	0.0	4.1
LU	0.0	0.0	0.2	0.0	0.7
HU	0.0	0.0	0.1	0.0	0.6
NL	0.7	0.0	6.4	0.0	24.1
AT	0.2	0.1	0.4	0.1	0.6
PL	2.0	1.1	6.4	1.3	11.7
PT	1.4	0.9	3.8	1.1	6.2
SI	2.6	2.2	5.9	2.4	10.0
SK	0.1	0.0	0.8	0.0	2.7
FI	0.1	0.0	0.5	0.0	3.0
SE	0.3	0.0	2.7	0.0	8.2
UK	0.4	0.0	1.8	0.0	5.7
EU25	0.9	0.3	3.8	0.4	10.0

Source: Own calculations based on EU–SILC 2007.

Table 4.2: The value of production for own consumption in sparsely populated areas, 2006 (mean % disposable income)

	Below 60% of median income		Below 40% of median income	
	Urban areas	**Rural areas**	**Urban areas**	**Rural areas**
CZ	0.8	2.1	0.8	4.6
DK	4.4	5.8	11.8	26.3
DE	4.4	4.1	12.0	12.3
EE	2.2	6.5	5.6	13.3
IE	0.5	0.3	2.6	1.5
EL	4.5	5.8	12.3	10.2
ES	3.1	4.4	8.0	9.9
FR	1.1	3.6	4.6	9.7
IT	5.0	5.6	13.1	12.5
CY	0.0	0.1	0.0	0.6
LV	4.0	16.3	10.2	23.4
LT	0.4	1.7	1.6	4.4
LU	0.1	0.5	1.0	0.6
HU	0.2	0.2	0.8	0.7
AT	0.0	0.7	0.0	0.9
PL	1.8	8.2	4.9	13.7
PT	0.6	5.7	1.2	9.1
SK	1.1	0.9	5.0	3.3
FI	0.0	0.7	0.0	4.5
SE	2.9	2.3	9.1	6.8
UK	2.0	2.9	6.1	7.8
EU25	2.8	4.9	8.4	10.6

Notes: No data for the Netherlands and Slovenia; no data for rural areas of Belgium.
Source: Own calculations based on EU–SILC 2007.

Table 4.3: At–risk–of–poverty rate, including production of goods for own consumption, 2006 (% population in each category)

	At-risk-of-poverty threshold of 60% of median income		At-risk-of-poverty threshold of 40% of median income	
	As usually measured	Incl. goods for personal consumption	As usually measured	Incl. goods for personal consumption
BE	15.1	15.1	3.7	3.7
CZ	9.5	9.6	2.3	2.4
DK	11.7	11.7	3.2	3.2
DE	15.2	15.2	5.1	5.1
EE	19.4	19.1	6.2	5.9
IE	17.5	17.5	3.6	3.6
EL	20.3	20.2	7.7	7.5
ES	19.7	19.6	7.3	7.3
FR	13.1	13.2	2.9	2.9
IT	19.8	19.7	7.0	7.0
CY	15.5	15.5	3.6	3.6
LV	21.2	19.4	8.2	7.1
LT	19.1	19.1	7.2	7.2
LU	13.5	13.5	2.3	2.3
HU	12.3	12.4	3.0	3.0
NL	10.2	10.2	2.7	2.7
AT	12.0	12.0	3.4	3.4
PL	17.3	17.0	6.3	5.7
PT	18.1	17.6	6.3	5.9
SI	11.5	10.3	2.5	2.2
SK	10.5	10.5	2.9	2.9
FI	13.0	13.0	2.3	2.3
SE	10.8	10.8	3.5	3.5
UK	19.1	19.1	6.2	6.2
EU25	16.3	16.2	5.3	5.2

Source: Own calculations based on EU–SILC 2007.

Table 4.4: Value of income in kind received by employees as part of earnings, 2006 (as % total disposable income in each income quintile)

	1st	2nd	3rd	4th	5th	Total
BE	0.4	1.0	1.4	2.0	2.6	1.5
CZ	0.8	1.0	1.5	1.8	1.6	1.3
DK	0.9	0.1	0.3	0.6	1.3	0.6
DE	0.6	0.4	0.5	0.8	1.5	0.7
EE	0.9	0.9	1.7	1.9	2.5	1.6
IE	0.0	0.1	0.3	0.4	0.8	0.3
EL	0.4	0.2	0.3	0.3	0.4	0.3
ES	0.9	0.7	1.2	1.1	1.3	1.0
FR	0.1	0.0	0.1	0.0	0.1	0.1
IT	0.9	0.7	0.8	1.1	1.1	0.9
CY	0.6	0.4	0.3	0.5	0.3	0.4
LV	0.3	0.4	0.3	0.6	1.0	0.5
LT	0.4	0.2	0.3	0.5	0.7	0.4
LU	0.2	0.4	0.6	0.7	1.2	0.6
HU	0.0	0.2	0.2	0.3	0.6	0.3
NL	0.4	0.4	0.8	1.5	2.2	1.1
PL	0.6	0.6	0.7	0.8	1.4	0.8
PT	0.1	0.4	0.5	0.5	1.2	0.5
SI	0.2	0.1	0.2	0.2	0.7	0.3
SK	2.6	2.8	3.4	3.8	4.7	3.5
FI	0.3	0.2	0.3	0.6	1.4	0.6
SE	0.1	0.1	0.2	0.6	1.7	0.5
UK	0.2	0.5	1.1	1.5	2.2	1.1
EU	0.5	0.5	0.7	0.9	1.3	0.8

Note: No data for Austria; data for the Netherlands is confined to company cars.
Source: Own calculations based on EU–SILC 2007.

Table 5.1: Wealth levels across countries (means and medians in '000 Euro, 2007 value)

	FI 1998	DE 1998	DE* 2002	IT 2000	NL 1998	ES 2001	SE 1997	UK 2000	Australia 2002	Canada* 1999	Japan 1994	US 2001	US* 2001	US* 2004
MEAN														
Net worth	68.4	124.1	70.4	310.5	120.4	202.5	106.2	-	270.6	153.4	302.5	259.8	375.3	377.3
Assets	80.4	145.9	-	314.8	159.0		136.0	-	316.4	182.2	-	-	426.8	443.7
Financial assets	15.1	35.6	9.4	89.7	43.9		38.2	23.3	99.9	53.4	90.2 (1)	107.0	179.3	158.5
Non-financial assets	84.8	-	-	225.1	-		-	-	216.6	106.4	164.0 (1)	158.3 (3)	247.6	285.2
Housing (main)	35.2	-	49.4	117.0	-		69.3	134.1	137.7	69.0	-	67.1 (3)	116.1	143.6
Debt	12.0	21.8	-	4.3	38.6		29.8	3.4 (2)	45.8	28.8	-	6.3 (3)	51.6	66.5
Mortgages	8.8	20.3	16.0	-	34.1		-	-	34.4	22.3	-	-	38.8 (4)	50.0 (4)
MEDIAN														
Net worth	45.5	42.0		-	-	128.6	73.0	-	146.2	-	192.7	84.6	81.7	78.4
Assets	60.4	49.8		-	-		-	-	192.8	104.9		-	139.6	145.6
Debt	0.2	0.0		-	-		-	0.0 (2)	6.7	22.3	-	0.2 (3)	36.8	46.6

Notes: *Median values are only for those that hold a particular item

(1) net financial assets: financial assets–debt; net housing assets: housing assets–housing debt.

(2) Non-housing debt.

Source: Jäntti and Sierminska (2008)

(3) Includes main home equity not value of main home. For debt refers to 'other debt'.

(4) Primary residence mortgage.

Table 5.2: Asset composition (in percentage shares of total)

	FI	DE	IT	NL	SE	UK		Australia	Canada	Mexico	US	
Financial assets	16	29	29	28	28	17		32	18	45	36	
Non-financial assets	84		71	68	72	83		68	64	55	64	
Housing	64	89	37	64	61	74		54	51		50	†
Business	-		7	4	-	-		10	14	-	26	
Total assets	100	29	100	100	100	100		100	100	100	100	
Debt	16	18	1	24	35	21		100	18	100	100	
Mortgages	11	16		22	-	18		75	12	-	70	†
Net worth	84	100	99	76	65	100		100	82	100	100	

Note: † Total real estate.

Source: Jäntti and Sierminska (2008)

Table 5.3: Top wealth shares and Gini coefficient

	Shares				Gini					
	DSSW		LWS		Wealth				Income	
	top 10%	top 1%	top 10%	top 1%	Year	DSSW	Year	LWS	Year	LIS
DK	76	29			1975	0.81				
FI	42		45	13	1998	0.62	1998	0.68	1995	0.22
FR	61	21			1994	0.73			1994	0.29
DE	44		54	14	1998	0.67	2002	0.78	2000	0.28
IE	42	10			1987	0.58			1987	0.33
IT	49	17	42	11	2000	0.61	2002	0.61	2000	0.33
NO	51				2000	0.63			2000	0.25
ES	42	18			2002	0.57			2000	0.34
SE	59		58	18	2002	0.74	2002	0.89	2000	0.25
Switzerland	71	35			1997	0.80			2000	0.28
UK	56	23	45	10	2000	0.70	2000	0.66	1999	0.35
Australia	45				2002	0.62			2001	0.32
Canada	53		53	15	1999	0.69	1999	0.75	1998	0.31
Japan	39				1999	0.55				
South Korea	43	14			1988	0.58				
New Zealand	52				2001	0.65				
USA	70	33	71	33	2001	0.80	2001	0.84	2000	0.37

Notes: DSSW: Davies, Sandstrom, Shorrocks and Wolff [Davies *et al*.] (2008).

LWS: Luxembourg Wealth Study in Sierminska *et al.* (2006).

Spain in LWS: Bover (2008).

