Chapter 1 Income Distribution and the Risk of Poverty

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This chapter is divided into three parts. The first part examines the distribution of income and the extent of inequality in income in EU Member States; the second part is concerned with the risk of poverty across the EU, as measured by the proportion of the population with disposable income below 60% of the national median; the third part extends the analysis by considering alternative indicators of the risk of poverty defined at an EU level and the relative number of people in the different Member States who are at risk according to the various indicators.

Income distribution in EU Member States[1]

The first part of this chapter presents comparative estimates of income inequality, based on data from the EU-SILC (Community Statistics on Income and Living Conditions). It draws attention both to the differences between countries of the EU in terms of income inequality and to the fact that the ranking of countries in terms of inequality is sensitive to the choice of measurement. More precisely, it investigates the effect on the inequality ranking of countries of sampling variability and the choice of equivalence scales and the inequality index.

The data and methods of analysis

The analysis is based on data from the 2006 EU-SILC, which covers all Member States (except Malta, for which the 'microdata' necessary for the analysis are not available, and Bulgaria and Romania, which initiated surveys only in 2007). The data relate to the population living in private households in the countries in question at the time of the survey. Those living in collective households and institutions are, therefore, generally excluded. The income concept used in the 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 2005 (except for Ireland, where it is the 12-month period before the date of the interview). The incomes of all household members and other household incomes are aggregated together, and total household disposable income is adjusted for differences in household size and composition by use of an equivalence scale.

[1] Based on the work of Márton Medgyesi and István György Tóth.

Equivalence scales are used in inequality research to adjust household incomes for differences in household size, taking account of economies of scale in consumption and differences in household composition. Unfortunately, equivalence scales cannot easily be estimated by observing household consumption behaviour, and research studies on inequality or poverty invariably adopt some widely used equivalence scale, such as the scales advocated by the OECD. In this analysis, we use the so-called modified OECD, or OECD II, scale, which assigns a value of 1 to the first adult in the household, 0.5 to additional members over the age of 14, and 0.3 to children under 14. The incomes of all the household members and any other household income are summed, and total household disposable income is adjusted for differences in household size and composition by use of the equivalence scale. 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.

Non-positive income values — which result from the way that the income of the self-employed is defined, i.e. essentially in terms of net trading profits — 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. (Specifically, income values at the bottom of the ranking 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.)

Researchers have proposed several indices for inequality measurement.[2] Here countries are ranked according to the Gini index.[3] The Gini index can take values from 0 to 1. The Gini index equals 0 when the distribution of incomes is equal in the society, and thus everyone has the same income. The value of the index rises as inequality gets higher, and equals the maximal value of 1 when all income is in the hands of one single person.

Inequality in the EU

The ranking of countries is presented, first, according to the Gini coefficient of inequality, together with the changes in inequality over the first half of the present decade. This is followed by a sensitivity analysis of the estimates of inequality thus obtained, by comparing the ranking of countries according to the Gini index to rankings obtained with other inequality indices, as well as by changing the equivalence scale.

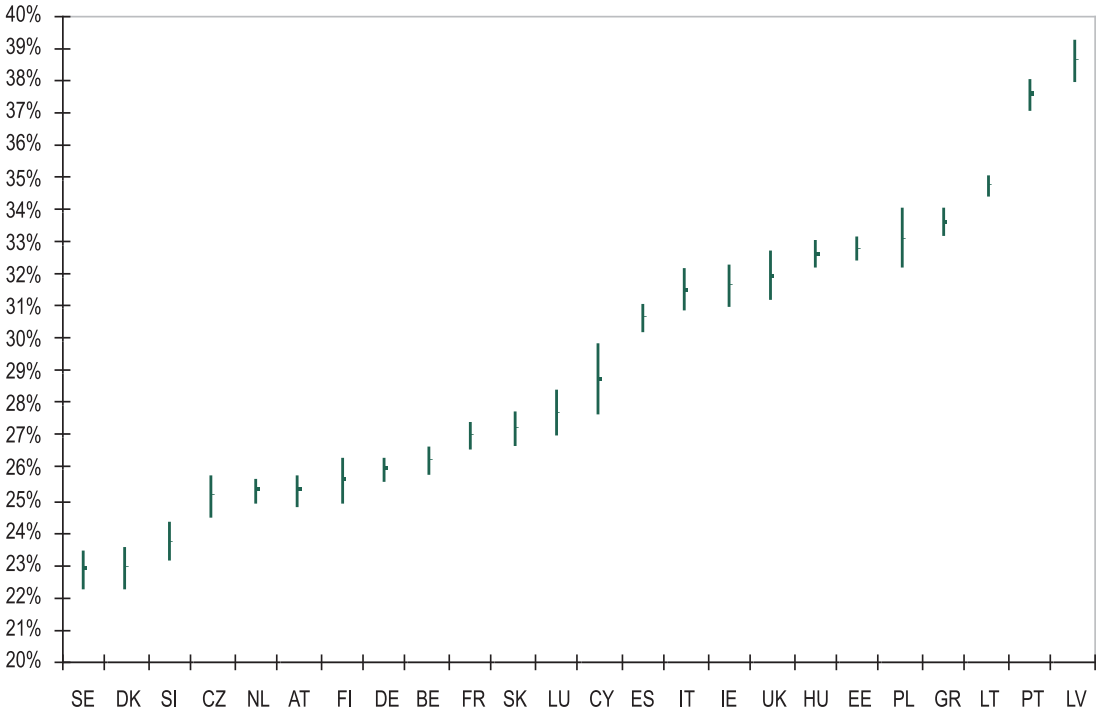
Gini rankings and the change in inequality

Figure 1.1 shows the ranking of countries according to the Gini index, as well as the 95% confidence intervals around the estimates. Latvia and Portugal stand out as the countries with the highest inequality, with a Gini index of 38-39%. Lithuania is the third country in the ranking with a 35% Gini index. Another group of eight countries have Gini indices higher than 30%: Greece, Poland, Estonia and Hungary

[2] For reviews of inequality measurement, see, for example, Cowell (2000).
[3] For a detailed description of the Gini index, see the Glossary.

have Gini indices of 33–34%, while the United Kingdom, Ireland, Italy and Spain are characterised by Gini coefficients of around 31–32%. Thus, among high-inequality countries we find the Baltic states, transition countries from Central and Eastern Europe (Poland and Hungary), the Southern European countries (with the exception of Cyprus) and the Anglo-Saxon countries. It must be noted, however, that, in the case of Hungary, a considerable change can be observed with respect to EU-SILC 2005. In 2004, the Gini index was 6 percentage points lower, and Hungary ranked among the middle-inequality countries, together with Belgium, Germany and France. A change of this magnitude in one year raises questions about data quality.[4]

Figure 1.1: Gini indices and bootstrapped 95% confidence intervals



Source: Based on data from the Eurostat New Cronos database. http://epp.eurostat.ec.europa.eu/
Note: Bootstrap confidence intervals were obtained by 1,000 replications.

At the other extreme, countries with the lowest inequality by this measure are Sweden, Denmark and Slovenia, with Gini indices of below 25%. Between the low- and the high-inequality countries there are a number of countries with Gini indices of above 25% but below 30%. It is difficult to determine the precise ranking of countries within this group, because confidence intervals around our Gini estimates overlap considerably. The Czech Republic, Netherlands and Austria are at the lower end of this group, while Cyprus, Luxembourg and Slovakia are at the upper end.

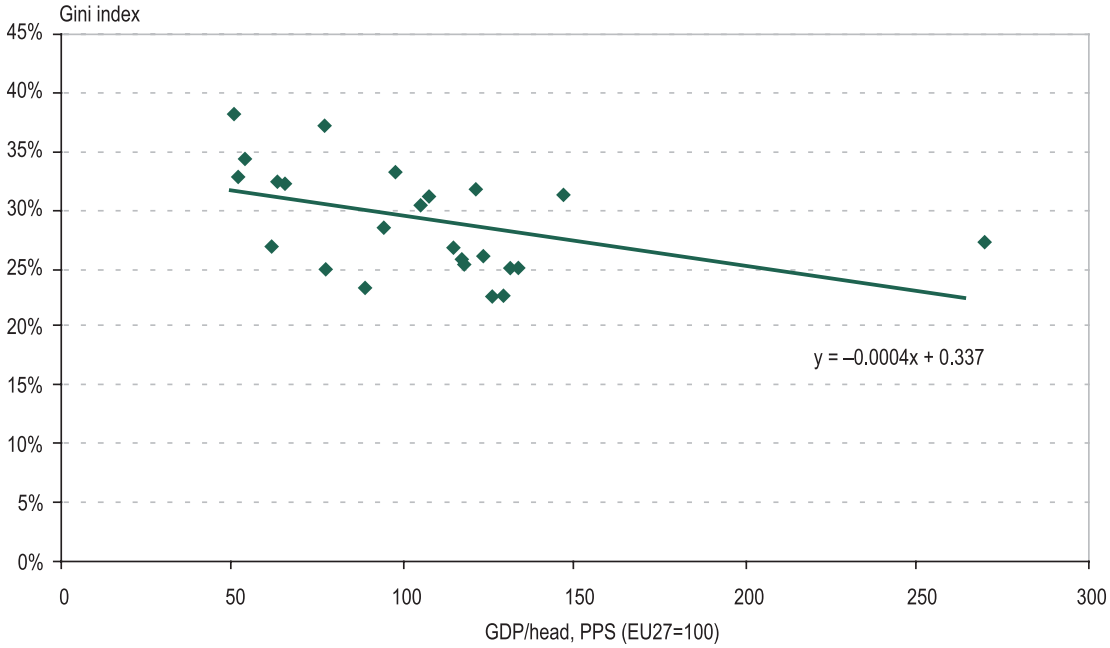
[4] Hungarian national data sources estimate lower inequality than the EU-SILC. According to the TÁRKI Household Monitor survey, the Gini index was 29% in 2005, which would rank the country again among countries with middle-level inequality (Tóth 2008).

Box 1.1: Standard error of estimates

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, which can be done by calculating the standard error of the estimates and taking confidence intervals around this. Such standard errors might be based on asymptotic theory or on simulation methods, such as the bootstrap. Bootstrapping involves empirically estimating the entire sampling distribution. In practice, a certain number of samples with replacement of size equal to the original sample are drawn from the sample. According to the theory of bootstrapping, this variability allows us to estimate the true sampling distribution of a statistic (Mooney and Duvall 1993).

