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# NETWORK ON SOCIAL INCLUSION AND INCOME DISTRIBUTION FINAL REPORT

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## EXECUTIVE SUMMARY

The focus of the first report of the network set up to monitor developments in income distribution and social inclusion is on income inequality and the incidence of low incomes across the EU and, in particular, on the relative numbers at risk of poverty, as conventionally defined as those with income below 60% of the median in each country. Its concern is to use all available data, or at least those available at EU level, to examine differences between countries in the rate of relative poverty, as defined, including the new Member States which entered the EU in 2004 and the candidate countries for entry into the Union (ie Bulgaria and Romania, which are at present involved in accession negotiations, together with Croatia and Turkey) and how this is tending to change. A parallel concern is to examine the factors underlying low incomes and the vulnerability of particular sections of the population, most especially children and older people aged 65 and over, to the risk of poverty, in order to provide a guide to policy aimed at tackling relative poverty and exclusion.

Although the focus is on income, and more specifically, on the income of households, a number of other aspects which affect the living standards, or the command over resources, over and above monetary income are also considered. These are housing costs, or imputed rent, and non-monetary benefits, in the form especially of social services of one kind or another, both of which have potentially important effects on the relative position of households in terms of the costs which they need to meet out of income. Since the scale of these effects vary both between countries and between households with differing levels of income, the, accordingly, influence the interpretation of the conclusions reached on the basis of examining relative incomes.

The main issues covered in the report and the conclusion reached, especially those which are relevant for policy, are summarised below.

### **Differences and trends in poverty rates across the EU**

The first part of the report presents an overview of differences in income inequality across the EU and the other countries covered and the changes which have occurred over recent years, insofar as these can be identified from the data available. It also examines differences in the structure of households, which affects the adequacy of income and living standards, and the way that this is tending to change over time.

The data available, which, in addition to the European Community Household Panel (ECHP), come from a variety of non-harmonised national sources, limit the analysis which is possible, especially for the new Member States and candidate countries, and adds a significant element of uncertainty over the results, particularly as regards changes over time. The conclusions reached, therefore, have in many cases to remain tentative until

more comparable and timely data become available from the new EU Survey of Income and Living Conditions (SILC).

The data suggest that the relative poverty, defined as above, is slightly lower, on average, in the new Member States than in the EU-15 so that the proportion at risk of poverty is marginally lower in the enlarged EU than it was beforehand. According to the latest data which are reasonably comparable (which are for 2001), therefore, some 15% of the population in the EU25 have an income lower than the poverty threshold in the country in which they live. At the same time, there are enormous differences between the new Member States and the EU15 countries in the level of the threshold, which, on average, in the former is only 35% of the latter even if account is taken of differences in price levels between the two (ie if income is measured in purchasing power parity terms).

There are equally marked differences in the population below the poverty line across the enlarged EU, the proportion ranging from under 10% in the Czech Republic and Slovenia and only slightly above 10% in Finland and Sweden to over 20% in Greece, Ireland and Slovakia. It is even higher in Turkey at around 25%.

In the EU-15 countries, where it is possible to identify changes over time from the ECHP, there seems to have been some convergence in poverty rates between 1995 and 2000 as a result largely of some increase in the Member States, the Nordic countries especially, where the rate had been lowest at the beginning of the period.

For the majority of those with income below the poverty line, low income appears to be a temporary phenomenon but a long-term one, in the sense that they had poverty level incomes for at least three years out of four over this period. Moreover persistently high poverty rates was an especially marked feature of countries where the poverty rate itself was high.

The proportion of children living in households with income below the poverty line varies even more widely between countries than the overall poverty rate, ranging from 7% in Slovenia and 9% in Denmark to 30% in Slovakia. In Turkey, it is around 32%. Slovenia apart, the poverty rate for children tends to be slightly higher than average relative to the overall rate in the new Member States than in the EU15. The rate seems to be particularly high within countries in lone parent households and in those with three children or more, as well as in households where mothers are not in employment.

Moreover, while, according to the ECHP, there was a modest decline in the proportion of children with income below the poverty line in the EU15 as a whole between 1995 and 2001, the proportion appears to have increased in the few new Member States for which data are available (Poland, Hungary and the Czech Republic). In the EU15 generally, the increased age at which people tend to have children and, therefore, their higher level of income, seems to have moderated the risk of child poverty as well as a generally declining rates of unemployment, though in the UK, increased social transfers to families have been important.

The number of older people of 65 and over with income below the poverty line varies across the EU by more still, from 4% in the Czech Republic and under 10% in France, Hungary and Poland to 30% in Spain, over 40% in Ireland and over 50% in Cyprus. The risk of poverty in old-age seems, in general, to be less in the new Member States than in the EU15, reflecting perhaps more of those in retirement living in households with people in work as well as relative pension levels. Experience varied over the second half of the 1990s, the poverty rate among the elderly rising in Ireland and Finland and declining in Germany and the UK and Germany.

## **Trends in the structure of households**

There are significant differences in the structure of households across the EU which has implications not only for the proportion of population with income below the poverty line but also for social policy. The relative number living alone is much larger in the northern countries of the EU-15 than in the southern countries or in the new Member States and candidate countries. Many of those living alone in all countries are people in retirement aged 65 and over.

The relative number of people living alone has increased over the long-term throughout the EU15 and has been accompanied by an increase in lone parents in most of the northern Member States. This increase was accompanied, in particular, by a decline in couples with children. The same pattern of change, over a shorter period, is evident in the Czech Republic, Slovakia, Hungary and Slovenia though not in Estonia, Cyprus or Malta. There are wide differences across the EU in the household circumstances of those aged 65 and over. In most northern EU-15 countries, the great majority of these live alone or as a couple. Very few live in households with other people and, accordingly, with access to other sources of income, employment income, in particular. This contrasts with the position in the southern countries and new Member States, where a significant number of people in this age group live in households where there is potential income support from other members. In most of the EU, however, the proportion of elderly people living in such households has tended to decline.

## **The accuracy of indicators of poverty**

Any interpretation of the indicators of inequality and relative poverty rates needs to take account of the margins of error applying to the data on which they are based which invariably come from surveys of a small sample of the population. To assess the scale of relative numbers with income below the poverty line and to compare these across countries or to monitor changes in them over time, in order, for example, to decide policy action or to evaluate the policy measures taken, it is essential to take explicit account of the uncertainty surrounding the estimates.

Analysis of these margins of uncertainty indicates, for example, that EU countries cannot be ranked unambiguously in terms of inequality or the risk of poverty when sampling errors are allowed for. The most that is possible is to identify country groups within which levels are similar but which differ significantly from other groups. Denmark, Sweden,

Finland, Austria and Germany, therefore, form a single group in which the degree of inequality is much the same and relatively low, Spain, Greece and Portugal, another group at the other end of the scale where inequality is relatively high. The problem is even more serious for subgroups of the population, such as children or elderly people in retirement, for whom, because of the smaller sample size, the margin or error can be substantially greater.

Similar considerations apply to estimating changes in indicators of poverty or inequality over time, implying that small year to year movements need to be treated with caution and, in many cases are unlikely to signify that poverty rates have risen or fallen much. This applies to poverty rates for children and older people which are a particular focus of policy attention.

### **Employment as protection against poverty**

People in paid employment tend to have the lowest poverty rates in all Member States. By contrast, the relative numbers with income below the poverty line are invariably highest among the unemployed, with Ireland, the UK, Malta and Estonia having the highest rates, reflecting the relatively low levels of unemployment benefit payable to those out of work. In Italy and the Netherlands, the poverty rate among the unemployed has risen markedly since the mid-1990s, reflecting the effect not only of policy but also perhaps of the changing composition of the unemployed.