Table 6.1: Income inequality (Gini coefficient) before and after taxes and benefits

	Original income	Original income + public pensions	Gross income	Disposable income	Effect of		
					Public pensions	Non-pension benefits	Taxes and contri-butions
	(1)	(2)	(3)	(4)	(2)-(1)	(3)-(2)	(4)-(3)
AT	0.44	0.36	0.28	0.23	0.08	0.08	0.05
DK	0.46	0.40	0.30	0.23	0.06	0.10	0.07
SE	0.44	0.36	0.27	0.23	0.08	0.08	0.04
LU	0.47	0.38	0.30	0.24	0.09	0.08	0.05
BE	0.49	0.41	0.32	0.25	0.08	0.09	0.08
NL	0.39	0.33	0.28	0.25	0.05	0.05	0.04
FR	0.49	0.40	0.31	0.26	0.09	0.09	0.05
DE	0.49	0.40	0.33	0.27	0.10	0.07	0.06
FI	0.48	0.40	0.32	0.27	0.08	0.08	0.05
SI	0.50	0.43	0.33	0.27	0.07	0.09	0.06
HU	0.55	0.44	0.35	0.27	0.11	0.09	0.07
ES	0.47	0.38	0.34	0.31	0.09	0.04	0.04
UK	0.50	0.46	0.35	0.31	0.04	0.11	0.04
IE	0.46	0.42	0.36	0.31	0.04	0.06	0.05
EL	0.50	0.40	0.36	0.32	0.10	0.04	0.04
EE	0.51	0.42	0.36	0.32	0.09	0.06	0.03
PL	0.55	0.46	0.35	0.33	0.09	0.11	0.02
IT	0.50	0.43	0.38	0.35	0.06	0.05	0.03
PT	0.51	0.45	0.41	0.36	0.06	0.04	0.05

Note: Countries are ranked by the Gini coefficient for (equivalised) disposable income and estimates apply to various years 2001–05. For definitions of the income concepts used, see the Glossary.

Source: EUROMOD.

Table 6.2: Poverty rates for whole population based on equivalised household disposable income in the baseline, without net benefits and without gross benefits

	Baseline	Excluding net benefits	Excluding gross benefits	Effect of taxes on benefits	% reduction due to net benefits
SE	8.7	37.8	43.5	5.7	76.9
LU	9.3	39.7	40.5	0.8	76.5
DK	9.8	35.8	40.0	4.3	72.6
AT	10.0	40.0	41.5	1.5	75.1
BE	10.1	38.1	39.7	1.6	73.4
FR	10.2	43.1	43.7	0.5	76.3
NL	11.9	28.6	30.4	1.8	58.5
FI	12.2	38.6	41.4	2.8	68.3
DE	13.0	40.1	40.9	0.8	67.4
HU	14.9	50.2	50.7	0.4	70.4
UK	15.8	38.8	39.3	0.5	59.2
SI	15.9	43.6	45.7	2.1	63.5
PL	16.9	49.3	51.9	2.6	65.8
EE	17.7	40.5	40.6	0.1	56.4
ES	18.5	37.4	38.6	1.2	50.5
EL	18.9	40.5	41.9	1.3	53.5
IT	20.6	40.7	43.3	2.6	49.5
PT	20.9	37.0	37.2	0.2	43.5
IE	22.0	33.8	34.1	0.3	35.1
Total	15.1	40.5	41.9	1.4	62.7

Notes: Countries are ranked by the baseline poverty rate for the whole population, using national poverty lines defined as 60% of median equivalised disposable income; benefits include public pensions. Estimates apply to various years 2001–05.

Source: EUROMOD.

Table 7.1: Proportion of people unable to afford particular items, by whether or not they are at risk of poverty, 2007 (as % in each category)

	Colour TV		Phone		Washing machine		Car	
	Above 60% of median	Below 60% of median	Above 60% of median	Below 60% of median	Above 60% of median	Below 60% of median	Above 60% of median	Below 60% of median
LV	0.2	4.7	0.7	10.2	3.3	19.3	25.2	47.6
PL	0.5	2.3	1.4	5.5	0.7	2.4	16.9	32.9
LT	0.2	5.4	0.9	11.0	4.3	15.0	12.0	29.4
HU	0.3	2.3	1.7	10.5	2.6	7.8	20.1	42.1
EE	0.1	2.3	0.3	4.8	1.5	10.5	16.1	38.8
SK	0.4	2.8	1.0	5.7	0.4	4.0	21.1	47.7
CZ	0.1	2.9	0.6	6.0	0.3	2.3	8.6	42.9
PT	0.4	1.3	3.3	12.0	1.6	9.1	7.7	27.9
EL	0.1	1.2	0.4	2.2	1.3	5.5	7.0	18.5
ES	0.0	0.4	0.1	1.1	0.1	0.8	2.6	10.1
SI	0.4	2.7	0.1	2.9	0.1	1.6	1.9	15.7
IT	0.2	0.9	0.5	3.1	0.2	1.5	1.4	8.1
FI	0.5	4.6	0.1	0.5	0.8	5.8	5.4	28.5
FR	0.1	0.8	0.5	2.3	0.5	2.9	2.1	10.8
SE	0.4	2.7	0.0	0.0	0.0	0.0	2.6	14.4
BE	0.2	1.4	0.1	0.9	0.6	7.4	3.4	25.0
DK	0.4	2.2	0.0	0.0	0.9	5.9	6.6	24.3
DE	0.3	1.5	0.2	1.0	0.3	1.4	2.9	17.2
NL	0.0	0.3	0.0	0.0	0.0	1.0	3.8	19.7
IE	0.1	0.9	0.0	1.9	0.2	1.9	5.9	24.2
AT	0.1	1.5	0.1	1.0	0.3	1.6	3.8	19.8
CY	0.0	0.9	0.0	1.0	0.2	3.4	0.7	7.6
UK	0.0	0.3	0.0	0.8	0.1	1.0	2.7	14.2
LU	0.0	0.2	0.0	0.7	0.0	1.5	0.3	9.5
EU25	0.2	1.2	0.5	2.5	0.5	2.4	5.0	17.2

Source: Own calculations based on EU-SILC 2007.

Table 7.2: Proportion of people unable to afford particular items, by whether or not they are at risk of poverty, 2007 (as % in each category)

	Meal of meat/fish		Keep home warm		In arrears on bills		Unexpected expenses		Annual holiday	
	Above 60% of median	Below 60% of median	Above 60% of median	Below 60% of median	Above 60% of median	Below 60% of median	Above 60% of median	Below 60% of median	Above 60% of median	Below 60% of median
LV	22.8	55.2	16.8	41.7	9.4	14.9	55.6	88.7	58.5	90.3
PL	19.3	45.4	19.3	39.4	14.8	34.4	48.9	80.9	59.8	88.5
LT	11.7	40.0	19.7	34.0	7.7	16.6	34.9	74.3	52.9	89.0
HU	22.2	48.0	9.0	23.7	15.7	43.3	59.4	88.1	61.5	89.8
EE	3.3	16.3	2.4	8.3	4.2	9.5	14.0	56.6	49.3	86.8
SK	28.6	62.1	3.5	14.5	5.8	22.9	39.5	75.9	50.4	84.3
CZ	11.0	32.9	4.9	17.5	4.1	19.5	33.9	81.8	29.4	73.1
PT	2.8	10.1	36.7	65.0	5.5	13.7	14.5	43.0	55.4	88.9
EL	1.3	26.7	9.8	29.4	19.7	52.7	23.0	55.2	39.5	76.0
ES	1.5	4.6	5.3	14.6	5.8	11.0	24.2	48.5	30.5	58.1
SI	8.3	25.4	3.2	11.4	12.5	27.6	37.8	70.7	25.1	63.9
IT	4.4	13.7	7.0	23.9	8.7	27.5	25.3	58.8	31.3	71.0
FI	2.2	8.1	0.9	2.6	7.2	22.1	25.9	58.9	14.0	46.7
FR	4.5	17.5	3.6	11.4	7.4	21.9	28.6	65.8	25.1	62.9
SE	3.0	9.5	1.6	3.5	4.6	15.8	15.4	41.0	10.8	34.7
BE	1.9	12.1	11.3	33.1	4.1	17.6	14.6	56.6	17.3	57.9
DK	1.7	8.7	9.2	18.1	3.2	14.1	15.9	39.8	7.7	23.3
DE	7.7	26.0	3.7	14.8	4.8	11.1	30.5	69.9	19.0	55.1
NL	1.2	3.7	1.3	4.6	3.4	12.1	18.1	49.7	12.0	34.5
IE	1.0	7.8	2.0	10.3	5.4	22.3	32.7	69.6	16.9	42.4
AT	6.2	24.2	1.7	9.0	3.2	9.3	23.7	65.7	21.2	58.2
CY	5.1	21.4	29.4	62.5	22.6	25.4	35.0	80.2	47.4	82.3
UK	2.5	10.2	3.4	9.7	6.4	17.7	20.9	51.2	16.1	44.1
LU	0.7	6.4	0.2	2.3	1.6	9.8	14.8	64.3	5.5	39.3
EU25	6.4	19.0	6.7	19.3	7.4	20.5	28.2	61.3	28.2	62.2

Source: Own calculations based on EU–SILC 2007.

Table 7.3: Material deprivation rate by income quintile, 2007

	First	Second	Third	Fourth	Fifth	Total
BE	38.5	13.4	5.0	2.4	0.7	12.0
CZ	43.6	19.0	10.0	7.0	2.3	16.4
DK	20.6	9.3	3.9	0.5	0.4	6.9
DE	32.0	15.3	6.9	3.7	1.6	11.7
EE	40.7	19.9	9.1	5.6	1.7	15.4
IE	27.4	15.9	5.5	2.5	0.2	10.3
EL	50.3	33.0	19.0	7.3	0.4	22.0
ES	21.3	12.3	7.9	4.1	1.9	9.5
FR	31.5	16.8	6.2	3.4	1.7	11.9
IT	35.7	18.4	12.0	6.4	2.1	14.9
CY	63.2	47.2	28.4	13.1	2.2	30.8
LV	77.0	61.1	42.6	30.5	11.9	44.6
LT	61.2	38.1	27.1	16.3	5.2	29.6
LU	12.5	0.7	0.5	1.1	0.2	2.9
HU	67.4	48.7	37.3	23.3	10.2	37.4
NL	16.7	7.4	2.0	1.4	0.7	5.6
AT	26.4	13.8	5.9	3.3	1.2	10.1
PL	66.4	52.0	39.2	23.9	9.7	38.3
PT	48.2	30.3	19.4	11.0	3.0	22.4
SI	35.2	17.1	10.8	6.2	2.3	14.3
SK	59.6	40.8	24.6	17.0	9.1	30.2
FI	29.6	12.1	3.5	2.2	0.3	9.4
SE	16.6	8.3	3.1	1.5	0.3	5.7
UK	25.5	14.7	6.7	3.9	1.4	10.4
EU25	35.1	20.3	11.7	6.7	2.6	15.3

Source: Own calculations based on EU–SILC 2007.