In the present analysis, bootstrap standard errors of the Gini coefficient are examined. The confidence interval estimates are based on 1,000 replications and those reported are also corrected for estimation bias.[5] An examination of the confidence intervals for the Gini coefficient shows that these overlap significantly for many countries, partly because differences in the ratio are relatively small but also because, for some countries, the standard errors for the ratio are large. This is especially true of Poland and Cyprus. Overlapping confidence intervals make it difficult to establish a precise country ranking. The most that is possible is to define groups of countries, which differ from each other, but within which levels are similar.

Figure 1.2: Inequality and national income in 2005



Source: Own calculations based on EU-SILC 2006

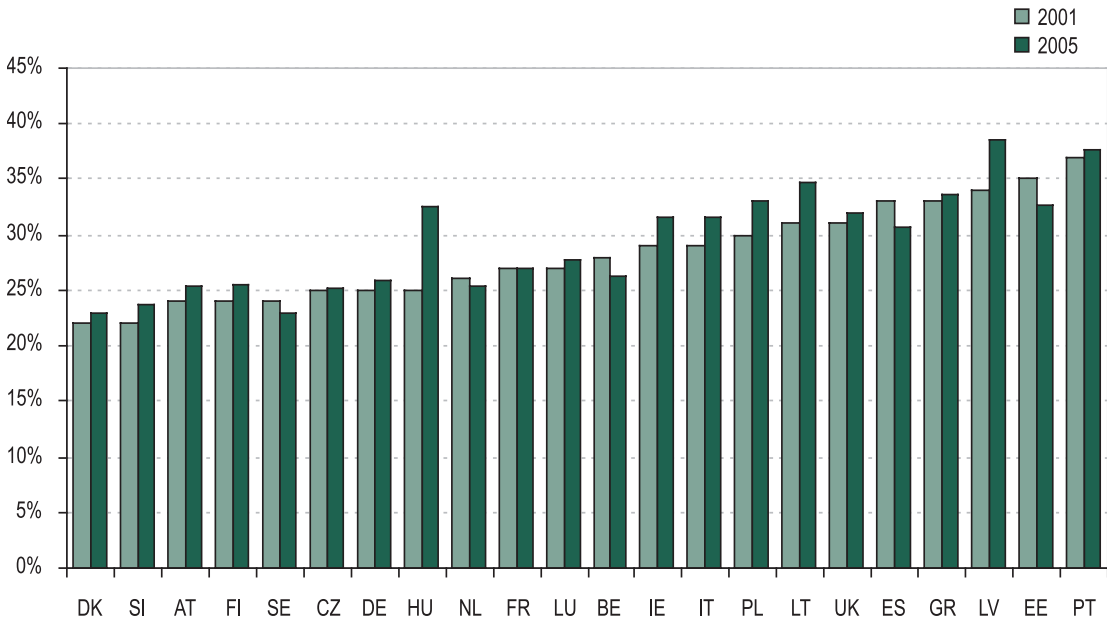
[5] Confidence intervals are reported on the basis of the 'percentile method', which divides the estimated sample distribution into 100ths, with the lower bound being the 2.5th percentile and the higher bound the 97.5th percentile.

As high-inequality countries in Europe are mainly relatively low-income transition countries (the Baltic states and Poland) or Southern European countries (Portugal, Greece), while low-inequality countries (in particular, the Nordic Member States or Luxembourg) tend to have high income levels, it is not surprising that there is a negative relationship between the level of income and inequality (Figure 1.2).

Comparison of the degree of inequality in income distribution in 2005 with that in earlier years is complicated by the change in the source of data used for estimation. While the 2005 estimates are based on the EU-SILC, those for earlier years (for 2000 and earlier) are based, for the EU15 countries, on the European Community Household Panel (ECHP) (which covered a much smaller sample of households) and, for others, on national sources (which vary in terms of sample size). There is no easy way of adjusting for the effect of this change on the estimates. All that can be said is that the larger the difference between the two estimates, the more likely it is that there was a change — either up or down — between the two years compared.

If, therefore, Gini coefficients in 2005 are compared to their values in 2000 (see Figure 1.3), relatively large increases (over 10%) are evident in Latvia, Poland, Lithuania and Hungary[6] in the case of EU-SILC data. In a number of other countries — Ireland, Italy, Slovenia, Finland and Austria — the increase is more modest. Given the change in data source, it is more likely that the degree of inequality increased in the former group of countries than in the latter. In Sweden, Belgium, Estonia, Spain and the Netherlands, on the other hand, the Gini coefficients were lower in 2005 than in 2000, though the difference is relatively modest, so it is uncertain whether inequality declined or not between the two years. In the remaining countries, little change is evident.

Figure 1.3: Gini indices in 2001 and 2005



Source: 2001 Gini indices are from Eurostat New Cronos Database, 2005 Gini indices were calculated from EU-SILC 2006
Note: Countries are ranked according to 2001 Gini indices.

[6] See footnote 4.

Box 1.2: Sensitivity analysis

We investigated the sensitivity of inequality rankings to changes in the methodology of inequality measurement. Most important methodological choices were the choice of inequality index and that of an equivalence scale.

The country ranking according to the Gini index was compared to the ranking according to the following indices: the P90/P10 index (the ratio of the ninetieth to the tenth percentile of the income distribution), the S80/S20 index (ratio of the share in total income of those in the top quintile to those in the bottom quintile), the MLD, the Theil,[7] the squared coefficient of variation (SCV)[8] indices and members of the Atkinson family of inequality indices[9] (with an elasticity parameter of 0.5, 1 and 2). 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 with an inequality aversion parameter ε=2, is very sensitive to low incomes in the distribution (Cowell and Flachaire 2006). In general, it can be expected that indices particularly sensitive to the tails of the distribution would produce rankings less similar to the Gini ranking than other indices.

Results confirm our expectations: the country ranking according to the P90/P10, the S80/S20, the Theil, the MLD and the Atkinson indices with an elasticity parameter of 0.5 and 1 show only minor differences compared to the Gini ranking. If, instead, inequality is measured by the SCV index, the country ranking shows some major differences when compared to that obtained using Gini. It should be borne in mind, however, that the SCV is particularly sensitive to high incomes and is, therefore, affected more by outliers than other measures, so that the results should be interpreted with caution.

The ranking according to the Atkinson index with ε=2 is also different from the Gini ranking — as would be expected, since this index is particularly sensitive to the lower tail of the distribution. The analysis also compared the ranking of countries obtained by using the OECD I and OECD II equivalence scales. Changes in the equivalence scale affect countries to a different extent. Countries differ in terms of typical household size and the number of children per household, as well as in terms of the correlation of household size with household income. The Gini index was generally lower when the OECD II scale was used, but in our case no important effect of changing the equivalence scale on the ranking of countries has been detected.

The ranking of countries according to the Gini index in 2005 shows some minor differences compared to the ranking for 2001.[10] Portugal was the country with the most unequal distribution at the beginning of the decade, but Latvia had moved to the top of the ranking by 2005. The huge increase in inequality in Hungary means,

[7] GE(1)=Theil index = $(1/n)\Sigma_{i=1,\ldots,n}(y_i/\mu)\log(y_i/\mu)$, where y_i are individual incomes, μ is the average income and n is the sample size.

[8] GE(2)=SCV=var(y_i)/μ^2, where notations are the same as above, and *var* stands for variance.

[9] Atkinson index: $A_\varepsilon = 1 - [(1/n)\Sigma_{i=1,\ldots,n}(y_i/\mu)^{1-\varepsilon}]^{1/(1-\varepsilon)}$, if $\varepsilon \geq 0$ and $\varepsilon \neq 1$ and $A_\varepsilon = 1 - \exp[(1/n)\ \Sigma_{i=1,\ldots,n}\ln(y_i/\mu)]$, if $\varepsilon = 1$, where the notations are the same as above, exp(.)=$e^{(.)}$, and ε is the inequality aversion parameter.

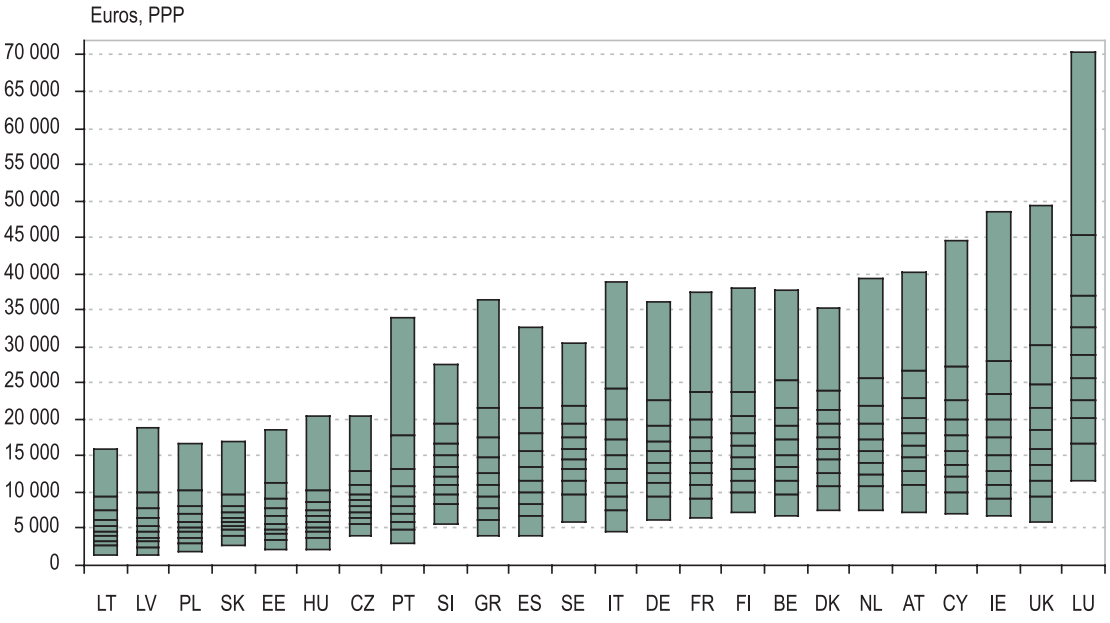
[10] Data for 2000 come from the Eurostat online database:
http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1996,45323734&_dad=portal&_schema=PORTAL&screen=welcomeref&open=/livcon/ilc/ilc_ip/ilc_di&language=en&product=EU_MASTER_living_conditions_welfare&root=EU_MASTER_living_conditions_welfare&scrollto=164
Data for EU15 countries come from the ECHP, data for other countries from national sources. Note that the data are referred to in the Eurostat database as relating to 2001, which is the year of the survey rather than the year to which the income relates.

of course, that Hungary moves up the ranking. In 2001, inequality indices in Poland and Lithuania were lower than in Spain, Greece and Estonia, whereas in 2005 they were higher. The least unequal countries were the same at the beginning and the middle of the decade, while among countries in between the highest and lowest groups, there are a number of smaller differences in the country ranking. Again, however, except among the most unequal countries, it is uncertain how far the ranking actually changes between the two years.