Accordingly, the risk of poverty for households is very much related to the number of household members who are in work and whether they work part-time or full-time. The differences are especially marked for household with and without children. In nearly all EU15 Member States, half or more jobless households with children fall below the poverty line. By contrast, for households with members fully employed, the poverty rate is lower than the national level and differences due to the presence of children are negligible.

The relative number of those in work with income below the poverty line – ie the working poor – differs across the EU in terms of the age groups most affected. In southern Member States, poverty is more concentrated among older workers, in part reflecting the large numbers employed in agriculture, in the rest of the EU15, among younger workers, a larger proportion of whom tend to live outside the family home and, therefore, have less access to other income apart from their own.

Poverty rates are especially high, as might be expected, among workers with low levels of education (compulsory schooling at most), particularly in the South of Europe, among those working part-time and among workers with temporary contracts of employment.

### **The relative importance of jobless households**

The relative number of jobless households in Member States seems to be as much related to the structure of households as to the rate of unemployment in the country concerned and, indirectly, to the extent of social support for those out of work which enables people to

live in households without access to income from employment. Both Belgium and the UK, in particular, have more jobless households than would seem to be implied by their level of unemployment and southern countries less. The proportion of jobless households is, on average, less in the new Member States than in the EU-15 countries despite unemployment being higher, though not in Poland and Slovakia, where unemployment is particularly high.

By the same token, changes in unemployment are not necessarily reflected in counterpart increases or reductions in the number of jobless households. The general fall in unemployment since the mid-1990s in the EU15 has not always, therefore, been accompanied by a corresponding decline in jobless households, the UK being a case in point. This has implications for social policy, the need for which is, accordingly, not necessarily related to the number of people out of work and may not decline as unemployment falls, at least in proportion.

Children in most countries are less likely to live in jobless households than people generally, though the reverse is the case in the UK and Ireland and in a number of the new Member States.

Although very few young people aged 16–24 live in jobless households without access to income from employment in all parts of the EU, the proportion is largest in northern EU-15 countries and smallest in the south of the EU and in the new Member States, partly reflecting the differential availability of social benefits.

The great majority of elderly people of 65 and over live in jobless households in northern EU-15 countries, whereas as in the south of the EU and in the new Member States, the proportion is much lower, implying that many more have access to income from employment and, potentially at least, less reliant on state support. In nearly all Member States right across the EU, however, the relative number of people in this age group living in jobless households has tended to increase over time.

Lone parents, most of whom are women, are less likely to be in employment than others virtually throughout the EU. This is particularly the case in Germany, the Netherlands and above all the UK, reflecting the lack of childcare support. Although still relatively small, the number of lone mothers in work has, however, increased significantly in the last two countries over the past decade.

## **Factors contributing to the risk of poverty**

There is a negative relationship between GDP per head levels and the degree of income inequality across households across the EU and candidate countries. The higher the higher the level of GDP per head, therefore, the lower the degree of inequality. The relationship seems to hold in both the EU15 countries and the new Member States, whether examined together or separately.

High GDP per head, however, is far from being a sufficient condition for achieving a low risk of poverty, though, other things being equal, it tends, on average, to be associated with a relatively small proportion of the population below the poverty line. Four groups of country can be distinguished in this regard: countries (including the Nordic Member States, Austria and France) with high GDP per head and a relatively low poverty rate; countries with high GDP per head and a high poverty rate (including the UK and Ireland as well as Italy); countries with a low GDP per head and a low rate of poverty (including the Czech Republic, and Slovenia); and countries with low GDP per head and a high poverty rate (including Estonia, Latvia and Slovakia). Among the candidate countries, Turkey has both the lowest level of GDP per head and by far the highest rate of poverty of all the countries considered in the report.

The degree of openness of the economy does not seem to affect the poverty rate one way or the other. This finding, however, based on analysing the relationship across countries at one point in time (ie on cross-sectional analysis), does not mean that an increase in openness in a given country would leave the relative number below the poverty line unaffected. It cannot be concluded, therefore, that, for example, a further opening of labour and capital markets in the new Member States would not lead to an increase in income inequality, or that increased globalisation would not affect the risk of poverty across the EU in general. Examination of this issue requires (time series) data for a run of years, which at present are not available.

The relative number of people of working age in employment, however, does seem to affect the poverty rate, in the sense of tending to reduce it, though the relationship is not particularly strong. Again, because this is based on cross-sectional analysis, it does not necessarily signify that an increase in employment in an individual country would reduce the risk of poverty, though *a priori* reasoning suggests that it is plausible that it would. Nevertheless, verification of this across the EU has to await the necessary time series data becoming available.

The data available also indicates that, other things being equal, higher expenditure on social protection relative to GDP is associated with lower rates of poverty, though in the EU15, it does not seem necessarily to lead to a lower degree of inequality.

Extending the analysis to examining poverty rates among children, on the one hand, and older people aged 65 and over, on the other, shows, first, that a large number of children with income below the poverty line tends to be linked to a high overall rate of poverty, but, secondly, this is not the case for older people. Moreover, it also shows that although a high level of social expenditure seems to reduce relative poverty among children, it does not tend to do so in respect of older people, which raises a question over the nature of the pension system in some Member States and the way that it distributes pensions among those in retirement.

A major conclusion from the analysis is the need for data for a run of years to explore the way that changes in GDP per head, employment, economic openness, social expenditure and so on affect the relative numbers with income below the poverty line across the EU so

as to provide a better guide for policy. The availability of longitudinal data – which are provided by the ECHP for the EU15 countries, though with a relatively small sample size and for a period which ended some 5 years ago – would also enable the effect on income of changes in individual circumstances to be examined and the extent to which any reduction in income to below the poverty line is a long-term rather than a transitory phenomenon.

A further conclusion is that a range of factors operating together seem to determine the degree of inequality in a country and its rate of relative poverty, quite apart from its level of prosperity, the level of employment and the amount spent on social expenditure. These factors include political and wider economic features as well as social norms and the institutional framework in place, including the nature of the social welfare system. Since these differ widely across EU countries, despite their similarities in a number of respects, it suggests a need for caution when drawing policy conclusions. In particular, it suggests that the same factors or policies may work in a different way in countries with different norms and different institutional arrangements.

### **the effect of taxes and benefits on low incomes**

Income inequality in society and the risk of poverty is affected not only by the scale of social transfers but also by the way that they are distributed as well as by the operation of the tax system, which can both levy a higher charge on those at the top end of the income scale than those at the bottom and give concessions to the latter which are equivalent to benefits. It is essential, therefore, to take explicit account of the incidence of taxes as well as benefits on those with differing levels of income when assessing the effect of government action on reducing income inequality and the social exclusion which might stem from this. This can be done for the EU15 countries on the basis of the Euromod model of household income but not for the new Member States or candidate countries for which no similar data – or modelling possibilities – are at present available.

While social benefits tend to account for a much larger share of the disposable income of households for those towards the bottom end of the scale than for those further up, the scale of the difference varies significantly between EU15 Member States. This is a reflection of differences in the way benefit systems operate, the relative priority attached to the relief of poverty in their operation and the extent of the use of means-testing to concentrate transfers on those with low incomes. In both Ireland and the UK, therefore, where means-testing is used more extensively than elsewhere, benefits are much more important for low-income households than in other countries, while they are of negligible importance, on average, for those with high incomes. This contrasts sharply with the situation in France and Austria, where benefits account for some 20% of the income of households in the top 20% of the income distribution.