Table 7.4: The proportion of people materially deprived, at differing poverty thresholds, 2007

	Total	60% median income		50% median income		40% median income	
		Above	Below	Above	Below	Above	Below
BE	12.0	6.7	41.8	8.9	47.7	10.5	51.5
CZ	16.4	12.4	54.6	13.7	67.4	15.2	66.8
DK	6.9	5.1	20.4	6.0	22.1	6.7	12.4
DE	11.7	7.8	34.4	9.2	36.6	10.6	33.6
EE	15.4	9.3	41.0	11.4	47.6	12.9	52.7
IE	10.3	6.2	29.8	8.2	31.8	9.9	20.7
EL	22.0	14.8	50.2	17.2	53.5	19.1	56.7
ES	9.5	6.6	21.4	7.5	23.1	8.3	25.4
FR	11.9	8.5	34.5	10.3	34.4	11.2	33.8
IT	14.9	9.7	35.9	11.3	40.2	12.6	45.2
CY	30.8	24.8	63.5	27.4	65.7	29.5	65.5
LV	44.6	36.2	76.1	39.1	77.6	41.6	79.2
LT	29.6	22.1	61.3	24.2	68.0	26.3	73.3
LU	2.9	0.8	17.0	1.3	24.2	2.4	29.1
HU	37.4	32.7	70.7	34.6	74.2	36.3	73.4
NL	5.6	4.1	18.8	5.0	17.1	5.6	5.1
AT	10.1	7.0	33.0	8.3	38.3	9.2	35.5
PL	38.3	32.2	67.3	34.3	69.7	36.0	72.2
PT	22.4	16.3	49.7	18.2	54.1	20.2	55.2
SI	14.3	10.8	41.4	12.4	45.2	13.5	48.8
SK	30.2	25.9	67.0	27.6	73.0	28.9	73.5
FI	9.4	6.1	32.4	8.1	33.3	8.9	32.3
SE	5.7	4.2	19.9	4.9	19.9	5.2	21.3
UK	10.4	6.7	26.1	8.0	28.2	9.3	27.1
EU25	15.3	11.1	36.8	12.6	39.5	13.9	40.2

Source: Own calculations based on EU–SILC 2007.

Table 7.5: Proportion of people deprived of different numbers of items, 2007 (as % population)

	Deprived of at least (number of items):								
	1	2	3	4	5	6	7	8	9
LV	78.1	63.2	44.6	24.9	12.6	5.1	1.4	0.5	0.1
PL	75.4	58.0	38.3	22.3	9.8	3.1	0.7	0.1	0.0
HU	80.9	61.5	37.4	19.4	8.8	3.3	1.1	0.3	0.1
CY	66.4	48.6	30.8	13.3	3.4	0.3	0.1	0.0	0.0
SK	69.2	48.5	30.2	13.7	4.6	1.5	0.6	0.1	0.0
LT	69.8	49.2	29.6	16.6	6.9	3.1	1.3	0.3	0.0
PT	68.8	47.2	22.4	9.6	4.2	1.4	0.3	0.0	0.0
EL	57.3	37.2	22.0	11.5	4.9	1.7	0.7	0.2	0.0
CZ	51.0	32.0	16.4	7.4	2.7	1.0	0.2	0.1	0.0
EE	61.6	32.5	15.4	5.6	2.2	1.0	0.4	0.2	0.0
IT	49.4	29.9	14.9	6.8	2.7	0.7	0.2	0.1	0.0
SI	52.1	30.8	14.3	5.1	1.6	0.5	0.1	0.0	0.0
BE	36.1	20.4	12.0	5.7	2.4	0.7	0.1	0.0	0.0
FR	43.8	26.1	11.9	4.8	1.4	0.4	0.1	0.0	0.0
DE	43.5	25.4	11.7	4.7	1.5	0.3	0.0	0.0	0.0
UK	33.7	20.9	10.4	4.2	1.1	0.2	0.1	0.0	0.0
IE	44.4	23.4	10.3	4.5	1.3	0.7	0.1	0.0	0.0
AT	39.4	21.5	10.1	3.3	1.2	0.3	0.0	0.0	0.0
ES	46.8	25.6	9.5	3.0	0.7	0.2	0.0	0.0	0.0
FI	37.4	20.1	9.4	3.5	1.2	0.3	0.0	0.0	0.0
DK	30.1	13.2	6.9	3.2	1.4	0.5	0.1	0.0	0.0
SE	24.8	12.2	5.7	2.1	0.6	0.1	0.0	0.0	0.0
NL	27.5	13.2	5.6	1.7	0.3	0.1	0.0	0.0	0.0
LU	24.2	9.7	2.9	0.8	0.3	0.0	0.0	0.0	0.0
EU25	47.3	29.6	15.3	7.0	2.6	0.8	0.2	0.0	0.0

Source: Own calculations based on EU–SILC 2007.

Table 7.6: Average number of items people are deprived of, 2007

	% deprived according to the indicator	Total population		Deprived of at least 1 item	
		Av. number of items	Weighted	Av. number of items	Weighted
LV	44.6	2.3	1.9	3.0	2.3
PL	38.3	2.1	1.7	2.8	2.2
HU	29.6	1.8	1.6	2.5	2.3
CY	37.4	2.1	1.7	2.6	2.0
SK	15.4	1.2	1.1	1.9	1.6
LT	30.2	1.7	1.4	2.4	1.9
PT	16.4	1.1	1.1	2.2	1.9
EL	22.4	1.5	1.3	2.2	1.8
CZ	22.0	1.4	1.2	2.4	2.0
EE	9.5	0.9	0.8	1.8	1.6
IT	14.3	1.0	0.9	2.0	1.7
SI	14.9	1.0	1.0	2.1	1.9
BE	9.4	0.7	0.8	1.9	1.8
FR	11.9	0.9	0.9	2.0	1.8
DE	5.7	0.5	0.6	1.8	1.7
UK	12.0	0.8	0.8	2.1	2.0
IE	6.9	0.6	0.8	1.8	1.9
AT	11.7	0.9	0.9	2.0	1.8
ES	5.6	0.5	0.5	1.8	1.6
FI	10.3	0.8	0.8	1.9	1.7
DK	10.1	0.8	0.8	1.9	1.8
SE	30.8	1.6	1.3	2.5	1.9
NL	10.4	0.7	0.8	2.1	1.9
LU	2.9	0.4	0.4	1.6	1.4
EU25	15.3	1.0	1.0	2.2	1.9

Note: 'Weighted' relates to the number weighted according to the prevalence of the item across society.
Source: Own calculations based on EU–SILC 2007.

Table 7.7: Proportion of men and women materially deprived and at risk of poverty, 2007 (% in each category)

	Men		Women	
	At risk of poverty	Material deprivation	At risk of poverty	Material deprivation
LV	19.3	41.7	22.7	47.1
PL	17.6	37.6	17.1	38.9
LT	16.7	27.6	21.3	31.4
HU	12.3	36.7	12.3	38.0
EE	16.7	13.6	21.6	16.9
SK	9.8	28.4	11.1	31.9
CZ	8.6	15.4	10.4	17.3
PT	17.2	21.5	19.0	23.2
EL	19.6	20.8	20.9	23.1
ES	18.6	9.2	20.9	9.9
SI	10.0	13.7	12.9	15.0
IT	18.4	14.1	21.2	15.7
FI	12.1	8.3	13.8	10.5
FR	12.5	11.2	13.8	12.5
SE	10.7	5.6	11.0	5.9
BE	14.4	11.1	15.9	12.9
DK	11.3	6.0	12.0	7.7
DE	14.1	10.7	16.2	12.7
NL	9.7	5.3	10.7	5.9
IE	16.1	9.5	18.9	11.1
AT	10.6	9.5	13.4	10.7
CY	13.6	29.7	17.4	31.9
UK	18.1	9.9	20.2	10.9
LU	12.9	2.4	14.1	3.4
EU25	15.4	14.4	17.2	16.0

Source: Own calculations based on EU–SILC 2007.