Income distribution in EU countries

The distribution of incomes in individual European Member States is shown in Figure 1.4. The income distribution of the countries is represented by the average income of each income decile. The income values are shown in Euros at purchasing power parity (PPP), i.e. with cross-country price differences taken into consideration, allowing direct comparisons to be made. The countries are arranged in increasing order of average income.

Figure 1.4: The income distributions of the countries of the European Union



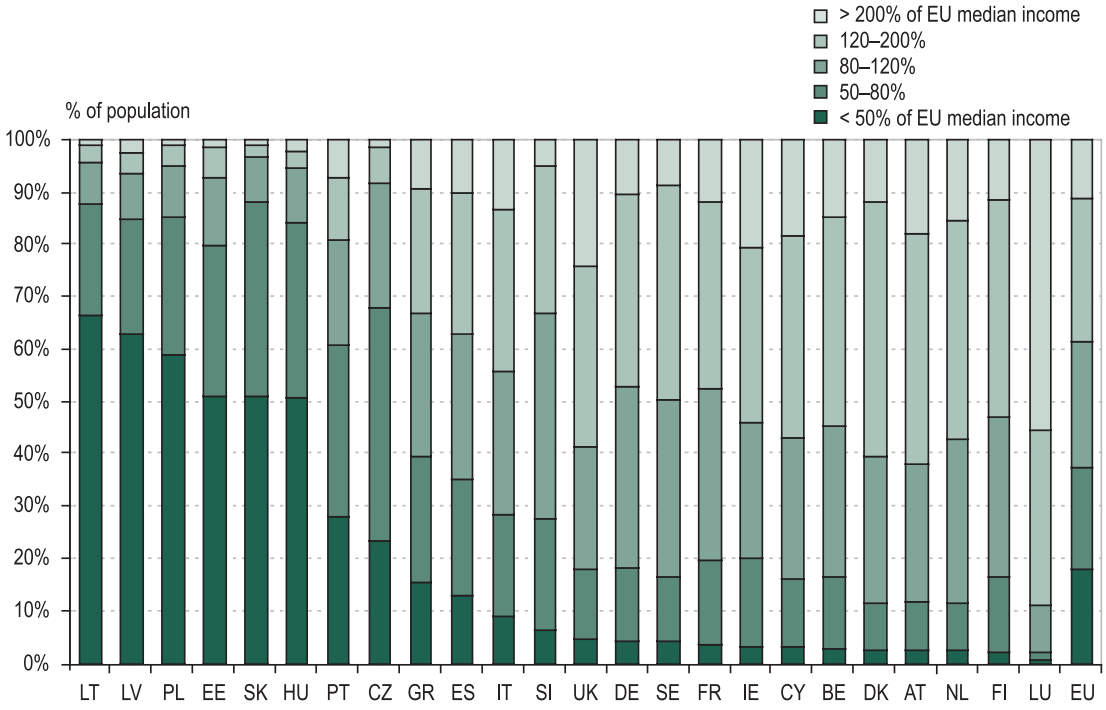
Source: Own calculations based on EU-SILC 2006
Note: The marks dividing the bars show the average incomes of the individual deciles.

As can be seen from Figure 1.4, there are significant differences in income levels between the EU Member States, and a substantial proportion of the income inequality between the citizens of the European Union can be explained by differences in incomes from one country to another. Of the EU countries, Lithuania has the lowest income level, with an average yearly equivalised disposable income of EUR 5,304 per person, while Luxembourg has the highest level (EUR 29,153 a year). The former socialist countries cluster together at the bottom of the scale, with average disposable incomes of under EUR 10,000. As is evident, people in the top decile of

the income distribution in the former socialist countries have an average income that is typical of middle-income earners in most Western European countries (France, Germany). There are three Southern European countries, Portugal, Greece and Spain, where average incomes fall between EUR 10,000 and EUR 15,000, with one of the former socialist countries, Slovenia, being grouped with them. The largest group of European countries has average incomes of between EUR 15,000 and EUR 20,000, and, apart from Luxembourg, the only country where the average level exceeds EUR 20,000 is the UK.

The figure also gives an indication of income inequalities in the various countries. In countries with relatively high inequality, the average income of people in the ninth and tenth deciles (i.e. with income in the top 20% and 10%) is substantially higher than those in the bottom deciles. In Portugal, for instance, the average income of those in the top decile is more than twice that of those in the ninth decile and twelve times that of those in the bottom decile.

Figure 1.5: The distribution of the population among the different categories of the overall European income distribution, by country



Source: Own calculations based on EU-SILC 2006

The overall distribution of income in the EU

Income inequalities and the risk of poverty in the EU can also be measured by taking the Member States together and comparing the income of people measured in purchasing power parity to the median income in the EU as a whole, measured in the same PPP terms (see below for an appraisal of this measure). Figure 1.5 shows the distribution of average equivalent income of people in the different countries, relative to the EU median equivalent income.

A fifth of the EU's population, therefore, have an equivalised income of less than half the EU median, while some 18% have an income of between 50% and 80% of the median, and 23% an income of around the median. At the same time, some 28% of those living in the EU have an income of between 120% and 200% of the median, while 12% have an income of twice the median or more.

With the exception of Slovenia and the Czech Republic, the majority of people in the former socialist countries are in the bottom fifth of the European income distribution. More than 60% of the population of Lithuania and Latvia have incomes of less than half the EU median, and the same is true of 51% of individuals in Hungary. In Luxembourg and Finland, by contrast, the proportion of those with incomes below half the overall European median income is under 2%. At the same time, more than half the people in Luxembourg and a quarter of those in the UK have incomes of more than double the median. The relative number of people with income below alternative poverty thresholds is examined below.

The risk of poverty across the EU[11]

Population at risk of poverty in EU Member States

So far as the distribution of income is concerned, the focus of policy attention across the EU tends to be not on the distribution as a whole but on the bottom end. In particular, the main concern is with the relative number of people in each country with (equivalised[12]) disposable income of below 60% of the national median, which has come to be taken in the EU as the main indicator of the risk of poverty. This varies widely across the EU. This is a relative, rather than an absolute, measure, the implicit assumption being that people assess their situation in relation to others. People considered to be at risk of poverty are those who may not be able to participate in the normal activities of society, or enjoy a standard of living that the great majority takes for granted, because of a lack of income. The income needed for this tends to be related to the prosperity or affluence of the country concerned. Relative definitions of poverty are widely used in Europe, while absolute measures tend to be used more in developing economies, where poverty can be much more serious and widespread. International development institutes, for example, typically use a poverty threshold of a dollar a day, adjusted for differences in price levels — i.e. in purchasing power parity (PPP) terms — to identify those who are poor.[13]

The rate of (relative) poverty varies between 10% and 23% in EU countries, with the proportion of the population with income below the poverty threshold lowest in the Czech Republic and the Netherlands and highest in Latvia (Figure 1.6 and Table A1.1). The proportion is also relatively low in the Nordic countries, Germany,

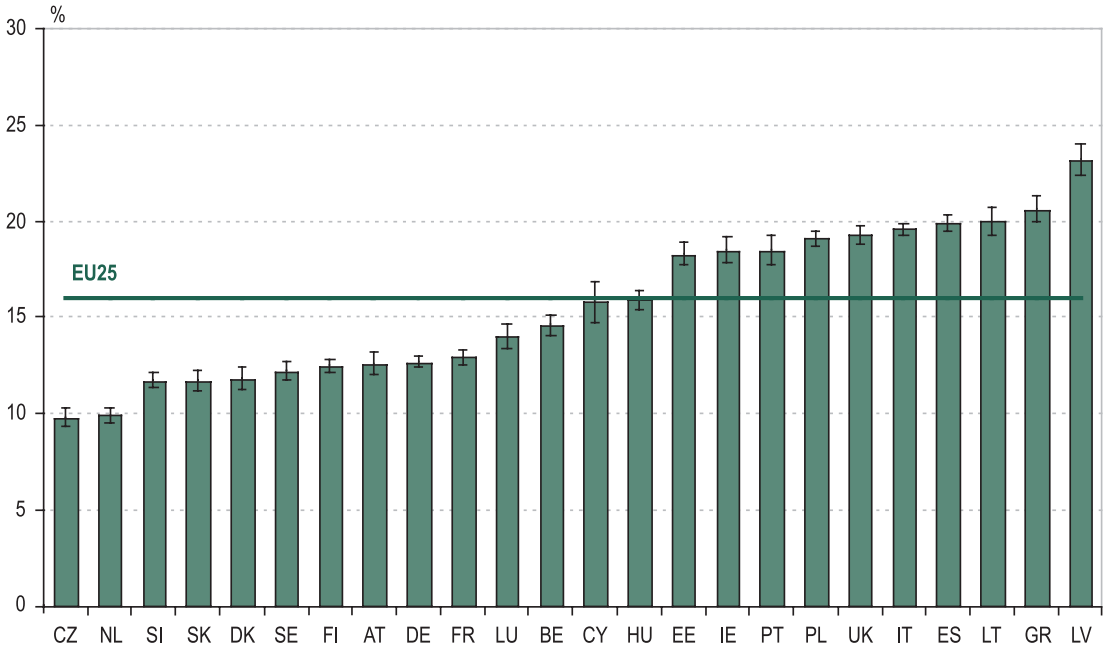
[11] Based on the work of Orsolya Lelkes, assisted by Eszter Zólyomi. We are also grateful to Asghar Zaidi for his contribution to the work of the Observatory during 2006–07.