In Austria especially, however, some of these benefits are taxed away, as they are in the three Nordic Member States, where taxes and social contributions paid on benefits are substantial, as well as in Belgium, Italy and the Netherlands. Neglecting these tax charges



when assessing the effect of benefits on household income tends to give a misleading impression of their relative incidence.

### **The effect on families with children**

The relative incidence of benefits net of taxes on families with children as compared with those without is important not only from an equity perspective but also in view of the policy concern evident in many parts of the EU over declining birth rates and the implications of this for future population growth. The extent to which governments, through the operation of the tax and benefit system, cover at least some of the costs of children is, therefore, of some significance in this regard. Analysis of the incidence of benefits and taxes on households with children as compared with those without, however, shows that the former receive, on average, less in benefits net of tax than the latter. This is contrary to what might be expected given the child or family benefits which are payable in most countries along with the widespread tax concessions for children which exist. But it is explicable in terms of the higher pre-tax and benefit income which households with children tend to have, which both increases their liability to tax and reduces their entitlement to – and need for – other social transfers (such as unemployment benefit, housing allowances or social assistance).

Allowing for this and estimating the benefits net of taxes which families receive as a result of having children (which does not mean simply adding up family-related benefits and tax concessions but taking account of the overall effect of the presence of children through a simulation exercise – carried out using the Euromod model of households), shows indeed that tax-benefit systems generally support families with children. The extent of this, however, varies markedly between Member States. It is largest, therefore, in Luxembourg (amounting to 23% of disposable income per head), Austria and Belgium (18% per head) and smallest in Italy, Portugal (7% in each), Greece and Spain (under 5%). These estimates, it should be emphasised, do not include the effect of benefits in kind, or non-monetary benefits, which as indicated below, are of major importance in Denmark and Sweden, in particular (where net cash benefits add around 15% or slightly less to disposable income) where they take the form of free or heavily subsidised childcare and other support on a larger scale than elsewhere.

The estimates indicate, in addition, that tax-benefit systems also serve to reduce the incidence of relative poverty among children to differing extents. The effect of benefits net of taxes is largest in Luxembourg, Austria and the UK, where they reduce the proportion of children with poverty levels of income by 17–18 percentage points, while at the other end of the scale, in Greece and Spain, they reduce this proportion by only around 2 percentage points.

### **The effect on household income of older children**

The age at which children tend to leave the family home varies markedly across Europe. In southern countries and the new Member States, it is significantly older on average than in northern parts of the EU15. This in some degree reflects differences in the support available to them outside the family which affects their ability to live alone or with people

of a similar age. Analysis indicates that in all EU15 countries, except Ireland and Austria, average household income, measured in equivalised terms, would be higher without the presence of older children, implying that they add more to household expenditure than they contribute to income. (This result, it should be noted, assumes that the weight attached to them when calculating equivalised income – 0.5 in each case – is a reasonably accurate measure of the additional household costs which they give rise to). Their depressing effect on household income is particularly large in Italy, France and the Netherlands.

Their effect on the (equivalised) income levels of younger children, however, is relatively small. In particular, their presence contributes to poverty rates among children only to a minor extent. The main exceptions are Ireland and Portugal, where the presence of older children in the household reduces the risk of child poverty, and, most notably, Italy, where their presence increases this risk perceptibly since they bring less income into the household than they add to expenditure.

### **The effect of non-monetary factors on living standards and the risk of poverty**

While the report focuses on examining inequality and the risk of poverty on the basis of household income, conventionally defined, which is the standard way of assessing these aspects, it recognises the importance of taking account of other factors, especially those related to wealth and income in kind, to obtain a full picture. An indication is given of the potential importance of allowing for these other factors by considering two of them in particular – imputed rent, or housing costs which are closely associated with this, and benefits in kind.

The estimates of these show that imputed rent and housing costs vary markedly between households in differing circumstances and with differing levels of income. Housing costs, therefore, which are an inescapable drain on resources, absorb a much larger share of income of those at the bottom end of the scale than of those further up, which in general implies that households below the poverty line are in an even worse position than those further up. The extent of this, however, varies significantly across the EU. The extreme case is Greece where taking explicit account of housing costs, or imputed rent, reduces the relative number of people below the poverty line because most of these either own their own housing or pay no rent. Many of those concerned have small holdings in agriculture and consume their own produce to a substantial extent, which is equally not taken into account in the measurement of their income and which also tends to reduce the effective poverty rate.

Many of them are also aged 65 or over, which accordingly implies that the high rate of poverty among this age group in Greece might be overstated, which is equally the case in Ireland and Portugal, where housing costs for such people tend to be low. By contrast, average housing costs of families with children with income below the poverty line are particularly high in Germany, Denmark and Finland, which implies that the poverty rates for these as conventionally measured might be understated – though in the latter two

countries, in particular, the opposing effect of non-monetary benefits (see below) also needs to be considered. These and other examples not only highlight the importance of allowing explicitly for differences in housing circumstances when assessing inequality and relative deprivation but also emphasise the need to take account of such differences when drawing policy conclusions.

The conclusions are similar as regards non-monetary benefits, which vary equally widely in terms of scale between countries and which affect the relative position of households in differing circumstances, both those with children and older people and those with differing levels of income. The support provided by means-tested benefits in kind to low income families in a number of countries, therefore, implies that income can give a misleading impression of their effective living standards.

Equally, benefits in kind going to families with children and the elderly, in the form in particular of care services, are much larger in some countries than others as well as being worth more to those at the bottom end of the income scale. Such benefits are especially important in Denmark and Sweden, where poverty rates in any case tend to be relatively low but where they are almost certainly overstated as compared with those elsewhere by the exclusion of non-monetary benefits from the definition of income.

## **Recent policy developments affecting relative income levels**

The changes in social benefits and taxes which have occurred in recent years – and, in particular, over the years for which data are not yet available – vary markedly across the EU, reflecting differences in the scale and nature of problems but also differences in the relative priority attached to supporting those on low incomes and reducing the risk of poverty. This reflects, in turn, differences in underlying political and economic circumstances in the design and nature of the tax and benefit system and in social attitudes. It is difficult, therefore, to detect common trends.

The measures which have occurred mainly involve changes to income tax schedules, social contributions and social benefits, though they also include changes in minimum wages and social services. A widespread tendency has been to seek to increase incentives to work and to restrain public expenditure, in particular to ensure the viability of social insurance schemes. At the same time, efforts have been made to try to avoid reducing support for those on very low incomes by extending social assistance in the form of minimum income guarantees. This is especially the case as regards those in retirement, where the focus has been on limiting both pension increases for those already retired and pension entitlement to those not yet of pensionable age.

In an attempt to increase work incentives as well as disposable income towards the bottom end of the scale, social contributions have been reduced or eliminated on low wages in a number of countries, including Belgium, Germany, Greece and the UK, although, of course, these benefit only those in work. To much the same end, minimum wages have also been increased in Spain, Ireland, Portugal and the UK, but have remained unchanged in the Netherlands. Similarly, unemployment benefits have been reduced in

Denmark and Germany partly in order to increase work incentives. In sharp contrast to elsewhere, however, benefits have been increased in real terms in Ireland and Finland, indicating perhaps a differing trade-off between maintaining incentives and raising low income levels.

Efforts to address the problem of relatively high poverty rates among children in Ireland, Portugal and the UK are evident in the increase in transfers to families with children which have occurred in one form or another. Equally, the relatively high risk of poverty among those aged 65 and over in these three countries plus Greece and Spain may have been tempered by recent increases in the pensions or social assistance paid to those in retirement with the lowest income levels.