Table 7.8: Proportion of people materially deprived and at risk of poverty, by age group, 2007

	0–17		18–24		25–64		65+	
	At risk of poverty	Material deprivation	At risk of poverty	Material deprivation	At risk of poverty	Material deprivation	At risk of poverty	Material deprivation
LV	20.5	43.9	18.2	41.1	18.2	41.3	33.3	58.5
PL	24.2	38.7	21.7	43.2	16.4	36.5	7.8	40.5
LT	21.9	28.6	16.4	26.8	15.7	27.9	28.9	38.5
HU	18.9	42.4	16.6	43.8	10.9	35.1	6.0	35.3
EE	18.1	14.4	17.5	15.5	15.8	14.2	32.9	20.0
SK	17.2	31.8	12.1	31.3	8.8	26.8	8.1	41.4
CZ	16.4	19.5	12.0	21.3	8.0	14.6	5.4	16.7
PT	21.2	23.9	16.0	24.4	15.1	20.0	25.6	27.3
EL	23.2	19.7	24.5	24.9	17.9	20.0	22.9	29.0
ES	24.0	9.4	17.9	11.3	16.3	9.0	28.2	10.8
SI	11.4	12.5	9.2	16.6	9.9	13.4	19.4	18.4
IT	25.4	17.9	24.7	18.1	16.8	13.9	21.7	14.0
FI	10.9	9.9	24.1	16.1	9.5	8.6	21.4	8.1
FR	15.4	14.6	21.6	16.5	10.8	11.3	13.3	7.8
SE	11.6	7.6	26.0	8.6	8.0	5.4	11.1	3.2
BE	16.8	15.4	17.2	15.9	11.7	10.8	23.2	9.7
DK	9.6	8.2	33.0	17.4	8.0	5.8	17.3	3.6
DE	13.8	13.5	20.3	15.0	14.2	12.5	16.7	6.5
NL	14.1	6.4	18.0	6.4	7.6	5.8	10.0	3.1
IE	19.3	14.0	18.0	14.3	14.0	8.7	28.8	4.1
AT	14.7	12.0	12.7	12.2	10.2	9.2	14.5	9.7
CY	12.3	28.3	8.8	32.7	10.4	28.6	50.3	43.7
UK	22.7	15.3	19.3	17.4	14.5	8.8	29.8	5.0
LU	19.8	4.0	16.3	2.3	12.3	3.1	7.2	1.0
EU25	19.1	17.3	20.1	19.9	13.8	14.5	19.1	13.1

Source: Own calculations based on EU–SILC 2007.

Table 7.9: Proportion of people materially deprived and at risk of poverty, by sex and age group, 2007

	Total	Sex		Age group			
		Men	Women	0–17	18–24	25–64	65+
LV	76.1	73.6	77.9	72.9	67.3	77.0	79.9
PL	67.3	67.8	66.8	65.5	67.9	67.6	71.2
LT	61.3	60.5	61.9	61.6	49.3	63.6	61.8
HU	70.7	70.4	71.0	76.4	70.7	68.4	62.0
EE	41.0	41.1	40.9	39.7	40.2	44.4	36.9
SK	67.0	67.0	67.0	67.5	70.6	63.5	76.3
CZ	54.6	56.0	53.5	57.7	62.0	53.4	39.9
PT	49.7	49.6	49.9	55.4	45.7	47.7	49.6
EL	50.2	48.1	52.1	46.9	48.6	47.8	59.7
ES	21.4	20.7	21.9	22.2	25.4	21.6	18.9
SI	41.4	41.2	41.5	39.8	39.1	40.2	45.4
IT	35.9	36.7	35.2	40.4	38.9	37.1	27.7
FI	32.4	32.6	32.2	37.3	43.3	36.3	16.8
FR	34.5	33.8	35.2	39.1	36.2	36.5	21.3
SE	19.9	21.0	18.8	28.5	17.7	21.8	7.0
BE	41.8	41.5	42.1	56.1	55.0	44.6	19.0
DK	20.4	19.8	21.0	26.7	31.5	23.1	1.9
DE	34.4	33.5	35.1	37.3	32.8	39.4	21.0
NL	18.8	18.8	18.8	23.3	13.1	20.7	9.4
IE	29.8	30.8	28.9	40.8	41.6	28.5	6.3
AT	33.0	34.9	31.5	35.2	34.0	35.5	24.2
CY	63.5	62.4	64.3	66.1	77.6	64.0	59.7
UK	26.1	27.0	25.3	38.4	42.8	26.2	6.6
LU	17.0	15.1	18.6	17.4	12.6	18.6	9.4
EU25	36.8	36.8	36.7	42.1	41.1	38.7	23.9

Source: Own calculations based on EU–SILC 2007.

Table 7.10: Proportion reporting difficulty in making ends meet, by whether or not at risk of poverty and materially deprived, 2007 (% in each category reporting difficulty or great difficulty in making ends meet)

	Total		>60% median		<60% median	
	Not deprived	Deprived	Not deprived	Deprived	Not deprived	Deprived
LV	16.1	74.1	14.3	70.8	34.0	80.0
PL	19.8	73.3	18.1	68.5	35.8	84.3
LT	9.1	58.7	7.6	51.4	21.1	69.7
HU	22.3	71.9	21.6	68.2	34.2	84.1
EE	3.7	51.3	2.7	38.9	10.5	63.0
SK	17.4	61.1	16.5	54.2	34.1	83.7
CZ	16.3	77.9	15.4	73.7	34.0	87.0
PT	26.2	76.6	23.3	71.7	47.6	84.0
EL	41.3	92.0	38.9	92.2	57.4	91.7
ES	21.6	77.5	19.0	75.1	34.2	80.5
SI	12.9	64.1	11.7	58.9	26.9	74.6
IT	28.3	87.5	24.8	85.0	48.4	90.2
FI	3.7	43.9	3.2	43.2	8.4	44.8
FR	8.5	67.3	7.3	64.5	20.3	72.1
SE	4.2	60.3	3.7	60.2	10.0	60.6
BE	8.1	68.6	6.1	59.6	26.3	76.7
DK	3.3	49.9	2.6	45.3	10.2	59.0
DE	2.4	31.8	1.8	28.7	7.9	35.9
NL	7.5	59.8	6.4	55.5	18.5	68.2
IE	15.9	74.4	14.6	70.0	24.0	78.7
AT	5.3	60.3	4.4	52.9	14.6	71.7
CY	29.0	82.9	27.3	82.4	47.9	84.1
UK	8.8	55.6	7.3	53.6	17.0	57.9
LU	4.9	59.6	2.5	41.6	23.7	65.1
EU25	13.5	67.0	11.7	63.5	26.5	72.5

Source: Own calculations based on EU–SILC 2007.

Table 7.11: Incidence of housing deprivation, by risk of poverty and whether or not materially deprived, 2007 (% with housing deprivation)

	Total		>60% median		<60% median	
	Not deprived	**Deprived**	**Not deprived**	**Deprived**	**Not deprived**	**Deprived**
BE	17.6	42.4	17.0	41.2	23.4	43.4
CZ	14.9	36.9	14.5	31.8	20.9	47.8
DK	12.5	39.7	12.2	41.4	15.8	36.5
DE	14.6	36.0	13.8	34.5	20.8	38.0
EE	32.0	53.5	28.5	48.2	54.5	58.4
IE	16.2	51.7	15.8	49.5	18.7	53.9
EL	18.5	42.0	18.0	40.3	21.7	44.0
ES	23.4	43.5	22.3	39.8	28.7	47.7
FR	17.3	40.3	16.6	38.5	23.9	43.3
IT	20.6	45.8	20.2	43.2	23.0	48.5
CY	26.4	48.4	26.2	47.0	29.3	51.3
LV	33.1	53.8	31.6	48.4	48.6	63.4
LT	33.4	57.0	31.2	47.6	51.5	71.2
LU	16.5	45.7	15.5	37.5	24.0	48.2
HU	18.8	39.8	18.4	36.0	24.3	52.3
NL	20.7	42.1	19.8	42.2	29.8	41.9
AT	12.3	31.9	11.9	27.3	16.4	39.0
PL	29.6	60.3	28.4	55.6	40.6	71.2
PT	25.4	54.1	24.6	49.6	31.6	60.7
SI	21.3	47.0	20.3	42.1	32.2	56.9
SK	6.9	16.8	7.0	13.9	5.3	26.2
FI	9.6	21.5	9.2	22.8	12.9	19.8
SE	11.2	26.0	11.0	26.4	13.4	25.2
UK	20.5	46.1	20.2	43.6	22.2	48.8
EU25	19.1	45.5	18.4	42.6	24.4	50.1

Notes: Housing deprivation is defined as either not having a bathroom/indoor toilet in the house, or having a leaking roof, rotten window-frames or floors, damp walls and so on, or not having enough light in the house.

Source: Own calculations based on EU–SILC 2007.

Table 7.12: Proportion of people with income above and below the poverty threshold with housing problems, according to different measures, 2007 (% people at risk/not at risk of poverty)

	Deprived of 1 of 3 and overcrowded		Reporting 3 of 5 'module' problems		Overall dissatisfied with housing	
	Not at risk	At risk	Not at risk	At risk	Not at risk	At risk
LU	1.1	8.4	2.9	13.0	4.3	15.5
UK	1.5	3.5	3.3	5.3	5.8	8.6
CY	0.6	2.2	10.2	16.7	13.1	22.7
AT	3.0	9.3	1.0	5.0	7.0	20.0
IE	1.0	2.3	1.4	4.9	14.6	27.0
NL	0.4	3.2	1.7	3.9	2.8	6.8
DE	0.6	2.8	3.5	8.5	16.0	21.3
DK	1.2	5.7	:	:	5.2	14.9
BE	0.9	5.1	1.7	8.3	9.6	22.5
SE	0.7	3.6	1.8	2.8	4.2	9.2
FR	2.4	8.1	5.0	11.9	7.8	22.1
FI	0.5	2.3	3.0	6.8	6.2	10.1
IT	5.4	13.8	5.6	16.4	12.2	28.8
SI	10.7	22.3	1.0	3.3	10.5	19.3
ES	1.2	3.9	3.2	9.6	10.1	16.6
EL	6.6	14.1	6.4	12.6	11.3	18.6
PT	6.2	13.3	15.0	26.8	16.2	25.9
CZ	6.2	25.3	4.3	11.1	13.1	31.9
SK	3.4	12.3	5.9	11.3	22.4	36.1
EE	12.2	23.8	5.9	10.4	29.1	34.5
HU	12.0	29.3	5.4	10.8	36.6	50.6
LT	18.3	35.3	8.9	10.2	37.2	41.7
PL	21.5	45.9	7.4	16.5	19.6	32.2
LV	24.8	34.5	10.0	19.5	30.2	39.6

Notes: 'Deprived of 1 of 3 and overcrowded' indicates having at least one of a leaking roof, damp walls, no bath and indoor toilet, too dark a house plus a shortage of space as measured by the number of rooms relative to the number of people – the indicator of severe housing deprivation adopted at the EU level. 'Reporting 3 of 5 'module' problems' indicates having at least 3 out of 5 of the aspects covered by the EU–SILC housing module – inadequate electrical installation, inadequate plumbing/water installations, dwelling not comfortably warm during winter, dwelling not comfortably cool during summer, shortage of space in dwelling.
'Overall dissatisfied with housing' indicates those reporting being either greatly dissatisfied or somewhat dissatisfied with their dwelling.
Source: Own calculations based on EU–SILC 2007.