[12] Calculation of equivalised household size: the first member of the household is weighted by 1, following adults receive a weight of 0.5 each, and children (defined as those aged 13 or less) receive a weight of 0.3 each. For a detailed description of the equivalised disposable income, see the Glossary.

[13] This indicator is included among the UN Millennium Goals, which aim to halve the population with an income of below a dollar a day between 1990 and 2015 (UNDP 2004). Although these absolute measures are repeatedly criticised for not being universally comparable and not being adequate for meeting the minimum number of calories needed to survive, they appear to be useful in focusing development efforts on the most needy (Ravallion 2008).

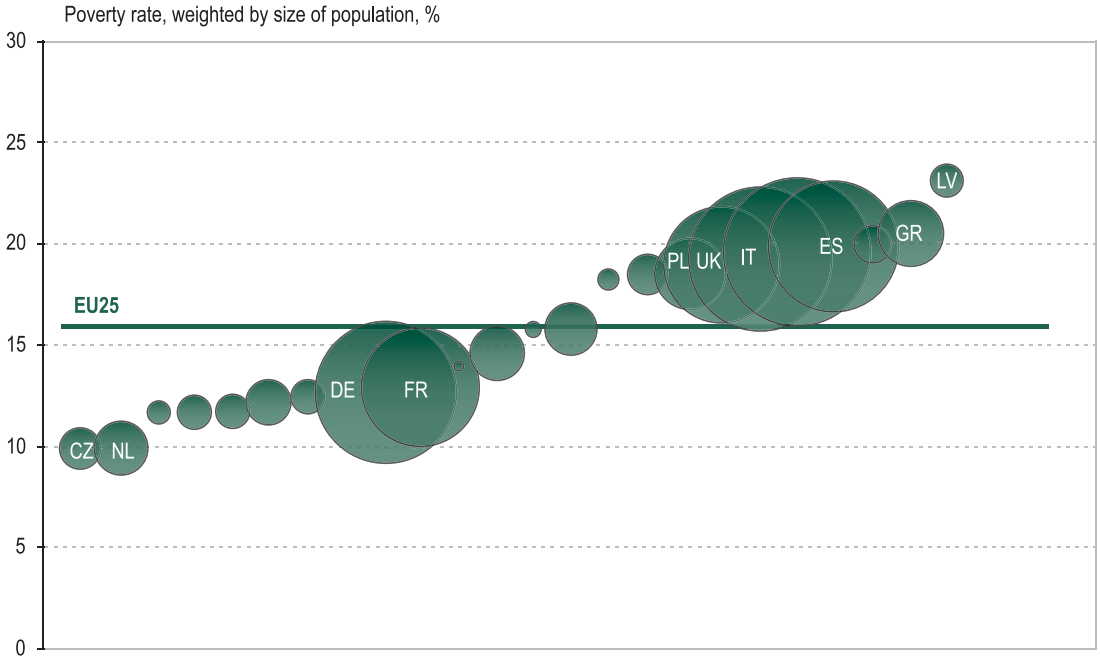
Austria, and a number of the ex-socialist countries, in particular Slovakia and Slovenia, while it is relatively high in Greece, Spain, Italy and Portugal, as well as in the three Baltic states.

Figure 1.6: At-risk-of-poverty rates across European countries (with confidence intervals)



Source: Own calculations based on EU-SILC 2006

Figure 1.7: The size of the poor population and the poverty rate across European countries



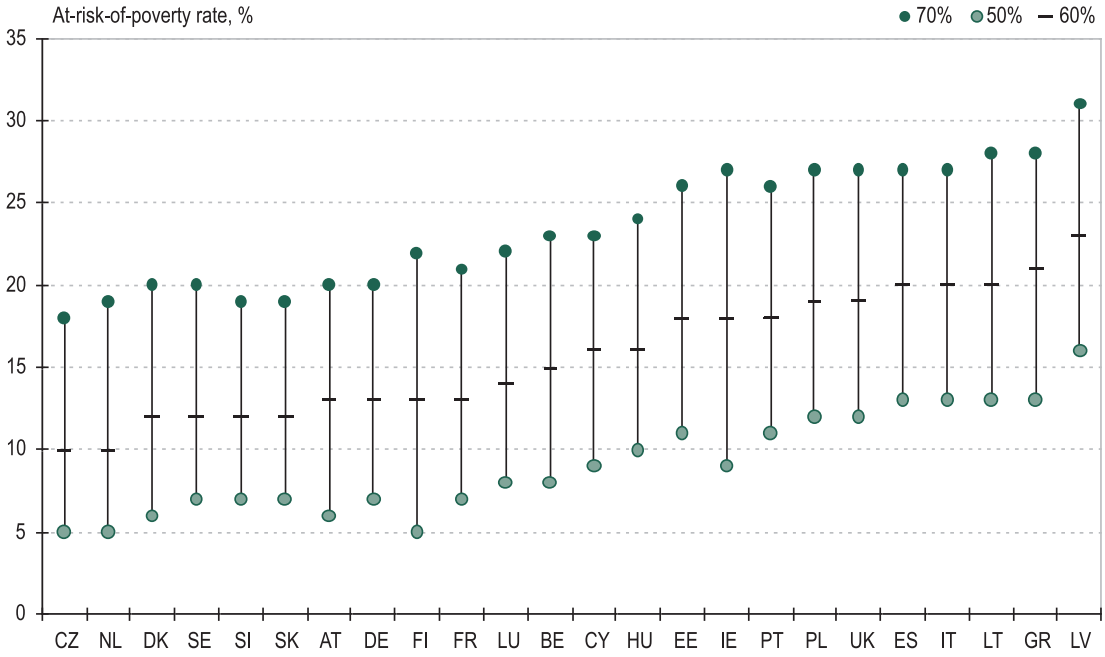
Source: Own calculations based on EU-SILC 2006
Note: Bubbles are showing the size of the poor population.

In practice, once explicit account is taken of the margin of error surrounding these estimates (i.e. by calculating confidence intervals), there is no significant difference in the proportion at risk of poverty between the Czech Republic and the Netherlands, between Slovenia, Slovakia and Denmark, or between Sweden, Finland, Austria, Germany and France, though there is a significant difference between these three groups and between them and the other 14 Member States.

Two-thirds of the total population at risk of poverty in the EU live in the six largest countries: Germany, France, the UK, Italy, Poland and Spain (Figure 1.7). This figure more or less reflects the overall size of their population within the EU. However, while Germany and France are countries with a large number of people at risk of poverty but with lower-than-average risk-of-poverty rates, the four other countries (the UK, Italy, Poland and Spain) have above-average poverty rates, as well as large populations (Germany and Italy have about the same number of people at risk of poverty, though the former has a population size almost 40% larger than the latter).

The sensitivity of the estimates of the proportion of the population at risk of poverty to the choice of poverty threshold can be seen by setting this at 50% and 70% of the national median equivalised disposable income (Figure 1.8). The ranking of most countries does not change substantially if these alternative thresholds are used instead, the main exceptions being Finland, Ireland and, to a lesser extent, Austria; using the 50% threshold improves the ranking of all three, while using the 70% threshold increases their rates relative to other countries, reflecting the comparatively large number of people concentrated around the median.

Figure 1.8: Sensitivity of poverty rates to the threshold chosen: poverty rates at 50%, 60% and 70% of national median equivalised income



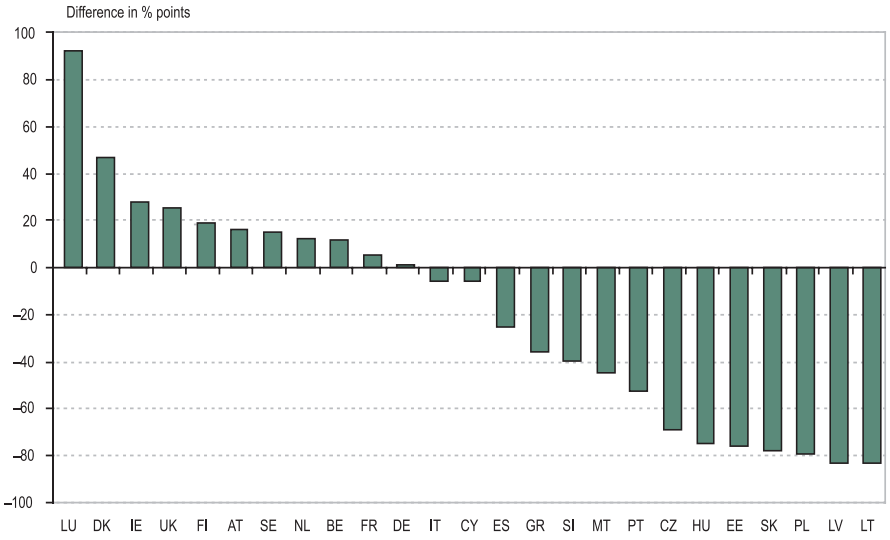
Source: Eurostat New Cronos database (http://epp.eurostat.ec.europa.eu/). Access date: June 2008

Box 1.3: Poverty thresholds across the EU15, and the new Member States

The poverty threshold used here is both relative and country specific. The threshold, however, in terms of purchasing power, differs greatly across countries, the average poverty threshold in the new Member States (NMS) being over 60% lower than the average for the EU15.

Poverty thresholds in Malta and Slovenia in terms of purchasing power parity are close to those in Greece and Portugal, while Cyprus is similar to Italy. The three Baltic states, as well as Hungary, Slovakia and Poland, have poverty thresholds of around 75% or more below the EU15 average.

Poverty thresholds in specific countries compared to EU15 average, 2006



Source: Eurostat New Cronos database 2008
Note: Poverty thresholds for households with two adults and two children younger than 14 years.