Overall in the EU15, the policy changes made in the past few years seem to have increased the relative income of those at the bottom end of the scale in Ireland, Portugal and the UK, all countries with relatively high poverty rates, and probably reduced their relative income in Belgium, Germany and Italy.

In the new Member States, the policy changes which have occurred have been particularly diverse and not always consistent, which further increases the difficulty of assessing the effect on those with low incomes. Income tax rates have, therefore, been cut in a number of countries and the number of rates reduced – at the extreme, to just one of 19% in Slovakia. In Poland, on the other hand, an additional top rate of 50% has been introduced and in Slovenia, tax rate bands have been indexed in line with price inflation rather than wage increases, so increasing the effective tax rate. While low income taxpayers have tended to benefit from the changes in most countries, those with higher incomes have typically benefited by more. Moreover, as noted above, many of those at the bottom end of the income scale are not liable to income tax and, therefore, receive no benefit from such changes.

Maternity and other parental benefits have been widely increased and extended, which might have served to reduce the relatively high rates of child poverty in these countries indicated in Part 1 of this report. For example, universal child benefit has been introduced in Cyprus, parental benefit for children under 4 increased in the Czech Republic, supplementary allowances introduced for families with three or more children in Estonia and benefit for the first child doubled, and maternity benefit increased by 50% in Lithuania. On the other hand, in Poland, the period of payment of maternity benefit was reduced in 2002 and birth grants made means-tested.

In the accession and candidate countries, the effects of policy changes on the distribution of income seem to have been particularly mixed. While in Bulgaria, they appear to have increased the relative income of those at the bottom end of the scale by targeting benefits to these through means-testing and increasing the minimum wage in real terms, offset in some degree, by reducing taxes on the highest earners, in Romania, they seem to have widened inequality through the introduction of a single rate of income tax, cutting the link of unemployment benefits to earnings and making uneven reforms to the pension system. In Turkey, they seem to have favoured those with low incomes through the introduction of unemployment benefits, the expansion of social assistance to poor

families and a large reduction in VAT on basic food and health and education services. In Croatia, changes have had opposing effects – an increase in the progressive nature of income tax being offset by the introduction of more concessions and a reduction in entitlement to means-tested benefit – with an uncertain overall impact on those at risk of poverty.

## INTRODUCTION

This is the first annual report of the network established as part of the Social Situation Observatory to monitor trends in income distribution and social inclusion across the EU Member States and candidate countries and to consider the policy implications. This involves examining the relationship between income and social inclusion and the extent to which income, as usually defined and measured, determines living standards and, accordingly, how far households and the people living in them are able to participate fully in society and avoid deprivation and exclusion. It also involves considering other factors which influence living standards and involvement in society, including, in particular, the tax and benefit system in place in different countries and other measures implemented by governments to provide social support, as well as access to employment, decent housing and so on.

This annual report, which is intended to be the first in a series, cannot cover all the issues of relevance in any detail. It is focused very much on income and in particular on the income of households and individuals at the bottom end of the scale who are considered to be at risk of poverty, and so of exclusion, according to the convention adopted by EU Member States. Its aim is primarily to examine the relative numbers with income below 60% of median income which has come to be regarded as the threshold for measuring the risk of poverty across the EU and the vulnerability of people in different age groups and in differing household circumstances to this risk.

The focus on income should not be taken to imply that income is either the sole or even the best measure of the living standard of people and households, let alone that income, is the only indicator of relative deprivation or exclusion. It is, however, the starting-point for assessing the risk of the latter and as such is an appropriate focus for a first report of this kind.

As described below, income has a number of drawbacks and deficiencies as a measure of living standards or the command, or purchasing power, which people have over goods and services. In particular, it does not reflect accumulated wealth which clearly affects living standards and which is considered in more detail below. But it, nevertheless, represents the most satisfactory measure from a practical perspective and the one which is most widely used for this purpose by academics and policy-makers alike.

A number of other important aspects which play a role in determining living standards are also considered explicitly in the report. These include imputed rent, which in principle should be included in measures of income but in practice is typically not because of practical problems of estimation. They also include benefits in kind, which in the form of social support can have a major effect on living standards and, more widely, on the freedom which people have to choose the life they lead and how they balance their various responsibilities and interests, especially their family and childcare responsibilities as against the pursuit of a working career. They include, in addition, and not least importantly, the access of individuals and households to paid employment which is a key determinant not only of income as such but of social involvement.

A central theme running through the report is the extent to which income and the risk of poverty differs between different age groups in the various countries and the way that social policy, in the form, in particular, of the tax-benefit system in place, affects this. A major concern, therefore, is with the relative position of people at different stages of their life cycle in terms of their income, employment and household circumstances and with the influence which governments through the social welfare system have on this. This is not only important in its own right, since it affects the choices open to people as regards both their personal and professional lives and how they use their time, but it can potentially have a significant effect on decisions over having children and, therefore, on future generations.

The data used in the report come so far as possible from EU-level sources which are designed to be comparable across European countries and consistent over time.. The main source on income is the European Community Household Panel (ECHP) surveys, which were conducted between 1994 and 2001, These, however, relate only to the EU15 Member States and provide details of income only up to 2000, which is now 5 years ago. The aim is to cover all EU Member States and the candidate countries (or more accurately, the two acceding countries – Bulgaria and Romania – and the two candidate countries – Croatia and Turkey) and to do so in timely way. This has meant a need to use data from national sources which are not necessarily entirely comparable between countries, despite efforts to make them so. Equally lack of EU-level data for the most recent years for EU15 countries – ie for 2001 on – has meant a similar need to rely on national statistics to indicate developments in income distribution in these since the ECHP came to an end. The absence of data on particular aspects for some of the new Member States and candidate countries, however, especially the non-availability of data for the years before 2000, means that it is not possible to include all countries in all parts of the analysis.

These features of the data need to be borne in mind when interpreting the results of the analysis presented below. The reliance on national sources, even if vetted by Eurostat, means that there is an inevitable element of uncertainty over the comparability of the data on income presented and on the relative numbers calculated to be at risk of poverty, the scale of which is impossible to gauge. Equally, the use of different sources for the years after 2000 and the years means that it is often difficult to judge whether income inequality and the risk of poverty has changed over the most recent years as compared with the 1990s and, if so, in which direction.

These uncertainties will continue until data from the new EU Survey of Income and Living Conditions (SILC) become available from 2006 on. However, difficulties will not end then. Given the likely problems of relating the data collected by the new survey with those available from national sources at present and from the European Community Household Panel (ECHP) for the 1990s, any satisfactory assessment of trends in income inequality and the risk of poverty may have to await until data for a number of years are available from the SILC.

## Conceptual issues

As indicated above, the focus of the analysis in the report is very much on household income which is intended to give a reliable indication of the command of the household in question over goods and services and, therefore, over the standard of living which it can support. Income is defined in monetary terms to include all revenue coming into the household from various sources during a given year and, as such, conforms with how the term is generally understood as well as with the way that it is defined in the ECHP. It also conforms with the main indicator used in the EU to assess the risk of poverty in Member States and to monitor developments in this over time. It includes income from capital and financial investments and from both public and private transfers as well as wages and salaries.

It does not, however, include elements of income, more broadly defined, which also affect living standards in much the same way as the sources of revenue included. In particular, it does not include:

- a household's production of goods and services for its own use, such as food especially, which in some cases and in some countries can represent a large proportion of consumption (in new Member States and candidate countries where subsistence farming is still prevalent, in particular);
- consumption of goods and services in kind, such as the use of care facilities provided at zero or subsidised cost by social services or free public transport, which can either be regarded as an additional source of income or as an element which reduces a household's need for monetary outlays and so increases the effective value of a given level of monetary income;
- the capital gains which are realised when a financial or physical asset is sold, which in effect is equivalent to income and in many countries is taxed as such;
- imputed rent on owner-occupied accommodation, which is the amount a household would pay if the property in question were let on the market and which, accordingly, represents how much it saves by not having to pay this.