Table 7.13: Proportion of people in densely populated areas with income above and below the at-risk-of-poverty threshold reporting difficulty of access to more than one essential service, 2007 (% those at risk/not at risk)

	2 services		3 services		4 services		5 services	
	Not at risk	At risk	Not at risk	At risk	Not at risk	At risk	Not at risk	At risk
LU	10.6	9.4	6.3	5.7	4.1	*2.5*	1.8	=
UK	6.2	9.6	2.7	5.6	1.7	3.5	0.5	=
CY	8.7	27.0	4.3	17.7	2.1	10.4	0.8	=
AT	9.6	9.3	5.7	*4.4*	3.5	=	1.7	=
IE	10.4	19.7	4.6	8.8	2.1	*5.8*	0.9	=
DE	13.2	13.4	5.5	5.0	2.5	*1.9*	1.1	=
DK	11.0	*11.3*	4.8	=	2.3	=	*1.0*	=
BE	14.4	18.3	7.1	9.9	3.8	5.8	1.3	*2.8*
SE	8.4	13.4	2.9	=	*1.0*	=		=
FR	7.1	8.5	1.3	*2.1*		=		=
FI	10.6	12.0	5.2	*8.3*	2.3	=	*0.8*	3.3
IT	28.8	44.1	20.8	33.2	14.7	22.9	8.8	14.7
ES	12.1	11.5	5.9	4.0	2.5	1.7	0.4	=
EL	16.8	20.6	11.7	16.5	7.5	11.8	4.1	6.5
PT	11.9	14.5	6.1	8.9	3.4	*4.7*	*0.8*	=
CZ	14.0	9.3	8.2	*5.5*	5.5	=	3.1	=
SK	24.6	21.7	12.9	<	6.1	=	3.4	=
EE	13.4	21.3	7.5	15.3	4.4	*7.2*	1.7	=
HU	18.1	27.2	10.7	17.7	5.6	*11.1*	3.0	*6.7*
LT	18.2	27.7	8.9	16.8	4.8	10.8	2.9	*6.9*
PL	15.0	16.6	9.2	9.7	6.3	7.2	4.3	4.0
LV	19.0	29.4	13.7	17.7	10.3	12.8	5.2	=
EU	13.1	16.7	6.9	9.7	4.1	6.0	2.1	3.1

Notes: In many cases, the number of observations is too small for the data to be reliable. These relate mainly to those at risk of poverty. In these cases, an indication is given of whether the figure is lower (<) than those with higher income, or similar – within 5 percentage points – (=). In the UK and France for public transport and the UK and Belgium for primary care, the observations are too small to be reliable for both those at risk and not at risk of poverty in rural areas.
Figures in italics are uncertain because of the small number of observations.

Source: Own calculations based on EU-SILC 2007.

Table 7.14: Proportion of people in sparsely populated areas with income above and below the at-risk-of-poverty threshold reporting difficulty of access to more than one essential service, 2007 (% those at risk/not at risk)

	2 services		3 services		4 services		5 services	
	Not at risk	At risk	Not at risk	At risk	Not at risk	At risk	Not at risk	At risk
LU	26.3	28.6	21.7	27.2	8.5	15.0	3.9	11.5
UK	6.4	23.1	3.3	>		>		=
CY	13.3	33.7	7.4	25.9	4.3	17.2	1.8	*6.3*
AT	33.2	45.2	27.2	37.1	22.7	30.8	14.8	21.4
IE	32.7	38.7	23.9	30.3	18.4	25.0	14.3	22.1
DE	33.9	35.3	19.6	21.1	11.8	12.3	5.8	*6.2*
DK	22.6	27.8	13.7	15.6	8.4	*12.7*	3.8	*10.1*
BE	67.3	62.0	53.9	51.5	39.7	*40.0*	19.9	*31.4*
SE	14.1	14.4	5.4	6.2	2.1	*2.8*	0.7	**0.7**
FR	9.2	10.1	1.5	*7.6*		=		=
FI	14.6	22.5	6.2	16.4	4.1	11.8	2.1	7.1
IT	35.0	44.1	27.4	33.2	22.8	27.8	13.9	17.9
ES	22.8	23.3	14.4	13.3	7.3	6.0	1.3	=
EL	38.6	50.6	29.9	42.6	19.6	31.4	8.6	15.6
PT	13.9	21.2	9.0	13.2	6.9	7.8	2.6	*3.8*
CZ	31.7	32.9	23.8	25.5	16.5	18.6	8.7	10.0
SK	36.9	40.9	23.8	25.0	12.6	11.2	5.2	*4.9*
EE	31.9	46.6	23.5	37.6	15.5	28.3	8.6	*19.2*
HU	24.4	30.1	13.0	16.3	6.7	10.6	3.6	5.2
LT	30.3	45.4	17.2	33.8	9.1	24.8	3.9	12.4
PL	36.0	48.7	28.1	39.5	21.0	29.8	9.6	12.6
LV	31.4	44.6	25.2	35.7	19.7	25.9	9.1	12.9
EU	26.8	35.0	17.9	25.3	12.1	17.8	6.2	9.4

Note: In some cases, the number of observations is too small for the data to be reliable. In these cases, an indication is given of whether the figure for those at risk of poverty is higher (>) or lower (<) than those with higher income or similar – within 5 percentage points – (=). Blanks indicate that the figure is too small to be reliable for those not at risk of poverty as well. Figures in italics are uncertain because of the small number of observations.

Source: Own calculations based on EU-SILC 2007.

Table 7.15: Proportion of people reporting an unmet need for medical care, 2007 (% total in each category)

	Income >60% of median	Income <60% of median
BE	0.2	2.0
CZ	4.5	4.9
DK	1.3	1.0
DE	8.3	13.5
EE	11.2	17.0
IE	2.2	6.3
EL	5.5	11.6
ES	1.8	1.9
FR	3.1	6.6
IT	5.5	11.1
CY	5.7	11.9
LV	20.6	36.0
LT	9.2	12.8
LU	3.8	4.3
HU	11.0	15.5
NL	2.0	2.6
AT	1.9	2.1
PL	12.4	14.3
PT	10.1	22.1
SI	0.3	0.6
SK	3.6	8.3
FI	1.0	1.3
SE	14.6	15.9
UK	3.4	4.0
EU25	5.7	9.1

Source: Own calculations based on EU–SILC 2007.

Table 7.16: Reasons for having an unmet need for medical care, 2007 (% total in each category reporting unmet need)

	Could not afford to	Waiting list	Could not take time because of work or caring	Too far to travel/no means of transport	Could not afford to	Waiting list	Could not take time because of work or caring	Too far to travel/no means of transport
	Income above 60% of median				Income below 60% of median			
BE	36.0	5.7	8.2	13.3	86.1	0.0	3.2	1.9
CZ	2.4	8.6	24.9	5.4	9.4	1.6	19.7	4.3
DK	22.9	0.0	62.2	3.2	5.4	0.0	94.6	0.0
DE	24.6	8.3	14.3	0.9	51.4	4.2	4.8	1.4
EE	5.9	57.3	9.0	6.3	24.7	39.9	2.7	15.3
IE	41.7	30.0	6.9	1.6	60.3	27.7	1.9	0.3
EL	64.4	11.3	10.2	3.2	77.8	4.5	3.1	2.8
ES	0.2	6.4	41.2	1.0	0.9	3.3	31.5	0.5
FR	28.1	5.0	23.6	0.7	51.8	3.2	10.1	1.2
IT	40.0	23.7	10.3	0.8	65.4	17.9	3.7	1.6
CY	40.8	0.4	15.5	0.2	80.1	0.0	3.1	3.8
LV	26.0	14.6	16.3	2.6	51.5	7.6	5.9	9.3
LT	12.4	53.4	7.8	3.9	36.8	24.9	1.4	15.0
LU	2.3	5.2	20.9	0.0	39.3	10.2	21.7	1.2
HU	13.4	3.3	21.4	3.2	32.8	4.1	12.1	2.8
NL	8.0	9.9	11.1	3.5	7.6	7.4	9.2	0.0
AT	18.4	7.1	22.3	2.2	55.6	2.2	1.8	3.4
PL	25.8	23.3	22.7	3.0	52.3	13.4	11.7	3.6
PT	70.9	4.5	9.3	0.4	84.2	3.4	1.7	0.8
SI	36.9	24.7	0.0	0.0	49.5	28.5	22.2	0.0
SK	11.7	9.7	35.1	3.6	55.7	7.9	9.5	5.5
FI	29.4	23.6	1.6	0.0	45.1	16.3	0.9	0.0
SE	3.7	15.9	14.7	2.0	4.7	16.2	20.0	0.9
UK	1.3	40.7	4.9	0.5	0.7	26.1	3.6	2.9
EU25	25.6	16.0	16.7	1.7	51.3	10.4	6.9	2.4

Source: Own calculations based on EU–SILC 2007.