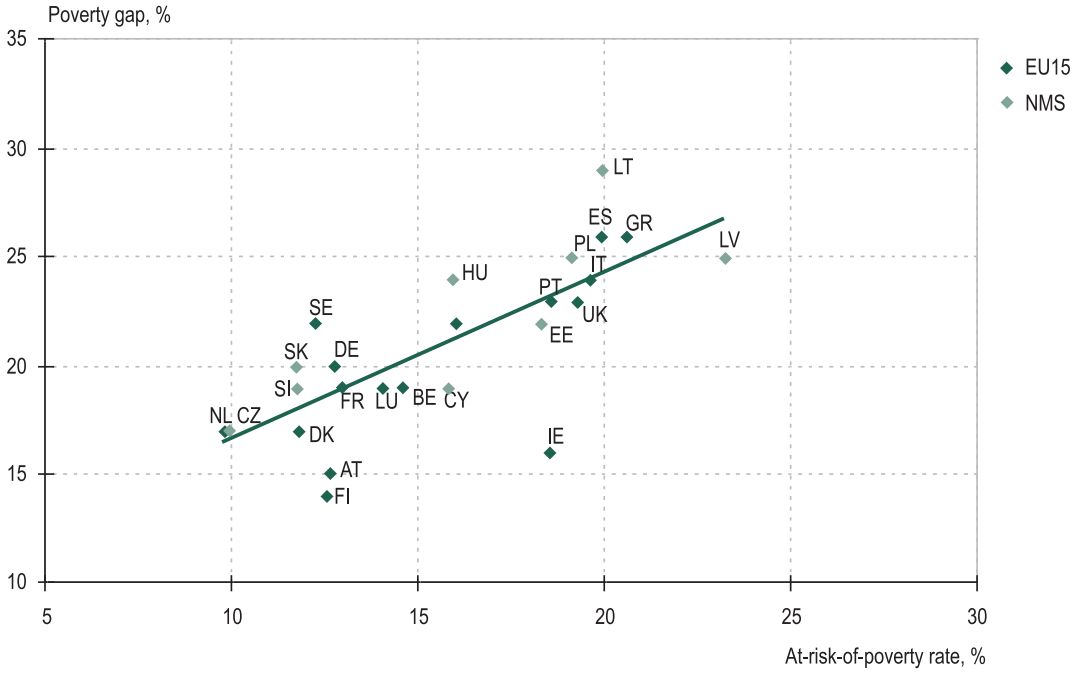
The poverty gap

How low is the income of those at risk of poverty? The risk-of-poverty rates discussed above indicate nothing about the extent to which the income of those concerned falls below the poverty line. The 'poverty gap' (the Laeken indicator termed the 'relative median at-risk-of-poverty gap') is a measure of this. It is defined as the difference between the median income of those below the poverty threshold and the threshold itself, expressed in relation to the threshold. As such, it indicates the scale of transfers which would be necessary to bring the incomes of the poor up to the poverty threshold level, here taken as 60% of median equivalised income.

The incomes of those below the poverty threshold in the EU25 are, on average, 22% lower than this threshold, which itself represents the minimum level of income considered necessary to avoid relative deprivation. The poverty gap between the EU Member States varies from 11% in Finland to 29% in Lithuania (see Figure 1.9). These figures are positively correlated with the at-risk-of-poverty rate (the correlation coefficient is 0.56). There is a tendency, in other words, that the greater is

the proportion of people with income below the poverty line, the lower are the relative incomes of those with income below that line. This suggests a common explanation in the form of the shape of the income distribution curve.

Figure 1.9: Poverty gap and at-risk-of-poverty rates across the European Union, 2005



Source: Own calculations based on EU-SILC 2006

Poverty trends

It is difficult to say much with any certainty about changes in risk-of-poverty rates over time (the data available are shown in Table A1.2 in the Appendix). In Table 1.1, the changes indicated by the data are summarised for two sub-periods, 1995-2001, when the ECHP data were available (but only for the EU15 countries), and the period after 2001. During the period 1995-2001, the data show an increase in the proportion of people at risk of poverty in Ireland and Finland and a decline in Portugal, Greece, Italy, Germany, Austria and Belgium.

In the period following 2001, it is difficult to establish whether changes are significant or pure statistical artefacts due to the break in the series (i.e. the termination of the ECHP, to be replaced 2-3 years later by the EU-SILC after an intervening period when only disparate national sources of data were available). Slovakia is a good case in point, the reported risk-of-poverty rate falling from 21% (the official rate in 2003 and 2004) to 13%, perhaps entirely because of the change in data source. The only countries over this period where there seems to be a clear change are Luxembourg and Finland, where risk-of-poverty rates rose according to the same data source for two consecutive years.

Table 1.1: Trends in poverty in countries with low, medium and high levels of poverty

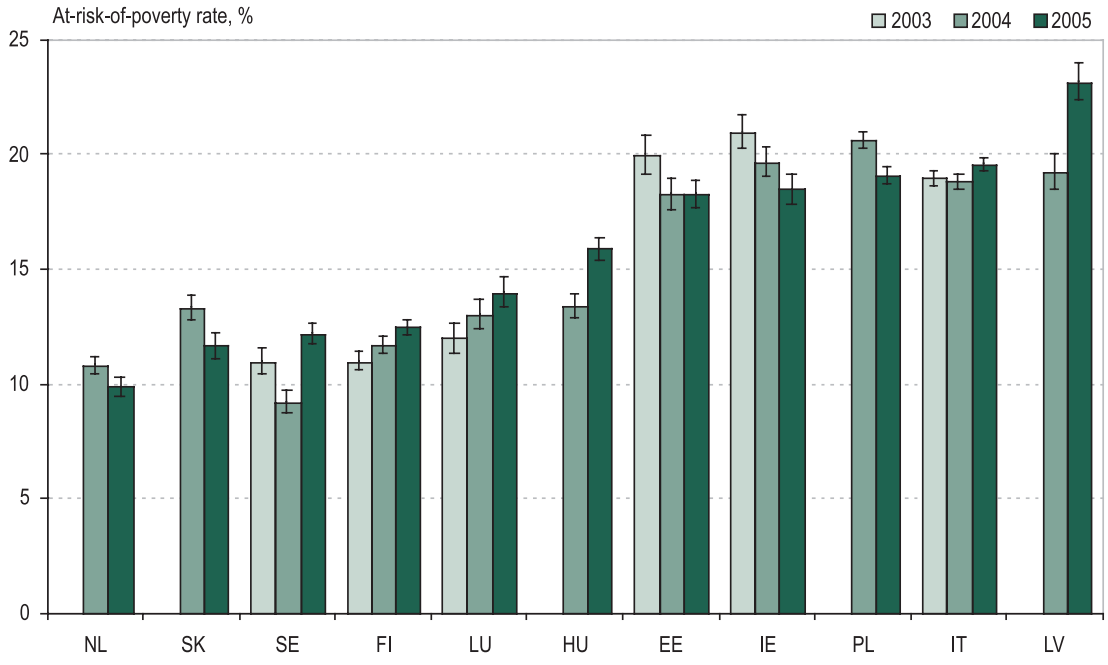
Period: 1995–2001		Poverty trend: Decline	Poverty trend: No significant change or unclear trend	Poverty trend: Increase
Level of poverty	Low	—	DK, LU, NL, SE	FI
	Medium	AT, BE, DE	FR	—
	High	IT, GR, PT	ES, UK	IE

Notes: Low poverty level: poverty rate < 12; medium poverty level: 12 < poverty rate < 18; and high poverty level: poverty rate > 18.
Increasing/declining trend: poverty rates increased (declined) in minimum two consecutive years or by minimum 2%.

Period: 2002–06		Poverty trend: Decline	Poverty trend: No significant change or unclear trend	Poverty trend: Increase
Level of poverty	Low	—	DK	LU, FI CZ,* SL*
	Medium	—	AT, BE, EE, FR, CY, MT, NL, SE	HU
	High	SK*	GR, IE, IT, PT, ES, UK	LV,* LT*

Notes: * indicates a break in the data series (for more details, see Table A1.2 in the Appendix).
Increasing/declining trend: poverty rates increased (declined) in minimum two consecutive years or by minimum 2%.

Figure 1.10: Poverty trends 2003–05: at-risk-of-poverty rates in the three existing waves of the EU-SILC survey (only countries with statistically significant change)



Source: Own calculations based on EU-SILC 2004, 2005 and 2006
Notes: Error bars indicate the confidence interval of the poverty rate estimates. Countries are ranked according to poverty rates in the most recent year.

The EU-SILC provides a consistent set of data, but only for the years 2003-05. Figure 1.10 presents the changes shown between these three annual surveys for a selected group of countries, where the data indicate a statistically significant change over time. This shows that the proportion of people at risk of poverty declined in the Netherlands, Slovakia, Estonia, Ireland and Poland over this period, and increased in Finland, Luxembourg and Latvia. The data for Hungary suggest a major increase, though this is almost certainly due in the main to measurement error (see discussion in the Appendix).

An EU-level indicator of the risk of poverty[14]

The above sections have considered the risk of poverty at Member State level, measuring the latter in relation to average, or median, income per head in the country concerned. This, therefore, focuses on the 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. It is less meaningful, however, as an indicator of those who are most likely to be deprived at the EU level, since it takes no account of differences in the level of median income between Member States. These differences can be substantial. In particular, in 2005, median equivalised disposable income per head in Luxembourg, the country with the highest level in the EU, was almost six times higher than in Lithuania, the country with the lowest level, even when income is measured in purchasing power parity terms to allow for differences in price levels (in euro terms it is almost 12 times higher).

Although, therefore, those with income below 60% of the national median in Lithuania may be most at risk of poverty in that country, it is likely that many of those with income above this level are more at risk of poverty in *an absolute sense* than those people in Luxembourg who had income below 60% of the median there. The same applies to those in the other new Member States, where income levels are much lower than in most of the EU15 countries — and even to those in Portugal or Greece, where income levels are also much lower than in Austria, the UK or other high-income countries.

Moreover, while Member States have prime responsibility for tackling problems of low income and social exclusion, there is also an EU-level interest in these issues, since one of the main objectives of the EU is to raise the standard of living and quality of life for all its citizens, and to promote economic and social cohesion throughout the Union. Progress towards achieving this is primarily assessed at present by 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 the output produced, rather than of income levels as such, which can differ significantly from this, not only because of transfers — and taxes — but because the share of GDP going to households can vary markedly both between countries and over time. Moreover, median income per head, as compared to the mean, is also influenced by the pattern of income distribution — how unequally income is distributed at the top and bottom end of the scale — which can also differ significantly from country to country.

[14] Terry Ward, assisted by Mayya Hristova.