To the extent each of these elements vary in importance between different households in the same country, as well as between those in different countries, they can distort comparisons of income, if this is used as a measure of purchasing power or living standards, if they are not explicitly taken into account.

The report considers two of these factors – imputed rent and benefits in kind – and attempts (specifically in Part 4) to estimate their potential value to different households in EU countries – largely EU15 countries because of the lack of data for new Member States – in order to give an indication of the effect on the results of leaving them out of account. It shows that in most countries the effect of not including imputed rent in the measure of income is, in most cases, to under-estimate the income of the more prosperous households in particular and, therefore, to understate the degree of income inequality and the relative



numbers with income below the poverty threshold, though the extent varies across the EU. There are, however, exceptions, Greece, in particular, where imputed rent seems to be higher among those with low income than those with higher levels, so reducing the proportion of households with income below the poverty line if this is defined to include imputed rent.

Social benefits in kind also vary in importance between countries, as well as between households with differing levels of monetary income. In particular, they are much larger in the three Nordic countries, and especially in Denmark and Sweden, than elsewhere in the EU and in Member States in which means-testing is most important, are much more concentrated among lower income households more than those further up the income scale.

Although not examined in the report, it is likely that the other two elements listed above, capital gains and production for own consumption, also vary markedly between both households and countries. While the former is likely to add disproportionately to the effective income of more prosperous households, the latter might be expected to be more important at the lower end of the income scale, especially in the low income countries, implying that the living standards of the households concerned are higher in practice than indicated by the income measure used. This, however, does not necessarily mean that the risk of poverty in these countries is being significantly overstated since many of the households in question might have very little monetary income to supplement what they produce for their own consumption.

Both capital gains and imputed rent are linked to perhaps the main deficiency of the use of monetary income to measure purchasing power, namely that it fails to account of accumulated wealth, which equally adds to the command over goods and services even if it is not realised. Such wealth can take various forms, both financial (stocks and shares) and physical (property, works of art, jewellery). The most common form of wealth is housing, which not only carries an imputed rent for owners – which is equivalent to an income stream generated by financial assets – but in the same way as other forms of wealth, represents an asset against which it is possible to borrow, so adding to purchasing power or, more accurately, giving the households concerned more freedom to vary their expenditure over time.

Although there is wide agreement about the importance of taking account of wealth as well as – or even instead of – income when assessing the distribution of purchasing power across society, it is difficult to do so in practice. This is because of the measurement problems involved in both having to identify the assets owned when incomplete records exist and to value these when there is often no market price to act as a guide. These practical difficulties are the major reason why data on wealth for most countries are not available, or at least, other than for a very limited set of assets.

The distribution of wealth across society is not considered in this report – ,although in Part 4, examination of housing costs gives some insight into the potential importance of taking account of wealth –not because it is regarded as unimportant but simply because of lack of

data. It is an aspect which because of its importance will need to be examined in future reports.

A related issue concerns the period over which income is measured. In the analysis here, the focus is on the income received by households in a given year. This may not accurately reflect income over a longer period of time if it fluctuates significantly, which, given the ability to save and to borrow may give a more representative indication of purchasing power. On the other hand, imperfections in the capital market and a reluctance to accumulate too much debt may limit the extent to which long-term income – or, in the extreme, life-time income – reflects living standards more closely than current income. (The effect on the risk of poverty if income over several years is taken rather than over one is considered in Part 2.)

A further aspect of measurement is the need to take account of variations in household size and composition when assessing the implications of any given level of income – or purchasing power however defined – for comparative living standards. While the use of households rather than individuals as the unit of measurement recognises that income tends to be shared among household members, especially if they are assumed to belong to the same family – which is so in the great majority of instances – it is still the case that larger households require more income to support a given standard of living than smaller ones<sup>1</sup>. But given the ability to share resources, they do not require proportionately more. The issue is how much more to assume.

The assumption adopted here is the conventional one, that each household member imposes a cost on the household budget in line with the weight accorded to them under the modified-OECD scale (which assumes that for each additional person of 16 and over, required income needs to rise by 50% to maintain living standards, and for a child under 16, by 30%). The focus of the analysis is on average ‘equivalised’ household income calculated by attaching these weights to individual members. In the analysis of individuals, in particular, those in different age groups, it is assumed that ‘equivalised’ income is shared equally between household members. (Whether or not this is the case in practice is not examined here, though the internal distribution of income is an issue of some interest and of some relevance for policy and as such is a subject for potential investigation in future reports.)

How far the weighting system adopted is an accurate reflection of reality – of the real costs associated with an additional adult or child in a household – is not explored in the analysis, but it should be recognised that the assumption adopted affects the results, if not in most cases to a major extent, especially as regards comparisons across countries. (Estimates of the risk of poverty among children are liable to be affected the most because of the relatively small weight attached to them.)

These various considerations imply that equivalised income, defined above and used in the analysis here, does not always give a reliable indication of comparative living standards both

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<sup>1</sup> In practice, there are a few households in which members do not belong to the same family and where the assumption of income being shared between them may not apply. Equally, there are also some families which may live in different households and share income between the members.

across and between countries, even if it is the best single measure available in practice, and that there is a need to take account of other aspects so far as possible. Moreover, there is the added problem that 'material' living standards in themselves, even if accurately measured, do not necessarily reflect social inclusion. The limitations of the use of income to identify instances of social exclusion have give rise to a theoretical and empirical literature around the issue and to the development of other indicators both of deprivation and of well-being, which is recognised as being a multi-dimensional concept affected by a range of other factors apart from income<sup>2</sup>. Such indicators include subjective measures, which though important from a policy perspective as a reflection of the satisfaction of people with their way of life and with the measures taken to support them, give rise to inevitable problems of comparability, in particular across countries, because of differing attitudes, experience and expectations<sup>3</sup>.

The need to take account of other factors is explicitly recognised by the EU in its approach to social inclusion and in the Laeken indicators compiled for monitoring developments in this regard in Member States. Though the majority of the indicators are based on income, others relate to unemployment, education, health and housing as well as subjective well-being.

It has also been suggested in a recent wide-ranging study that it would be useful to develop a 'deprivations index' for the EU Member States, to include a set of elements which might be regarded as basic necessities (such as the ability to afford adequate heating in the home, an annual holiday or regular meals with meat or fish)<sup>4</sup>. Such a suggestion is close to proposing a need to examine an absolute measure of poverty as well as the relative one which at present is the focus of policy attention in the EU as well as of the present report. This possibility has been given added impetus by the entry of the new Member States into the Union in 2004, with their much lower levels of income than the EU15 countries, and by the prospective entry of Bulgaria and Romania, where income levels are even lower. How far the relative levels of poverty estimated for these countries are comparable with those calculated for the EU15 Member States when median income levels, even when measured in purchasing power parity terms, are so much lower (over 60% lower on average and over 75% lower in the case of the two accession countries – see Part 1 below), is a matter for consideration (though it is not considered in any detail here).

## Outline of the report

As indicated above the report focuses very much on the distribution of equivalised income in the countries covered and on those whose income falls below the commonly accepted (in the EU at least) poverty line set at 60% of median income in each country, as well as on the factors affecting both the degree of dispersion of incomes and the risk of poverty as defined. Other aspects affecting living standards and social inclusion, however, are also considered, in particular, employment and its influence on income, housing costs, imputed rent and

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<sup>2</sup> On deprivation, see Nolan and Whelan, 1996; Whelan, Layte and Maitre, 2004. On well-being, see, in particular, the Special Issue on Inequality and Multidimensional Well-being, *Review of Income and Wealth*, June 2005.