Table 7.17: Lack of affordability of healthcare (2007)*

	Hospitals	Medical or surgical specialists	Family doctors or GPs
AT	11	39	14
BE	31	38	8
BG	52	63	16
CY	10	66	39
CZ	8	15	5
DK	1	7	1
EE	25	37	6
FI	22	59	17
FR	17	48	8
DE	24	28	10
EL	45	71	43
HU	48	45	18
IE	33	53	33
IT	23	49	16
LV	24	25	5
LT	33	40	10
LU	11	14	4
MT	57	54	9
NL	19	21	6
PL	21	31	8
PT	40	78	37
RO	48	60	24
SK	13	24	14
SI	23	39	16
ES	10	22	7
SE	7	7	4
UK	8	13	4
EU	**21**	**35**	**11**
Croatia	47	56	17
Turkey	32	41	29

* The percentage responding 'not very affordable' or 'not at all affordable' in
each case.
Sources: European Commission Special Eurobarometer 283 (December 2007)
Health and long-term care in the European Union, QA5.1, QA5.3 and QA5.4
('Thinking now about the affordability of healthcare services in [COUNTRY],
please tell me if for you personally, or for your close ones, each of [hospitals /
medical or surgical specialists / family doctors or GPs] are very affordable, fairly
affordable, not very affordable or not at all affordable').
http://ec.europa.eu/public_opinion/archives/ebs/ebs_283_en.pdf

Table 7.18: Out-of-pocket spending on health by those aged 50+ as % of income, 2004

	All households	Poorest 20% (quintile 1)
AT	2.2	5.2
BE	7.2	14.5
DK	2.6	5.2
FR	1.8	3.9
DE	2.4	5.8
EL	7.4	13.8
IT	6.1	14.4
NL	1.9	3.5
ES	3.1	7.2
SE	2.5	5.8
Switzerland	*3.4*	*7.1*

Notes: Average out-of-pocket spending on healthcare as a percentage of household income. Households headed by persons aged 50+ only.

Sources: Lambrelli and O'Donnell (2008). Data from the Survey of Health, Ageing and Retirement in Europe: www.share-project.org

Table 7.19: Large share of out-of-pocket health spending among those aged 50+, 2004

	Percentage of households spending in excess of 10% or 25% of their income on health expenses	
	10%	25%
AT	3.2	0.8
BE	13.7	5.2
DK	3.3	1.0
FR	3.2	1.1
DE	3.0	1.3
EL	14.2	4.8
IT	11.1	3.3
NL	3.2	1.3
ES	5.5	2.5
SE	2.7	0.6
Switzerland	*5.7*	*2.2*

Notes: Households headed by persons aged 50+ only.
Sources: Lambrelli and O'Donnell (2008). Data from the Survey of Health, Ageing and Retirement in Europe: www.share-project.org

Table 7.20: Private and out–of–pocket spending on healthcare, 2006

	Out-of-pocket as % of private health expenditure	Private health expenditure as % of total
AT	72.2	23.0
BE	78.7	28.9
BG	97.7	40.2
CY	84.3	55.2
CZ	95.5	12.1
DK	90.1	16.0
EE	92.9	25.8
FI	79.9	21.5
FR	33.2	20.3
DE	56.7	23.4
EL	62.5	57.5
HU	86.8	29.2
IE	57.2	21.7
IT	86.2	22.9
LV	97.3	36.8
LT	98.3	30.0
LU	70.5	9.4
MT	89.3	22.3
NL	33.0	18.2
PL	85.0	30.1
PT	80.2	28.2
RO	85.2	29.0
SK	88.2	26.1
SI	44.1	27.0
ES	76.4	27.5
SE	87.9	18.8
UK	92.2	12.6
Croatia	94.1	19.9
Turkey	70.3	28.5
Iceland	100.0	16.9
Norway	95.2	16.4
Switzerland	76.2	39.7

Notes: Out-of-pocket expenditure as a percentage of private expenditure on health.
Source: World Health Organization
(www.who.int/whosis/indicators/compendium/2008/3exo).

Table 8.1: Student performance in reading and mathematics, by family background, 2006 (ratio of home to migrant performance)

	Student performance in reading		Student performance in mathematics	
	Home/first generation	Home/second generation	Home/first generation	Home/second generation
BE	1.25	1.19	1.27	1.19
DK	1.19	1.15	1.18	1.14
DE	1.16	1.19	1.14	1.18
IE	1.03		1.04	
EL	1.09		1.11	
ES	1.13		1.14	
FR	1.10	1.08	1.14	1.10
IT	1.17		1.10	
LU	1.16	1.14	1.12	1.10
NL	1.15	1.13	1.12	1.14
AT	1.11	1.19	1.14	1.19
PT	1.17		1.14	
SE	1.15	1.06	1.14	1.09
UK	1.10	1.01	1.05	1.05

Source: PISA 2006: *Science competencies for tomorrow's world*, OECD.

Table 8.2: Difference in performance in science by student background, 2006 (difference in mean grades)

	Not accounting for economic, social, cultural status of students		Accounting for economic, social, cultural status of students	
	Migrant background minus home students	Different language migrants minus home students	Migrant background minus home students	Different language migrants minus home students
BE	-86.4	-102.4	-57.2	-51.8
DK	-86.9	-95.7	-48.9	-33.3
DE	-85.4	-96.9	-45.8	-24.3
IE	-10.5		-12.8	
EL	-44.3	-78.9	-25.1	-10.4
ES	-59.7		-48.2	
FR	-53.1	-58.8	-18.1	-18.2
IT	-58.4		-46.9	
LU	-66.5	-82.3	-31.7	0.0
NL	-75.5	-85.6	-41.0	-36.9
AT	-90.1	-96.4	-60.9	-36.8
PT	-54.9		-56.5	
SE	-60.8	-67.6	-43.4	-32.0
UK	-32.5	-49.1	-14.2	-8.3

Note: Result for Ireland is not statistically significant.
Source: PISA 2006: *Science competencies for tomorrow's world*, OECD.

Table 8.3: Performance of students with parents with high education, relative to those with parents with low education, 2006

	Ratio of grades: high/low educated parents			
	Science	Reading	Mathematics	Average ratio
FI	1.07	1.07	1.08	1.07
IT	1.11	1.10	1.10	1.11
ES	1.12	1.10	1.11	1.11
SE	1.13	1.12	1.11	1.12
IE	1.14	1.13	1.13	1.13
NL	1.15	1.14	1.12	1.14
PT	1.13	1.14	1.13	1.14
UK	1.19	1.16	1.14	1.16
FR	1.19	1.16	1.17	1.17
DK	1.20	1.17	1.16	1.18
LU	1.20	1.20	1.15	1.18
EL	1.19	1.17	1.20	1.19
DE	1.21	1.24	1.19	1.21
AT	1.26	1.20	1.21	1.22
BE	1.22	1.24	1.23	1.23
PL	1.28	1.28	1.25	1.27
HU	1.28	1.28	1.31	1.29
SK	1.40	1.46	1.49	1.45

Note: 'High educated' relates to parents with tertiary qualification, 'Low' to those with only basic schooling (ISCED 0–2). The parent with the highest education level is taken in each case.

Source: OECD, PISA 2006.

Table 8.4: Probability of attaining higher education, of women and men, aged 25–65, by education level of father, 2005

	No father	Highest education attained by father			Odds ratio	
		Low	Medium	High	High/low	High/no father
CZ	0.10	0.05	0.12	0.52	11.0	5.1
PL	0.08	0.07	0.24	0.69	9.7	9.1
HU	0.14	0.07	0.19	0.60	9.1	4.2
SI	0.07	0.05	0.20	0.42	8.0	6.0
IT	0.08	0.08	0.36	0.64	7.7	7.7
SK	0.15	0.08	0.20	0.52	6.7	3.5
LU	0.21	0.12	0.32	0.80	6.5	3.8
PT	0.09	0.11	0.58	0.65	6.0	6.9
LV	0.14	0.12	0.26	0.58	4.7	4.1
CY	0.18	0.20	0.55	0.81	4.1	4.6
EL	0.18	0.16	0.46	0.65	4.1	3.7
LT	0.18	0.17	0.36	0.65	3.8	3.7
EU25	0.18	0.18	0.33	0.63	3.6	3.4
AT	0.15	0.14	0.26	0.51	3.6	3.3
IE	-	0.23	0.56	0.82	3.5	-
FR	0.12	0.22	0.53	0.72	3.3	6.0
ES	0.20	0.22	0.51	0.72	3.3	3.7
DK	-	0.18	0.28	0.57	3.2	-
BE	0.18	0.25	0.54	0.79	3.2	4.3
NL	0.25	0.25	0.43	0.69	2.8	2.8
SE	0.21	0.24	0.52	0.63	2.6	3.1
EE	0.21	0.22	0.36	0.58	2.6	2.8
UK	-	0.29	0.43	0.69	2.4	-
FI	0.27	0.29	0.45	0.62	2.2	2.3
DE	0.31	0.28	0.35	0.58	2.1	1.9

Source: EU–SILC *ad hoc* module 2005.

Table 8.5: Education level of young people aged 16–29, by education level of their parents, 2007

| Parents | % total children with parents with the education level indicated | | | | | | | | | Odds ratio | |
| | Low | | | Medium | | | High | | | | |
Children	Low	Medium	High	Low	Medium	High	Low	Medium	High	H/L (1)	H/L (2)
BE	17.6	63.8	18.6	9.7	55.5	34.8	3.9	42.4	53.7	2.9	1.2
CZ	35.6	62.2	2.2	5.3	76.6	18.1	1.9	53.2	44.9	20.5	1.5
DK	57.5	40.0	2.6	51.1	47.5	1.4	42.6	55.6	1.8	0.7	1.3
DE	50.0	41.1	8.9	21.6	64.8	13.6	14.1	62.9	23.0	2.6	1.7
EE	48.0	49.3	2.7	21.1	60.2	18.6	9.8	55.3	34.9	13.1	1.7
IE	24.3	59.6	16.1	2.7	63.5	33.8	2.3	51.2	46.5	2.9	1.3
EL	19.9	58.5	21.6	5.8	61.0	33.1	1.5	37.4	61.0	2.8	1.2
ES	43.5	26.7	29.8	21.1	33.2	45.7	9.9	24.3	65.8	2.2	1.6
FR	21.4	54.7	23.9	11.2	59.5	29.3	5.0	45.1	49.8	2.1	1.2
IT	28.7	47.9	23.5	9.3	50.4	40.2	2.4	29.4	68.2	2.9	1.4
CY	18.9	38.7	42.4	6.5	38.1	55.4	3.5	30.1	66.5	1.6	1.2
LV	49.5	43.0	7.5	18.4	56.3	25.3	8.3	45.1	46.6	6.2	1.8
LT	50.8	36.7	12.5	14.9	48.1	37.0	6.2	33.6	60.2	4.8	1.9
LU	25.6	53.8	20.6	15.1	49.3	35.6	9.7	31.9	58.4	2.8	1.2
HU	28.8	66.6	4.6	5.3	71.7	23.1	3.5	46.8	49.7	10.7	1.4
NL	31.8	51.9	16.3	22.9	54.0	23.1	12.9	55.6	31.6	1.9	1.3
AT	31.4	62.9	5.8	9.7	74.6	15.7	5.1	58.3	36.7	6.3	1.4
PL	21.9	68.9	9.2	5.1	66.0	28.9	1.1	43.0	55.9	6.1	1.3
PT	40.9	33.4	25.7	8.1	44.4	47.5	2.2	29.0	68.8	2.7	1.7
SI	12.8	59.9	27.3	5.3	49.9	44.8	1.9	36.0	62.1	2.3	1.1
SK	31.5	61.7	6.8	2.1	72.0	26.0	0.5	47.7	51.7	7.6	1.5
FI	23.4	69.1	7.4	15.2	78.1	6.7	11.3	78.4	10.3	1.4	1.2
SE	13.7	80.8	5.6	5.5	84.4	10.2	2.5	82.5	15.0	2.7	1.1
UK	16.8	74.2	9.0	3.9	78.1	17.9	1.2	70.7	28.1	3.1	1.2
EU25	31.9	46.1	22.1	10.5	62.9	26.6	8.2	51.5	40.4	1.8	1.3