GDP per head, therefore, gives only a very approximate, and potentially misleading, indication of how income levels vary between Member States. Accordingly, there is a strong case for examining household incomes across the EU directly, in order to monitor differences in living standards and to assess how social cohesion at the EU level is changing. This need has been recognised ever since the present indicators used to monitor social exclusion in EU Member States were first developed in 2001.[15]

The concern here is to examine the relative number of people with disposable income below a particular level — both in relation to median income across the EU as a whole (i.e. the income received by someone at the mid-point of the income distribution at EU level), which amounted to around EUR 1,130 a month in 2005, and in absolute terms. Income throughout is measured (as invariably is the case with respect to GDP per head) in purchasing power parity terms to allow for price-level differences and to ensure comparability across countries in terms of the command over resources.

Such a measure is not new — it has been suggested on a number of occasions in the recent past.[16] The EU-SILC makes its calculation more possible, and more meaningful, than before by providing data on household income for all Member States (with the exception at present of Bulgaria and Romania) on a reasonably comparable basis. It, accordingly, makes it possible to identify those whose income falls below a certain level and in which countries they live.

Measuring disposable income across the EU on a comparable basis, however, is not without its problems. Although the application of PPP estimates takes explicit account of price-level differences and allows household income to be compared in different countries in terms of what income is capable of purchasing, this can be done only approximately. In practice, it is difficult to identify an equivalent package of goods and services in different parts of the EU on which prices can be compared, since consumption patterns vary from country to country.

Moreover, the income being measured does not include income in kind, such as food grown for a household's own consumption — which is important in a number of places, especially in the more rural parts of some of the new Member States, and which is likely to affect those on low income in particular — or benefits in kind, such as the free provision of childcare, which is also important in some countries (see Chapter 8).

The limitations of the PPP measure that arise from these considerations, as well as the range of other factors that make it difficult to compare income levels across the EU (such as the varying incidence of both income and benefits in kind), need to be kept in mind when interpreting the results of the analysis presented below.[17]

[15] See the discussion and references in Atkinson *et al.* (2005).

[16] *ibid.*

[17] It ought also to be kept in mind, however, that the same limitations apply to comparisons of GDP per head between different parts of the EU, though such comparisons are frequently made.

People with income below various poverty thresholds in the EU

As indicated above, estimates of the relative number of people with income below a certain level in the EU can be made from the data collected by the EU-SILC in 2006 for disposable household income in 2005, equivalised to adjust for differences in the scale and composition of households. These data, however, do not include Bulgaria and Romania (or indeed Malta). Accordingly, the estimates presented below relate to 24 Member States.

Since it is not clear what the most appropriate income threshold should be when identifying those at risk of poverty, the results of applying a range of possible thresholds are examined below, in order to see how the relative number of people with income below each of these levels and their distribution across countries change as the threshold is varied. It should be emphasised that the thresholds chosen are illustrative only, and no normative significance should be attached to them. In particular, it is not suggested that anyone with income below a given threshold is necessarily living in poverty, still less that there should be a policy at EU level to raise income in all countries above any given threshold.

Indeed, as indicated above, there is a question mark anyway over the extent to which relative levels of income reflect relative levels of purchasing power in countries in which income in kind is important. This applies, in particular, to those people with low monetary income levels in rural areas, especially those in the new Member States, such as Poland or Lithuania, many of whom might be producing most of the food they need. Some indication of the scale of this and how it affects the estimation of the number of people with income below the poverty line is given below.

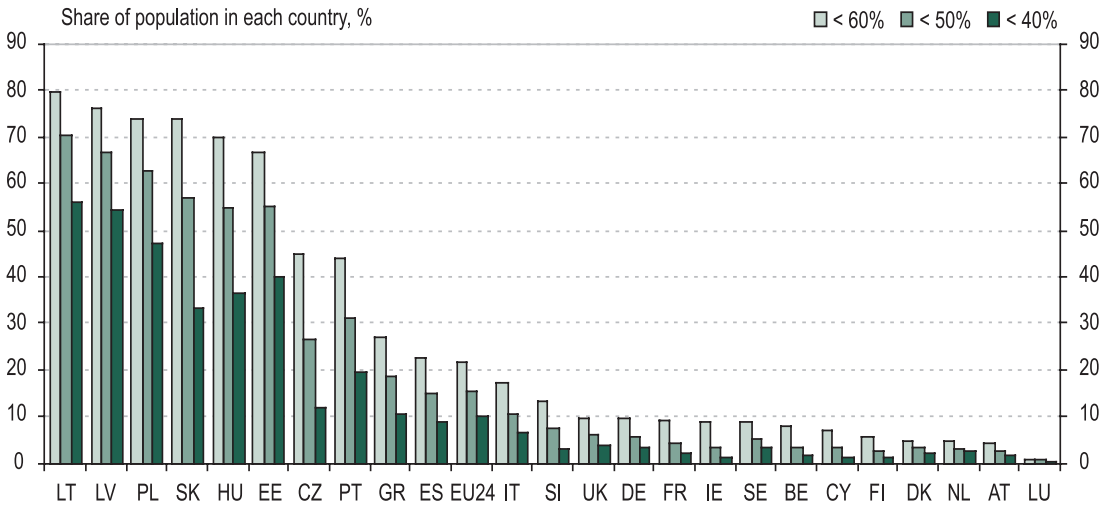
Income below 60%, 50% and 40% of EU median

The starting point is to examine those with income below 60% of the EU median income, which is the conventional threshold taken for measuring the risk of poverty at national level. At the EU level, this threshold amounts to around EUR 680 a month, or more precisely to the purchasing power equivalent of this in the different countries.[18] It is estimated that in 2005 some 22% of the population (or 100 million people) in the EU (i.e. in the 24 Member States excluding the three countries mentioned above) had income below this level (Figure 1.11).[19] This compares with a figure of 16% of people with income below 60% of the median level in the country in which they live, which is the weighted average of the figures for the risk of poverty at national level across the EU (i.e. the indicator conventionally used to measure the risk across the EU as a whole).

[18] Once differences in price levels are taken into account, in terms of what it can purchase, EUR 680 is the equivalent (to take the extremes) of EUR 511 in Denmark and EUR 1,356 in Latvia. In Greece and Portugal, it is equivalent to EUR 821. The levels in the new Member States are in between the Lithuanian and the Greek or Portuguese levels, except in Cyprus and Slovenia, where they are closer to the Greek level.

[19] Income in the EU is the sum of equivalised household disposable income, measured in PPP terms in the 24 Member States covered.

Figure 1.11: Proportion of people with income below 60%, 50% and 40% of the EU median level of disposable income (in PPS), 2005



Source: EU-SILC 2006
Note: In the case of Malta, no data available.

The proportion of people in each Member State with income below this threshold is obviously much larger in the countries with relatively low levels of income per head than in those with higher levels, irrespective of the degree of income dispersion in individual countries. In Latvia, Lithuania, Poland and Slovakia, 74–80% of the population have an income below 60% of the EU median (i.e. only 20–26% of people have an income above this), in Hungary and Estonia the figure is 67–70%, and in the Czech Republic and Portugal, 44–45%. On the other hand, in Cyprus and Slovenia, the figure is below the EU average, at 13.5% and 7%, respectively, which is much less than in Greece (27%), Spain (23%) or Italy (17.5%).

In all other countries, the proportion is 10% or less — close to 10% in the UK (despite the median level of income per head being the third highest in the EU) and Germany, and around 9% in France, Ireland and Sweden.[20] By contrast, in Denmark, the Netherlands and Austria, the figure is 5% or less, and in Luxembourg it is only 1%.

A reduction in the poverty threshold from 60% to 50% of EU median income, of course, reduces the number of people below the threshold, but to varying extents in different countries because of differences between them in the distribution of income at this end of the income scale. In the EU as a whole, the proportion with income below this level is reduced to 15.5% of the total population (or some 71 million people). In Latvia and Lithuania the proportion is reduced, but it is still 67–70% of the population, while in Poland and Slovakia, it is reduced by more, to 63% and 57%, respectively, reflecting the larger concentration of people with income just below the 60% threshold, especially in Slovakia, where the

[20] Although GDP per head in Ireland is the second highest in the EU behind Luxembourg, average household income is much lower than this, because of the substantial scale of net income transferred abroad (taking the form to a large extent, in practice, of retained profits of foreign-owned enterprises), which illustrates the substantial difference that can exist between GDP per head and disposable income per head.

proportion is only slightly higher than in Estonia and Hungary. In the Czech Republic, the proportion is reduced to 27%, a much bigger drop than in Portugal (31%), again reflecting the more equal distribution of income in the former.

In Greece, the proportion is still close to 20% and in Spain it is over 15%, while in Italy it is around 11%, much higher than other EU15 countries, Portugal excepted. In the rest of the EU, except for Slovenia (8%), the figure is 6% or less.

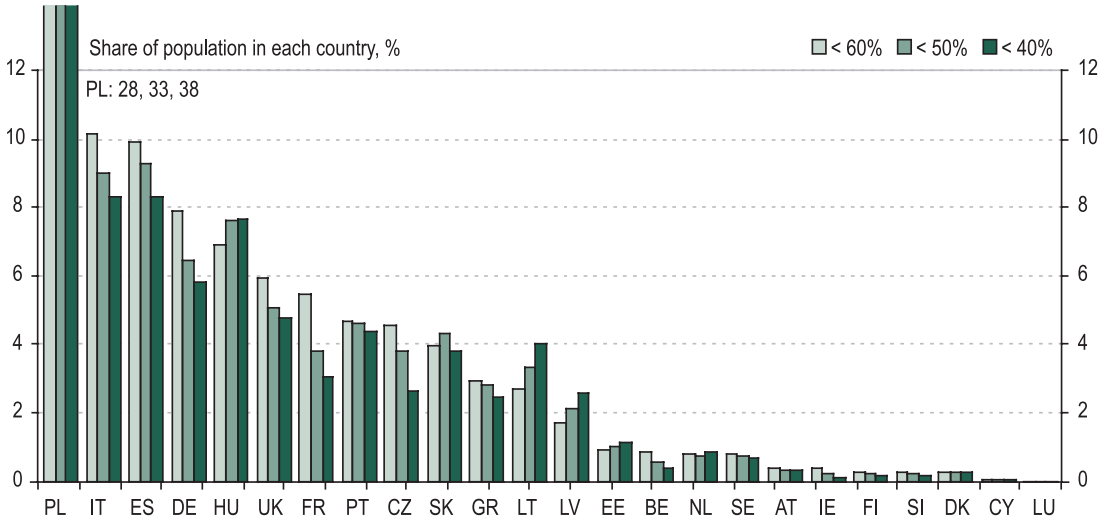
A further reduction of the threshold to 40% of the EU median (or to just over EUR 450 a month) lowers the share of the population with income below this level to just over 10% (or around 47 million people). The proportion in Latvia and Lithuania is still around 55%, reflecting the fact that a threshold of 40% of the EU average is some 7–9% above the national median level of income. In Poland, where a poverty threshold at this level is just 4% below the national, it is reduced by slightly more, to 47%, and in Estonia to 40%, while the reduction is more pronounced in Hungary and, more especially, in Slovakia, to 36.5% and 33.3%, respectively. In both these cases, the threshold amounts to 85% of the national median income.