<sup>3</sup> See in particular, the *Quality of Life Survey 2003*, carried out by the European Foundation for the Improvement of Living and Working Conditions, 2004.

<sup>4</sup> See Atkinson, Cantillon, Marlier and Nolan, 2005.

access to benefits in kind. As also indicated above, the relative position of people in different age groups and at different stages of the life cycle in terms of income and employment is a theme running through the analysis.

Part I of the report presents an overview of differences in income distribution and in the proportion of people with low incomes across the EU. It is divided into two chapters. The first reviews the extent of inequality in the distribution of income in the EU Member States and candidate countries, the relative numbers at risk of poverty and how both have tended to change over recent years, insofar as the data available allow. It focuses in particular on the differential risk of poverty of people in different age groups, especially of children and older people, and on the effect of household size and composition on this.

An annex to this chapter considers differences in the structure of households between countries and the way this has changed over time, focusing on in the growing tendency for people to live alone and the household circumstances of young people aged 16–24, many of whom are in full-time education or training, and older people aged 65 and over, most of whom have retired and reliant on income from pensions. These differences and trends have a significant effect on the income of households and on the need for State support, the availability of which itself affects household structure.

The second chapter of Part I examines the reliability of the indicators presented in Chapter 1 which are those conventionally used to assess and monitor relative levels of income inequality and poverty in the EU. Its purpose is to estimate the margins of error surrounding these ‘single-point’ measures and the significance of the differences observed between countries. Although this is purely a statistical exercise, it is – or should be – an essential part of interpreting the values of the indicators in question and of monitoring changes in these over time.

Part II is concerned with the effect of employment and the earnings from this on incomes and in preventing household income from falling below the poverty line. It is also divided into two chapters. The first, Chapter 3, examines the relationship between income and employment status in EU Member States and candidate countries and demonstrates the importance in all countries of being in paid work for avoiding low levels of household income and the risk of poverty.

The second chapter, Chapter 4, considers differences in the number of ‘workless’, or jobless, households between Member States and the candidate countries and how this has tended to change over time as well as its relationship, on the one hand, to the level of unemployment and, on the other. The structure of households. It shows that the number of jobless households does not necessarily tend to vary in line with unemployment but that it is related to household structure, which has implications for policy.

Part III of the report focuses on factors contributing to low income levels and the risk of poverty across the EU, which are, accordingly, are the factors which policy needs to address to tackle the problem. It is again divided into two chapters. The first (Chapter 5) examine the scale of inequality in income distribution and the rate of relative poverty across the EU and

candidate countries and the extent to which both are related to 'macro' factors – in particular, to GDP per head, the degree of openness of the economy, the level of employment, including especially among women, the age structure of the population and the relative number of children, on the one hand, and older people, on the other, both of whom are in need of income support and vulnerable to the risk of poverty, and policy efforts made by governments to provide such support for these and other groups in society, as reflected in the amount spent on social protection.

The second chapter (Chapter 6) pursues this last aspect further and considers the effect of the tax and benefit system in different countries on the disposable income of households and individuals with differing levels of income. This is based on the Euromod simulation model of households and is largely confined to the EU15 Member States since the model has not yet been extended to the countries which entered the EU in 2004 or to the candidate countries. The focus is on the effect of the system in place on families with children, and the extent to which there is a net transfer to these to help cover the costs associated with having children, and on older people, most of whom are reliant in all countries on public pensions. It considers, in addition, the position of young people aged 18 and over living in the family home and the extent to which they contribute to or are supported by household income.

Part IV examines two of the main factors which need to be considered in addition to income to obtain a satisfactory view of the extent of inequality in the distribution of purchasing power, and living standards, across the EU and of the relative numbers at risk of poverty, namely, imputed rent, or housing costs, and non-monetary benefits. Its concern is to give an indication of the relative importance of these two factors in different countries and, more especially, of the extent to which they affect the relative position of households with low income levels as compared with those further up the income scale. Accordingly, it indicates how the results of the analysis presented in earlier parts of the report on the relative numbers at risk of poverty across the EU are affected by consideration of the two factors concerned.

Part V considers the policy developments which have occurred since 2000, and, more especially, since 2002, in EU Member States and candidate countries which might have affected the distribution of income and the relative numbers at risk of poverty and which, accordingly, might have had an effect on the indicators presented in the report. As such it gives an indication of how the conclusions reached in earlier parts, which are based on data which in many cases relate to several years ago, might need to be modified as a result of subsequent policy action. At the same time, it indicates the relative scale of the effort being made by governments in different countries to address the incidence of low income identified in this report.

## **PART I**

# **OVERVIEW OF POVERTY LEVELS OF INCOME IN THE EU**

## CHAPTER 1 POVERTY LEVELS OF INCOME: CROSS-COUNTRY COMPARISONS, TRENDS AND DEMOGRAPHIC FACTORS<sup>5</sup>

This paper examines relative income levels and the incidence of poverty in the 25 Member States and the four candidate countries – Bulgaria, Croatia, Romania and Turkey – and reviews trends over time on the basis of the latest data series available. The focus is on the role of demographic factors as explanations of variations in the at-risk-of poverty, in particular age and household structure. It also considers the age profile of poverty, focusing on two age groups in particular: children (defined as those under 16) and the elderly (those aged 65 or over). The final section looks at the relationship between the structure of households and poverty and how this has tended to change over time. The primary concern throughout the analysis is very much on the incomes of those at the bottom end of the income scale and how these relate to incomes further up the scale, rather than on the distribution of income as such, which can be equally relevant. This issue will be examined in some detail in future reports.

### Poverty rates and inequality across countries

Some 15% of European Union citizens are regarded as being poor according to the indicator used. This means that on average 15% have incomes lower than 60% of median equivalised income in the country in which they live. It should be emphasised that this definition is based on national income thresholds which vary greatly across countries (see Box below).

Poverty rates in the EU25, defined in these relative terms, range from 8% in the Nordic countries, the Czech Republic and Slovenia and 21% in Greece, Ireland and Slovakia (Figure 1.1, it includes a different estimate for Hungary than the “official” Laeken indicator – which gives Hungary a poverty rate of 10% – based on an alternative and seemingly more reliable data source<sup>6</sup>). In Turkey, some 25% of the population have income below the poverty line, significantly more than in any of the existing EU Member States.