Notes: H/L(1) is the probability of someone whose father or mother had a tertiary education themselves having the same education level relative to the probability of someone whose father and mother had only basic schooling having tertiary education. H/L(2) is the probability of someone whose father or mother had a tertiary education themselves having either tertiary or upper secondary education relative to the probability of someone whose father and mother both had a low level of education having tertiary or upper secondary education.

Source: EU–SILC 2007.

Table 8.6: Persistent-at-risk-of-poverty rates and at-risk-of-poverty rates (calculated on different base populations), 2006

	% Below threshold (2007 cross-sectional)	% Below threshold (2007 longitudinal 2004 base pop.)	Persistent-at- risk-of- poverty rate	Below threshold 4 years in 2004-07 (2004 base pop.)	% of population below persistent-at-risk-of-poverty threshold within total population below threshold in year 2007
BE	15.1	12.6	8.7	5.6	71.4
EE	19.4	19.8	10.2	5.9	51.7
ES	19.7	19.8	11.6	6.3	60.8
FR	13.1	13.7	7.8	4.6	58.6
IT	19.8	20.4	14.5	9.4	71.0
LU	13.5	12.6	8.5	5.6	68.1
AT	12.0	10.5	4.6	2.3	43.6
PT	18.1	17.0	13.0	10.0	75.3
FI	13.0	13.0	7.6	5.3	58.4
SE	10.8	10.5	4.9	3.5	46.4

Source: Own calculations based on EU-SILC longitudinal datasets 2004-07 and on cross-sectional EU-SILC 2007.

Table 8.7: Population continuously at risk of poverty and at-risk-of-poverty rates, 2006

	% Below threshold (2007 cross-sectional)	% Below threshold (2007 longitudinal 2005 base pop.)	Below threshold 3 years in 2005-07 (2005 base pop.)	% of population below at-risk-of-poverty threshold for 3 years in 2005-07 within total population below threshold in year 2007
BE	15.1	13.9	7.6	54.3
CZ	9.5	8.7	4.4	50.0
EE	19.4	19.3	8.5	44.2
ES	19.7	19.5	8.7	44.9
FR	13.1	13.2	5.9	46.1
IT	19.8	19.8	11.6	58.7
CY	15.5	15.9	9.4	58.9
LV	21.2	22.2	9.3	41.9
LT	19.1	19.5	11.0	56.2
LU	13.5	12.4	7.6	61.7
HU	12.3	12.4	4.8	38.4
NL	10.2	8.7	4.5	51.8
AT	12.0	11.9	4.5	38.2
PL	17.3	16.7	8.7	52.1
PT	18.1	18.8	12.9	67.4
SI	11.5	11.1	6.0	53.6
SK	10.5	9.2	4.0	43.9
FI	13.0	12.5	6.8	54.3
SE	10.8	10.5	4.1	38.2
UK	19.1	19.5	7.4	38.2

Source: Own calculations based on EU-SILC longitudinal datasets 2005-07 and on cross-sectional EU-SILC 2007.

Table 8.8: Persistent-at-risk-of-poverty rates and at-risk-of-poverty rates (calculated on different base populations) by gender, 2006

	% Below threshold (2007 cross-sectional)	% Below threshold (2007 longitudinal 2004 base pop.)	Persistent-at-risk-of-poverty rate	Below threshold 4 years in 2004-07 (2004 base pop.)	% of population below persistent-at-risk-of-poverty threshold within total population below threshold in year 2007
			Men		
BE	14.4	11.9	8.1	5.7	70.7
EE	16.7	16.8	8.9	5.5	53.1
ES	18.6	18.5	10.8	5.7	60.1
FR	12.5	13.5	7.5	4.4	57.3
IT	18.4	18.9	13.4	8.6	70.9
LU	12.9	11.5	7.6	5.2	66.0
AT	10.6	8.0	2.8	1.5	35.6
PT	17.2	15.5	12.1	8.7	76.6
FI	12.1	11.2	6.6	4.4	58.4
SE	10.7	9.5	4.8	3.1	50.9
			Women		
BE	15.9	13.2	9.4	5.5	72.1
EE	21.6	22.4	11.4	6.3	50.8
ES	20.9	21.0	12.4	6.8	61.4
FR	13.8	13.9	8.0	4.7	59.8
IT	21.2	21.8	15.5	10.1	71.2
LU	14.1	13.6	9.4	5.9	69.8
AT	13.4	12.8	6.2	3.1	48.4
PT	19.0	18.2	13.8	11.2	74.3
FI	13.8	14.7	8.6	6.2	58.4
SE	11.0	11.5	5.0	3.8	42.8

Source: Own calculations based on EU-SILC longitudinal datasets 2004-07 and on cross-sectional EU-SILC 2007.

Table 8.9: Persistent–at–risk–of–poverty rates and at–risk–of–poverty rates (calculated on different base populations) by age groups, 2006

	% Below threshold (2007 cross-sectional)	% Below threshold (2007 longitudinal 2004 base pop.)	Persistent-at-risk-of-poverty rate	Below threshold 4 years in 2004-07 (2004 base pop.)	% of population below persistent-at-risk-of-poverty threshold within total population below threshold in year 2007
25–64					
BE	11.4	9.7	5.8	3.7	63.4
EE	15.7	16.2	9.3	6.0	57.5
ES	16.1	15.8	7.9	3.7	52.6
FR	10.9	12.3	6.6	3.6	54.2
IT	16.9	17.0	11.5	7.3	67.6
LU	12.4	12.0	7.9	5.5	66.7
AT	10.2	9.2	3.5	1.4	38.2
PT	14.8	13.8	10.2	7.1	71.1
FI	9.0	9.6	5.6	3.4	58.5
SE	7.4	5.6	2.8	1.9	51.0
65+					
BE	23.9	21.7	19.2	11.4	84.6
EE	34.8	31.2	12.8	7.3	41.1
ES	29.7	30.1	22.0	14.9	72.6
FR	13.7	15.5	11.4	7.0	75.9
IT	22.5	24.7	18.1	12.4	73.5
LU	6.9	6.6	4.6	2.7	69.3
AT	15.4	17.3	10.1	7.2	57.8
PT	26.8	22.7	18.9	17.3	84.4
FI	23.7	22.0	11.4	9.8	51.7
SE	12.2	20.2	9.6	6.5	46.1

Source: Own calculations based on EU–SILC longitudinal datasets 2004–07 and on cross–sectional EU–SILC 2007.

Glossary

Active labour market policies: Measures aimed at improving recipients' prospects of finding gainful employment or increasing their earnings capacity or, in the case of employers, at encouraging them to take on people or to maintain jobs. These include public employment services, vocational training programmes, job subsidies and job creation measures.

At-risk-of-poverty rate (may also be shortened to 'the poverty rate'): The proportion of people with an equivalised disposable income below the at-risk-of-poverty threshold, which is conventionally set at 60% of the national median equivalised disposable income (after social transfers and direct taxes). The at-risk-of-poverty rate is part of the set of indicators adopted by the Laeken European Council.

Benefits: Include all the main cash benefits and public pensions received by households. In some cases, we divide benefits further into public pensions, means-tested benefits and non-means-tested benefits.

Benefits in kind: The provision of social services, such as child or elderly care, at a subsidised price or free of charge.

Canberra Group on Household Income Statistics: A group set up to improve national household income statistics by developing relevant standards on conceptual and practical issues. To improve international comparability, the Group has developed and recommended international guidelines and standards. For more information, see: www.lisproject.org/links/canbaccess.htm

Cash benefits: Income support for individuals in the form of monetary payments, in contrast to benefits in kind.

Citizenship: The legal nationality of the person concerned.

Confidence interval: An interval that is known to include the true value of a variable with a certain, and relatively high, probability (generally 95% or 99%).

Contributory pension scheme: A pension scheme funded by contributions from the individuals concerned and, in many cases, by their employers.

Cross-sectional dataset: Data that relate to a single point in time, rather than a time-series dataset, which consists of observations over successive periods of time (e.g. monthly or annually).

Decile: One of the nine variate values that divide a total frequency distribution (such as that of disposable income) into 10 equal parts in terms of the population covered, once the population has been ranked in terms of a particular variable (such as disposable income).

Decile group: The population included within one of the 10 equal parts. For example, the bottom income decile group represents the 10% of the population with the lowest income in a country or region.

Disposable income: Gross income less income tax, regular taxes on wealth, compulsory social insurance contributions paid by the individual concerned plus social transfers and any private transfers received.

Duration of unemployment: The (continuous) period during which a person is both available for work and actively seeking work.