Elsewhere, the proportion is reduced to below 20% in all countries, though only marginally so in Portugal, where the threshold is just over 60% of the national median, and to below 10% in all apart from Portugal, the Czech Republic (12%) and Greece (11%) and to under 4% in all except for these three countries plus Italy and Spain.

Despite the relatively small proportions of people with income below these thresholds in most of the EU15 countries, it is still the case that, because of their population size, a large share of the total number of people in the EU with incomes at these levels lives in those countries. Just over half (51%) of the people with income below 60% of the EU median, therefore, live in the EU15, some 10% of them each in Spain and Italy, and 8% in Germany. At the same time, 28% live in Poland, though under 10% are in the three Baltic states and Slovakia, where the relative number of people below the EU poverty line is also very high (Figure 1.12).

With the poverty threshold at 50% of EU median income, some 44% of the people with income below this level live in the EU15, 9% in each of Spain and Italy and 6.5% in Germany. In the new Member States, the people concerned are again concentrated in Poland, which accounts for 33% of the total with this level of income. With the poverty threshold at 40% of the EU median, the proportion with income below this level living in the EU15 is reduced to 40%, with almost 8.5% each in Spain and Italy, and, in the new Member States, 38% of the total in Poland.

Figure 1.12: Division of people with income below 60%, 50% and 40% of the EU median level of disposable income (in PPS), 2005



Source: EU-SILC 2006
Note: In the case of Malta, no data available.

Income below EUR 5 per day

The thresholds used to measure the relative number of people with low incomes can also be expressed in absolute rather than relative terms in order to make them more tangible. An income of 40% of the EU median in 2005 represents an average of just under EUR 15 a day, expressed in purchasing power terms rather than actual euros. In Latvia and Lithuania, as indicated above, the income equivalent of this level of purchasing power exceeded the national median, while in Poland — at just over EUR 8 a day — it was only slightly below the national median.

This provides a useful basis for setting a poverty threshold in absolute rather than relative terms. The poverty threshold in Poland, as conventionally defined in terms of 60% of the national median, is, therefore, around EUR 5 day, which, again purely for the sake of illustration, can be set as the EU threshold for examining the relative number of people in EU Member States with income below this level. It should be reiterated that, as in the case of the other thresholds, EUR 5 a day has no normative — and still less policy — significance. Nevertheless, it is an amount that people can relate to relatively easily, even if, in terms of purchasing power, it is worth almost 2.5 times as much in Poland as in Denmark because of the much lower price level in the former than in the latter; and *over* 2.5 times as much in Latvia and Lithuania, where median income levels in PPP terms are the lowest in the EU.

In practice, some 18% of people in Poland had (equivalised) disposable income of below this level — 6.8 million — and around 30% of people in Latvia and Lithuania, while in Estonia, the proportion was around 11%, and in Hungary and Slovakia — 9%. People with income below this level, however, were not confined to the Central Eastern European Member States. In the EU as a whole, around 3% of the population fell into this category, or just over 14 million people (Table 1.2).

Table 1.2: Population with equivalised disposable income of under EUR 5 a day* in EU countries, 2005

Country	Number (000s)	% of country population	% of poor population in the EU	Population with negative or zero income		
				Number (000s)	% in country population	% of population with less than EUR 5
BE	56	0.5	0.4	23.7	0.2	42.1
CZ	171	1.7	1.2	0.2	0.0	0.1
DK	41	0.8	0.3	28.2	0.5	69.5
DE	730	0.9	2.5	361.6	0.4	49.6
EE	145	10.9	1.0	4.2	0.3	2.9
IE	5	0.1	0.0	0.6	0.0	11.0
GR	168	1.6	1.2	58.4	0.5	34.7
ES	692	1.6	4.9	199.7	0.5	28.8
FR	134	0.2	0.9	60.1	0.1	45.0
IT	858	1.5	6.1	360.5	0.6	42.0
CY	1	0.1	0.0	0.0	0.0	6.2
LV	721	32.1	5.1	17.3	0.8	2.4
LT	1,002	29.6	7.1	7.7	0.2	0.8
LU	1	0.2	0.0	0.5	0.1	46.6
HU	875	8.8	6.2	40.0	0.4	4.6
NL	134	0.8	0.9	98.4	0.6	73.3
AT	24	0.3	0.2	0.6	0.0	2.3
PL	6,837	18.1	48.3	35.0	0.1	0.5
PT	228	2.2	1.6	–	–	–
SI	9	0.4	0.1	–	–	–
SK	487	9.0	3.4	2.4	0.0	0.5
FI	8	0.2	0.1	1.6	0.0	19.4
SE	158	1.7	1.1	75.6	0.8	48.0
UK	657	1.1	4.6	303.9	0.5	46.3
EU	**14,143**		**3.1**	**1,680.2**	**0.4**	**11.9**

Note: * Measured in terms of purchasing power standards (PPS).
(–): there is no one with zero income.

Nevertheless, apart from Portugal, where the figure was marginally higher, less than 2% of the population in all Member States (other than those listed above) had income of below EUR 5 a day in 2005. But this still meant that almost 4 million people in EU15 countries have income this low. Just over 1.5 million of these were in Spain and Italy, and 1.4 million in Germany and the UK taken together.

Income in kind

As emphasised at the outset, these figures need to be interpreted with caution. In particular, the limitations of the EU-SILC data on income need to be recognised. In the countries in which the proportion of people with income below EUR 5 a day is relatively large, such as Poland and the Baltic states, some of the people concerned are likely to have a significant amount of income in kind in the form, in particular, of food produced for their consumption. Although the EU-SILC in 2006 contains no details, or estimates, of the scale of such income,[21] national sources in Poland, if a little dated, do provide an indication of its relative importance.

These show that income in kind is estimated to have added only around 3% to average household disposable income in Poland in 2003, and to have reduced the proportion of people at risk of poverty by only 1-2 percentage points.[22] If these estimates are a reasonable reflection of the actual situation in Poland, taking account of income in kind would not change the results of the above analysis markedly.

Zero and negative incomes

Quite apart from the exclusion of income in kind, the figures for the relative number of people with income below EUR 5 a day inevitably involve a degree of uncertainty, as is always the case at the extremes of the income distribution. This uncertainty relates not only to the data themselves — in part because it is difficult to ensure a representative coverage of the households concerned — but also to their interpretation in terms of the purchasing power of the recipients. At the bottom end of the income scale, therefore, there are a number of people recorded as having negative or zero incomes. In 2005, according to the EU-SILC, almost 1.7 million people across the EU fell into this category. This is equivalent to some 0.4% of the total population, but it amounts to 12% of those with income below EUR 5 a day. The question is whether the people concerned really had no income during the year — let alone a negative amount — and, if so, how they managed to survive, since it is obviously the case that, for them, income cannot be an adequate reflection of the purchasing power they had at their disposal.

In practice, the number of people in question varies markedly between Member States — from no one, or virtually no one, being recorded as having zero or negative income in the Czech Republic, Ireland, Cyprus, Luxembourg, Austria, Portugal and Slovenia to over 300,000 in Germany, Italy and the UK, though nowhere does the number exceed 1% of the population. Moreover, with the exception of Denmark and the Netherlands, in all countries less than half of those with income of less than EUR 5 a day are recorded as having zero or negative income.

There are two main reasons, apart from simple reporting errors, why someone should be recorded in the EU-SILC as having zero or negative income. The first is that they are self-employed and have a business which made trading losses in 2005 — or live in the same household as someone who is self-employed with such a business — since the income of the self-employed is defined by the survey as their net income from trading. This, however, does not mean that they had no

[21] It will from 2007 onwards.

[22] These figures are based on estimates made by the Polish Statistical Office in 2005 on the basis of data from national sources.

income to live on, since, in practice, much of their spending on goods and services might be accounted as business costs, while equally it may come out of the income accumulated over previous years. Either way, their income, as recorded by the EU-SILC, reflects neither their purchasing power, nor whether they suffer from deprivation and, accordingly, are at risk of social exclusion.

According to the survey, some 41% of those with zero or negative income in 2005 were either self-employed or lived with someone who was self-employed. This proportion varies markedly across countries, from 85% in the Netherlands, 74% in Greece, 67% in Denmark and 64% in Spain to only 18% in France, 16% in Latvia, 11% in Sweden and just 5% in Lithuania.

The second possible reason is that gross income less taxes paid may indeed be negative because the latter exceeds the former. This may happen because the taxes concerned relate to a previous year, when income was much higher, or because they include taxes on capital gains or some other sum received which is not included in the survey as part of income. Again, the income recorded will neither reflect purchasing power nor necessarily the risk of social exclusion.

To check the purchasing power of the individuals concerned, their responses to the questions in the survey on material deprivation can be examined to see the extent to which they report being unable to afford particular items or having financial difficulties. Such an examination indicates that, while in most cases a larger proportion of them than average for the country in question report being unable to meet unexpected costs, in around half the countries (of those in which the numbers are large enough to break down reliably), the majority report being able to meet such unanticipated costs — in Denmark, France and the UK, around two-thirds, in Belgium and Hungary, over 70%, and in the Netherlands and Sweden, over 90%.

Similarly, in around half the countries, fewer of them report being unable to afford to buy a car than the national average, and less than 10% overall. This suggests that many of the people concerned in a number of countries, though by no means all of them, have significantly positive levels of purchasing power — and certainly a higher level than EUR 5 a day would seem to imply.