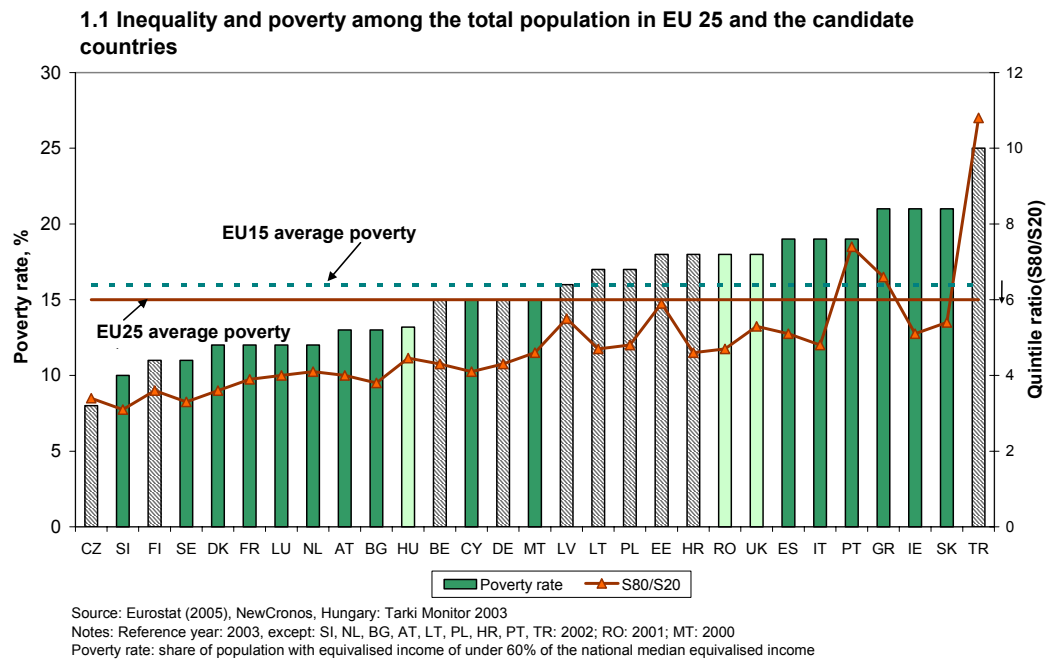
Poverty rates in the new EU Member States (NMS) are no higher in general than in the EU15, using this relative definition of poverty. The Czech Republic, Slovenia and Hungary have poverty rates below the EU average, the other countries, above. (It should be noted that according to the “official” Laeken indicator, Hungary has one of the lowest poverty rates (10%), but when an alternative, and arguably more reliable, data source is used, this rate increases to 13%, still below the EU25 average but less so.) Nevertheless, the poverty rate on average in the NMS is slightly lower than in the EU15 (or at least it was in 2001), resulting in the average rate in the EU falling slightly with enlargement (from 16% to 15%)<sup>7</sup>.

<sup>5</sup> by Orsolya Lelkes and Mattia Makovec, European Centre for Social Welfare Policy and Research, Vienna

<sup>6</sup> This data source is compiled by Tarki; see Chapter 5 below for more details.

<sup>7</sup> In the 10 NMS on average the ratio of population at-risk-of-poverty was 14% in 2001 and 15% in 2002, according to Eurostat estimates.

The monetary value of these national poverty thresholds, however, varies greatly across countries, which implies that the use of a single threshold for the EU as a whole would increase the poverty rate substantially in the NMS (see discussion in Box). This raises the issue of whether such a threshold should be used, if not instead of at least in conjunction with, national poverty thresholds. Part of the rationale for the use of the latter is that national governments have responsibility for policies affecting income distribution. Both social welfare systems and tax policy remain under national sovereignty. The implication is that social justice is interpreted within a single society and, accordingly, the equity or fairness of a particular distribution of income is judged by those living in a particular country.



The design of the European Union, and its focus on social cohesion across countries, with the Structural Funds specifically devoted to this purpose, implies, however, that social justice and some notion of equity is regarded as a concept applying across the whole of the EU rather than varying across countries. Moreover, surveys of social attitudes show that people tend to compare their financial situation not solely to their fellow citizens, but also to those of other (normally richer) countries. The use of an EU-wide poverty threshold, adjusted for differences in purchasing power, would highlight variations in income across countries. Changes over time could, in addition, be used to monitor progress towards social cohesion. The policy implications of such a measure, however, remain unclear. Although the Structural Funds are designed to support Member States and regions where GDP per head falls below a particular level relative to the EU average, which bears some relationship to low income levels, the focus of these is on structural intervention to strengthen economic performance rather than on tackling problems of low income as such.

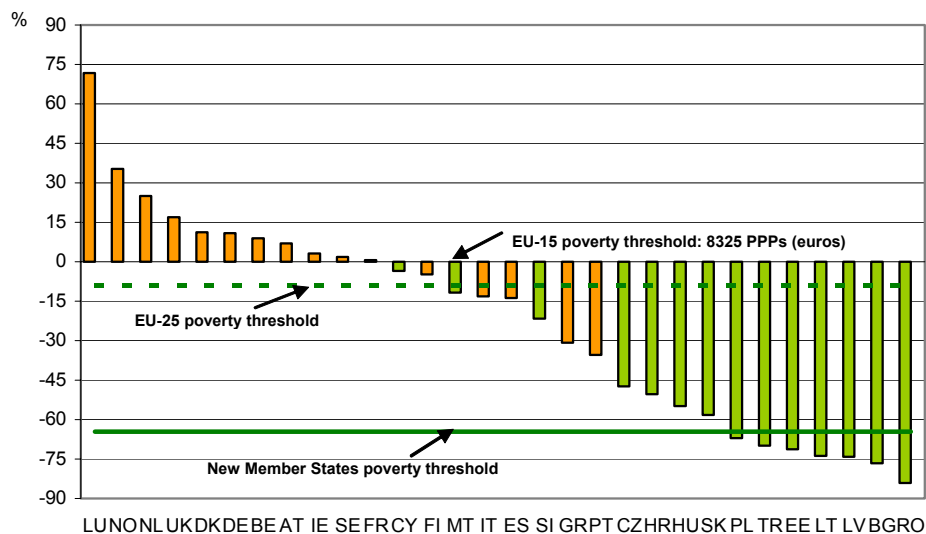


### Poverty thresholds across the EU15, New Member States and candidate countries

The poverty threshold used in the analysis is a relative one and country-specific, 60% of median income in each country. These thresholds in terms of purchasing power, however, differ greatly across countries. The overall poverty threshold in the New Member States is over 60% lower than the average for the EU15.

Poverty thresholds in Malta, Cyprus and Slovenia in purchasing power parity terms are close to those in Spain, Greece and Portugal. In all other NMS and candidate countries, the poverty threshold is much lower than in all EU 15 countries. The three Baltic States, Bulgaria and Romania have particularly low poverty thresholds, around 75% or more below the EU15 average. In terms of a universal poverty threshold equaling the EU average, therefore, relatively few people in most of the EU15 countries would be considered poor, while in the new Member States and candidate countries, as well as Greece and Portugal, most would.

#### *Poverty thresholds in specific countries compared to EU15 average, 2003 (% difference)*



Source: Eurostat (2005), CPI for Turkey: Turkish National Bank

Note: national threshold values have been adjusted with Consumer Price Index where only 2002 or 2001 data were available

The inequality measure used as a primary Laeken indicator is the income quintile ratio, which shows the ratio of income received by the 20% of a country's population with the highest income (top quintile) to that received by the 20% with the lowest income (lowest quintile)<sup>8</sup>. The average quintile ratio in the EU25 is 4.5<sup>9</sup>, and the difference between the country with the highest extent of inequality measured in this way and that with the lowest is over three times. In the majority of countries, the ratio is between 3 and 6. Only in Portugal, Greece and Turkey is it significantly higher. In Portugal, the quintile ratio is 7.4, while in Turkey it is as high as 10.8.

<sup>8</sup> More precisely, it is the level of income received by someone who is ranked 20% from the top of the income distribution relative to the income received by someone who is 20% from the bottom.