ECHP: The European Community Household Panel, a panel survey in which the same selected sample of households and the people living in them were interviewed each year about their income, financial situation, working life, housing situation, social relations, health and other aspects of their living conditions. Altogether, there were eight annual surveys, or waves, of ECHP between 1994 and 2001, before it was terminated, to be replaced by the EU-SILC (see below).

Educational attainment: The highest education or training level successfully completed, usually defined in terms of the International Standard Classification of Education (ISCED).

Employed person: Defined according to international conventions as anyone aged 15 and over who, during a particular week (the reference week), worked at least one hour in a job or business, or had a job or business from which they were temporarily absent. The definition includes unpaid family workers. In some parts of the EU-SILC or Labour Force Survey (see below), employment can also be self-defined.

Employment rate: The proportion of those aged 15-64 who are in employment.

Equivalised (household) disposable income: The total disposable income of a household (i.e. the sum of the income of all members) divided by the number of people living in the household, weighted to allow for the economies associated with collective consumption. The weights used in the analysis here, and in most studies, conform to the modified OECD scale, which attributes weight of 1.0 to the first adult, 0.5 to everyone else aged 14 and over, and 0.3 to each child aged under 14. Each person in the household is, therefore, assigned the same 'equivalised disposable income', on the implicit assumption that the income of the household is shared equally between the members.

EU10: The Member States that entered the EU on 1 May 2004 — i.e. the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and Slovakia.

EU15: The 15 Member States prior to the accession of the EU10 — i.e. Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, the Netherlands, Austria, Portugal, Finland, Sweden and the United Kingdom.

EU25: The EU15 plus the EU10.

EU27: The EU25 plus Bulgaria and Romania.

EU-SILC: The EU Statistics on Income and Living Conditions, an annual survey to collect comparable data in EU Member States on these and related aspects. The survey project was launched in 2003 and covered six Member States (Belgium, Denmark, Greece, Ireland, Luxembourg and Austria) plus Norway; it was extended in 2004 to a further seven (to the EU15 – with the exception of Germany, the Netherlands and the UK – plus Estonia). In 2005, the survey covered all EU25 countries, and as from 2007 it covers Bulgaria and Romania as well (together with Turkey and Switzerland). Additional information can be found at: http://forum.europa.eu.int/Public/irc/dsis/eusilc/library

EUROMOD: A tax-benefit microsimulation model of households in EU Member States, which enables the effects on income of policies and policy reforms to be estimated in a comparative way across countries.

Eurostat: The Statistical Office of the European Communities and part of the European Commission.

Fiscal drag: The process by which tax revenue tends to increase with inflation or growth because tax thresholds or allowances are not adjusted in line with inflation or the growth of income.

GDP: Gross domestic product, an aggregate measure of output produced or income generated in an economy.

Gini coefficient (or Gini index): A measure of inequality or concentration, here used mainly in respect of income. The Gini coefficient is derived from the Lorenz curve (see below), which plots cumulative shares of the population, from the poorest upwards, against the cumulative share of incomes that they receive. The Gini coefficient is defined as the ratio of the area between the Lorenz curve and the total area delineated by the 45-degree line, which indicates an equal distribution of income, with everyone receiving the same amount. The Gini coefficient, therefore, varies between 0, when it would be the same as the 45-degree line, and 1, when a single individual (person or household) has all the income.

Gross income: Original income plus cash benefits.

Household: One or more persons living in the same place, or at the same address, and, by assumption, sharing income and purchases.

Household Budget Surveys: Sample surveys of household expenditure on various goods and services.

Imputed rent: An estimate of the equivalent market rent for a house that is owned by the occupier(s) or for which the actual rent paid is subsidised or free of charge.

Inactive person: Someone who is economically inactive.

Inactivity rate: The proportion of the population of working age (conventionally taken as 15–64) that is neither employed nor recorded as being unemployed.

Income quintile share ratio (S80/S20): The ratio of total equivalised disposable income received by the 20% of the population with the highest income (top quintile) to that received by the 20% with the lowest income (lowest quintile).

Indexation: The periodic adjustment of the monetary value of regular payments, allowances or thresholds to take account of inflation.

Labour force: The sum of those recorded as being employed and unemployed.

Labour Force Survey: A quarterly household survey of the employment circumstances of people living in a representative sample of households.

Laeken indicators: A set of indicators of key aspects of social exclusion and poverty agreed by the Laeken European Council in December 2001. A new set of overarching indicators was adopted by the Social Protection Committee in June 2006.

Lorenz curve: A curve that plots the cumulative percentages of income received by individuals or households ranked in terms of income.

Material deprivation: The enforced lack of particular items, services or facilities considered important for an acceptable standard of living.

Mean log deviation (MLD) index: The MLD index is a measure of inequality. It takes its minimum of 0 when every individual in society has the same income, and higher levels of the MLD index show higher inequality. The MLD index belongs to the so-called 'Generalised Entropy Family' of indices, members of which share the property of 'additive decomposability'. This property can be exploited when one seeks to quantify the importance of a grouping variable (e.g. region of residence, age or education) in 'explaining' inequality. 'Additive decomposability' means that the index can be written as the sum of two components: a weighted sum of within-group inequalities and between-group inequality — that is, inequality that would be observed if the incomes of all individuals were replaced by their respective group means. Formally the MLD $= (1/n)\Sigma_{i=1,\ldots,n}\log(\mu/y_i)$, where y_i are individual incomes, n is sample size, μ is sample mean income.

Means-tested benefits: Social transfers that are subject to a means test, i.e. an assessment of the income and accumulated savings of households to determine whether the level of the two is low enough to entitle them to payment. They are specifically targeted at those with larger needs or lower resources and, therefore, explicitly involve redistribution.

Median: The value of the variate which divides a total frequency distribution into two halves. Median income is, therefore, the level at which 50% of the population has income higher than this and 50% lower than this.

Minimum income schemes: Social transfers designed to bring the income of households up to a minimum level.

Non-means-tested benefits: Social transfers usually based on contingencies such as disability, or intended for horizontal redistribution (e.g. to children) or as earnings replacement incomes (sickness, maternity/paternity or unemployment).

NUTS: The Nomenclature of Territorial Units for Statistics. This is a multi-level hierarchical system for classifying regions in the EU, which is based to some extent on the administrative structure in place at regional level in the different countries. Each Member State above a minimum size is subdivided into NUTS 1 regions, each of which is, in turn, subdivided into NUTS 2 regions, and so on. For more details, see http://ec.europa.eu/eurostat/ramon/nuts/home_regions_en.html

Original income: Refers to income before taxes are deducted or cash benefits added. It includes earnings from employment, income from self-employment, income from capital, private pension income (i.e. market income) plus transfers from other households (such as alimony and child maintenance).

Outlier: A data value that diverges a long way from that of most observations.

Participation rate: The proportion of working-age population that is either employed or unemployed.

Poverty gap (or at-risk-of-poverty gap): A measure of the extent of risk of poverty, defined as the difference between the median income of those with income below the poverty threshold and the threshold itself, expressed as a percentage of the latter.

Poverty line (or threshold): The income chosen to denote an acceptable level. Those with income below this level, here taken to be 60% of the median, are defined as being at risk of poverty.

Poverty rate: See at-risk-of-poverty rate.

Public pensions: Defined as restricted to those aged 65 or over (67+ for Denmark, since that was the Danish pension age in 2001) and to benefits specifically intended to provide income

during old age or to replace earnings during retirement. Any other pensions paid to younger people or other benefits paid to the elderly are included in one or other of the cash benefit categories, rather than as pension income.

Purchasing power standard (PPS) or parity (PPP): A unit of account that measures the ability to purchase a given basket of goods and services in different countries, which accordingly adjusts for differences in price levels.

Social assistance: Transfers by government to households, intended to provide income support for households that are either not eligible for social insurance benefits or for which the amount of the benefits received is considered insufficient to bring their income up to an acceptable level.

Social exclusion and inclusion: A multi-dimensional view of poverty and deprivation, which includes non-monetary as well as monetary aspects.

Social insurance benefits: Transfers, usually funded mainly by contributions to social insurance, or security and schemes, entitlement to which is typically determined by a person's contribution record.

Taxes: Include income taxes and employee and self-employed social contributions, together with other direct taxes customarily included in the concept of disposable household income, such as Council Tax in the UK and Church taxes in Finland. Locally administered income taxes are included along with national taxes, while indirect taxes are not included.

Tax allowances: Amounts deducted from gross earnings to arrive at taxable income.

Tax credits: Amounts that are subtracted from a person's tax liability to determine the tax payable. In a number of countries, they represent a form of transfer to those in work with low earnings and a means of increasing their income to a more acceptable level.

Unemployed person: Defined according to international conventions as somebody aged 15 and over who is available for work and actively seeking work, though in some parts of the EU-SILC or Labour Force Survey (see above), such as when indicating employment status during the previous year, unemployment can also be self-defined.

Unemployment rate: The number of unemployed as a percentage of the labour force.

Work intensity – EU-SILC indicator: A Eurostat measure, calculated as the ratio between the number of months spent in employment during the year by household members of working age (i.e. those aged 16-64) and the number of months they could potentially spend in work, if they were all employed. A work intensity index value of 0 corresponds to no one being in employment – i.e. a jobless household. A work intensity index value equal to 1 means that all the household members of working age have been employed for the entire year, while an

index value of between 0 and 1 reflects a situation in which either only one household member has worked for the full year, or household members have worked for only part of the year.

Work intensity – alternative measure: The indicator included in the EU–SILC database makes no allowance for part-time working or the number of hours usually worked per week. The proposed alternative measure is similar to the EU–SILC variable, but makes an explicit adjustment for hours worked if they are less than full-time hours (taken to be 35 hours a week or more). It is calculated to cover all members of a household aged 18–64.

Working-age population: Defined as those aged 15–64 in the European Labour Force Survey, but as 16–64 in the EU–SILC which is the main source of data in the report. In some contexts, such as when calculating work intensity, working-age population may be defined differently in order to exclude some of the younger (or older) age groups.

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