Nevertheless, even if all of those recorded as having zero or negative income are excluded, this still leaves almost 3% of the EU population (some 12.5 million people) with income of less than EUR 5 a day. At the same time, many of those people (as in the case of those with zero or negative income) seem from the evidence not to have suffered from material deprivation, so presumably they had access to sources of purchasing power other than the income they received, or that was attributed to them, in 2005, in the form of accumulated wealth, as well as income in kind. Accordingly, the results of the above analysis do not necessarily imply that the people indicated have only EUR 5 a day to live on, though they do suggest that there are large numbers across the EU who are in this situation.

Concluding remarks

The first part of this chapter analysed income inequality in the EU. Among relatively high-inequality countries (Gini coefficient over 30%) we found the Baltic States, transition countries from Central and Eastern Europe (Poland and Hungary), the Southern European countries (with the exception of Cyprus) and the Anglo-Saxon countries. At the other extreme, countries with the lowest inequality (Gini index below 25%) were Sweden, Denmark and Slovenia, while other countries constitute a third group of countries with middle-level inequality.

Within-country inequality is not the only form of income differences in the EU. A substantial proportion of the income inequality between the citizens of the European Union can be explained by differences in incomes from one country to another. There are significant differences in income levels between the EU Member States: average income of the richest country exceeds by six times that of the country with the lowest income level.

According to the income figures for 2005, the proportion of the population at risk of poverty, defined in the conventional way as having a disposable income of less than 60% of the median of the country in which they live, varies between 10% and 23% in EU Member States (or at least in the 24 Member States for which comparable data are available from the EU-SILC). The risk of poverty tends to be low in the Nordic countries, along with Austria, Germany and a number of the ex-socialist countries, including the Czech Republic, Slovakia and Slovenia, while it tends to be relatively high in the Mediterranean countries and the Baltic States. The ranking of countries does not change substantially when alternative poverty thresholds of 50% and 70% of the national median are used instead of 60%, though, of course, the proportion of population at risk does — a point that needs to be kept in mind when interpreting the results of any estimation of the number of people concerned in particular countries. The average income of those below the poverty threshold in the EU25, defined in these terms, was 22% less than the threshold, which itself represents the minimum level of income regarded as being needed to avoid relative deprivation. The figure, however — the poverty gap — varied from 29% in Lithuania to 11% in Finland.

Unfortunately, no satisfactory data exist to assess the change in the proportion of people at risk of poverty over time. The data from the EU-SILC cover only the three years 2003-05 inclusive, and then only for around half the Member States; and the data from earlier surveys (the ECHP in particular) are not really comparable because of the different basis of the surveys. As it happens, the data show a small decline in the proportion at risk of poverty in the Netherlands, Slovakia, Estonia, Ireland and Poland, and a small increase in Finland, Luxembourg and Latvia. For Hungary, the data indicate a substantial increase, though this suggests measurement error — a significant difference in the sample of people surveyed between the two years — rather than a genuine rise.

The chapter also provides estimates of the relative number of people across the EU with disposable income below a certain level, as defined either in absolute terms or in relation to median income at EU level, both adjusted for differences in price levels. This perspective provides an alternative on the risk of poverty in the European Union to that based on national income levels, as is conventionally used. Moreover, it is an approach that is more suitable for assessing differences in

living standards between people in Member States and for monitoring the process by which the poorer parts of the EU catch up in income terms. It complements the approach to monitoring disparities in economic performance through GDP per head.

The measure highlights the fact that, although the problem of low incomes is most serious in many of the new Member States, there are nevertheless significant numbers of people in the richer parts of the Union whose income is well below the median level in the EU and who seem to have relatively little to live on. This remains the case even after allowance is made for those recorded as having zero or negative income, many of whom seem to have purchasing power closer to the median than the bottom end of the scale.

It remains to be decided, however, which of the different measures applied in the analysis is the most suitable for use as a threshold to indicate the relative number of people at risk of poverty, defined at an EU rather than a national level, and to monitor changes in this over time as one possible guide to whether the Treaty objective of social cohesion is coming closer or is receding.

Appendix

Table A1.1: At-risk-of-poverty rates and number of the poor population in EU countries, 2005

Country	At-risk-of-poverty rates (%)	At-risk-of-poverty rates (%) — confidence intervals		Number of poor population (000s)	Sample size
		Lower bound	Higher bound		
AT	12.6	12.0	13.1	1,027	14,883
BE	14.6	14.1	15.2	1,523	14,292
CY	15.8	16.9	18.3	120	11,069
CZ	9.8	9.4	10.2	996	17,830
DE	12.7	12.4	13.1	10,371	31,717
DK	11.8	11.2	12.3	628	14,549
EE	18.3	17.7	18.9	243	15,741
ES	19.9	19.5	20.3	8,536	34,183
FI	12.5	12.2	12.9	650	28,039
FR	12.9	12.5	13.3	7,611	24,726
GR	20.6	19.9	21.2	2,203	15,112
HU	15.9	15.4	16.4	1,581	19,902
IE	18.5	17.8	19.1	786	14,634
IT	19.6	19.3	20.0	11,549	54,512
LT	20.0	19.3	20.7	678	12,134
LU	14.0	13.3	14.7	63	10,242
LV	23.2	22.4	24.0	516	10,892
NL	9.9	9.5	10.3	1,606	23,092
PL	19.1	18.7	19.5	7,052	44,157
PT	18.5	17.8	19.1	1,947	12,042
SE	12.2	11.7	12.7	1,114	17,043
SI	11.7	11.3	12.0	234	31,276
SK	11.7	11.1	12.2	628	15,138
UK	19.3	18.8	19.8	10,997	22,542

Source: Own calculations based on EU-SILC 2006

Table A1.2: Trends in poverty risk of the total population, using 60% of median income as the poverty line

	Survey year											
Country	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
BE	16	15	14	14	13	13	13	:	15[1]	15	15	15
CZ	:	:	:	:	:	:	8	:	8	:	10[1]	10
DK	10	:	10	:	10	:	10	:	12[1]	11	12	12
DE	15	14	12	11	11	10	11	15	15	16	12[1]	13
EE	:	:	:	:	:	18	18	18	18		18	18
IE	19	19	19	19	19	20	21	:	20[1]	21	20	19
GR	22	21	21	21	21	20	20	:	21[1]	20	20	21
ES	19	18	20	18	19	18	19	19[1]	19	20[1]	20	20
FR	15	15	15	15	15	16	13[1]	12	12	14[1]	13	13
IT	20	20	19	18	18	18	19	:	:	19[1]	19	20
CY	:	:	:	:	:	:	:	:	15	:	16[1]	16
LV	:	:	:	:	:	16	:	16	16	:	19[1]	23
LT	:	:	:	:	:	17	17	17	15	:	21[1]	20
LU	12	11	11	12	13	12	12	:	10[1]	11	13	14
HU	:	:	:	:	:	11	11	10	12	:	13[1]	16
MT	:	:	:	:	:	15	:	:	:	:	15[1]	14
NL	11	12	10	10	11	11	11[1]	11	12	:	11[1]	10
AT	13	14	13	13	12	12	12	:	13[1]	13	12	13
PL	:	:	:	:	:	16	16	17	17	:	21[1]	19
PT	23	21	22	21	21	21	20	20	19	21[1]	19	19
SI	:	:	:	:	:	11	11	10	10	:	12[1]	12
SK	:	:	:	:	:	:	:	:	21	21	13[1]	12
FI	:	8	8	9	11	11	11[1]	11	11	11[1]	12	13
SE	:	:	8	:	8	:	9	11	:	11[1]	9	12
UK	20	18	18	19	19	19	18[1]	18	18	:	19[1]	19

Source: Eurostat New Cronos database
Notes: In the first row, the year refers to the survey year.
[1]Break in series; in the majority of EU15 countries the results reported under 2001 come from the last wave of the ECHP.

Potential data problems in selected countries — at-risk-of-poverty rates in the EU-SILC and national data sources

Germany

The proportion of the population at risk of poverty is about 5 percentage points lower when calculated from the EU-SILC data than when calculated from the German Socio-Economic Panel (SOEP) (Frick and Grabka 2008) (Table A1.3). Comparing the sample populations of the EU-SILC with those of the microcensus and the SOEP, Hauser (2008) finds significant differences in the coverage of poorly integrated foreigners, small children (who are under-represented in the EU-SILC) and the elderly and employed (who are over-represented). He concludes that 'this causes serious distortions to the Laeken indicators calculated' (p. 2).

Table A1.3: At-risk-of-poverty rates in Germany based on two alternative surveys (%)

	2003	2004	2005	2006
SOEP	16.3	16.7	18.0	16.5
EU-SILC	–	12.0	12.7	n.a.
Difference (in percentage points)		–4.7	–5.3	

Source: EU-SILC: own calculations; SOEP: Frick and Grabka (2008)

Hungary

The proportion of people estimated to be at risk of poverty in 2005 from the EU-SILC data is 16%, which is much more than in the previous year (13%) or than according to other data sources (13% in 2006) (see Table A1.4). According to the TÁRKI Household Monitor, the risk-of-poverty rate remained much the same between 2005 and 2007 (around 12–13%). Moreover, the most recent EU-SILC data for 2007 (currently available only in the national statistical office) also show a rate of around 13%. Accordingly, the evidence suggests that there is a problem with the 2006 data. There is no information available on data quality as regards the EU-SILC for 2006. The EU-SILC for 2005, however, had a response rate of only 51%, which suggests that there might be problems as regards its representativeness. In addition, there seems to have been under-reporting of income compared to the two alternative official surveys by the Central Statistical Office, with incomes at the bottom being 13–14 percentage points lower than in the microcensus and the Household Budget Survey.

Table A1.4: At-risk-of-poverty rates in Hungary based on two alternative surveys (%)

	2004	2005	2006
TÁRKI Monitor	12.9	–	13.5
TÁRKI Monitor (confidence intervals at 95% level)	11.2–12.9	–	11.7–13.5
EU-SILC	13.4	15.9	12.6

Source: TÁRKI Monitor: Szivós (2008, p. 99); EU-SILC: own calculations, except for the income year of 2006: KSH (2008, Table 1)