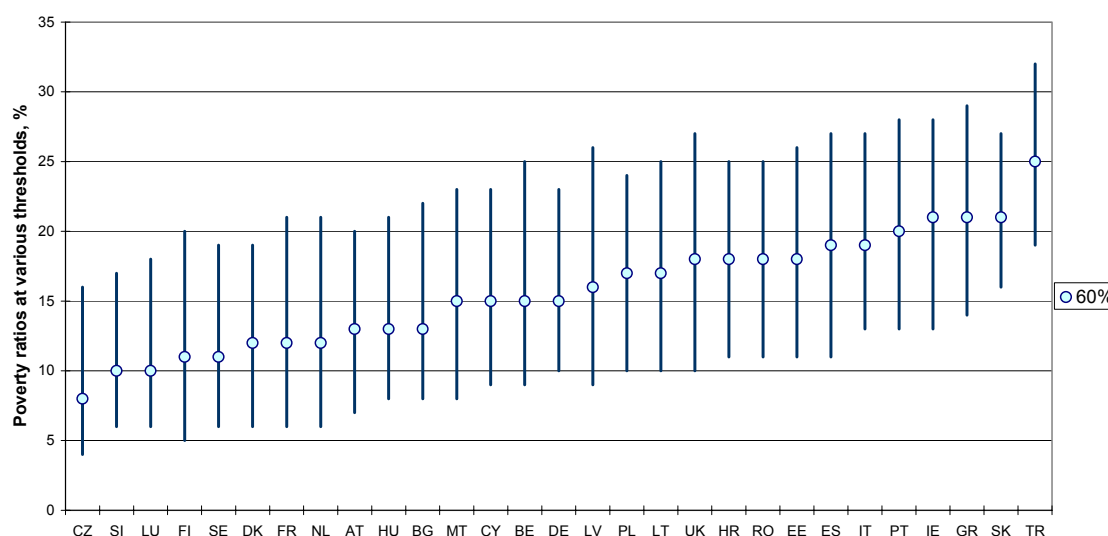
<sup>9</sup> Eurostat estimate for 2001.

The situation in Portugal is atypical in the sense that it has a higher level of inequality than would be expected given its poverty rate<sup>10</sup>. The explanation is the relative prosperity of those at the top end of the income scale in Portugal; 44% of total household income being concentrated among the top 20% of income recipients. This ratio is higher than in any other EU15 country (data are available only for these), and greatly exceeds the EU15 average, 37%. For comparison, only 7% of total income in Portugal goes to the bottom 20% of income recipients. This difference is not attributable to the specific indicator of inequality used here, as the Gini coefficient suggests differences of a similar magnitude. The Gini coefficient reaches 37 in Portugal, while it is only 29 and 31 in Italy and Spain, the countries with similar level of poverty, respectively (Eurostat data, 2005, New Cronos database).

## THE POVERTY THRESHOLD

The estimates of poverty are sensitive to the threshold used. The most commonly used definition of poverty by the EU, also a primary Laeken indicator, is based on a poverty threshold which equals 60% of national median equivalised income. This indicator suggests that 15% of the population of the European Union has income below the poverty threshold. As the level chosen for this threshold is relatively arbitrary, it is instructive to examine the sensitivity of the estimated poverty rates to the precise level used. This, at the same time, gives an indication of the number of people with incomes just below or just above the particular threshold chosen, which is clearly of relevance for policy as well as helping to assess the significance of the poverty rate calculated. The use of an alternative poverty threshold of 50% of national income would reduce the proportion of with poverty levels of income from 15% to 9% in the EU (for country-specific rates, see Table 1.1). On the other hand, a poverty threshold of 70% would increase it to 24%.

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



Source: Eurostat (2005), NewCronos database  
 Notes: Reference year: 2003, except: HU, SI, NL, BG, AT, LT, PL, HR, PT, TR: 2002; RO: 2001; MT: 2000

<sup>10</sup> This difference is not attributable to the specific indicator of inequality used here, since the Gini coefficient suggests a difference of a similar magnitude. The Gini coefficient is 0.37 in Portugal, while it is only 0.29 and 0.31 in Italy and Spain, countries with similar levels of relative poverty (Eurostat data, 2005, New Cronos database).

While the poverty threshold used greatly influences the degree of poverty, it affects the country ranking only a little. The countries in Figure 1.2 are ranked according to the conventional 60% threshold. The circles indicate the level of poverty, using this definition, and the lines indicate the poverty range, when alternative thresholds, of 50% (the bottom of the line) and 70% (the top) are used. The figure highlights both the sensitivity of the estimates to the choice of the threshold (shown by the length of the line) and differences in the distribution of income across countries. Comparing for example Finland and Sweden, countries which have about the same poverty rate when the standard 60% threshold is used, the relative number of people with incomes both just above and just below the poverty line is significantly larger in Finland than Sweden, implying that the use of a 70% threshold would give a higher poverty rate and the use of a 50% level, a lower rate. In Latvia, the UK and Spain, a relatively large number of people also have incomes close to the 60% threshold, whereas in Slovenia, Austria, Germany and Slovakia, income is more dispersed and the poverty rates are less sensitive to the threshold chosen. These results highlight the importance of taking explicit account of the relative number of people with income close to the poverty line rather than simply focusing on a single poverty rate.

### THE EXTENT OF POVERTY: POVERTY GAPS

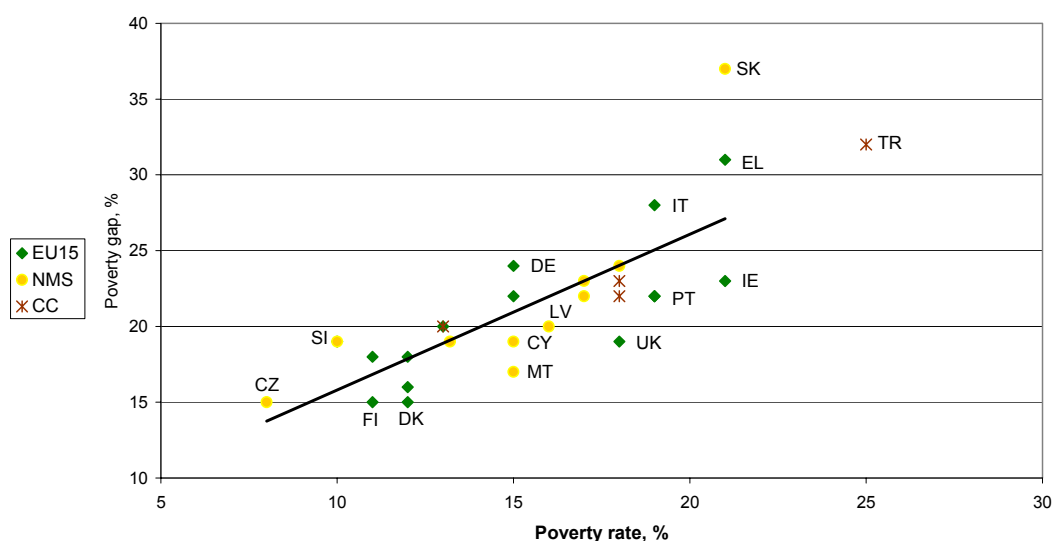
How poor are the poor? The discussion above focused on one indicator of low income, the poverty rate. These rates indicate how many people have incomes below the particular threshold chosen, but reveal nothing about the extent of their poverty, an aspect which the relative numbers with incomes just above and just below the threshold throw some light upon. This aspect is explored further in this section. The 'poverty gap' (the Laeken indicator termed the "relative median poverty risk gap"), measured as the difference between the median income of persons below the poverty threshold and the threshold itself, expressed as a percentage of the threshold, indicates the extent to which the incomes of the poor fall below the poverty threshold on average. In policy terms, it indicates the scale of transfers which would be necessary to bring the incomes of the poor up to the poverty threshold level. 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.

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 regarded as being needed to avoid relative deprivation. The poverty gap in the EU25 countries varies between 15% (in Belgium, Denmark and the Czech Republic) and 37% (in Slovakia) (see Figure 1.3). These values are positively correlated with the poverty rate (for EU25 plus the 4 candidate countries:  $R=0.84$  and for EU25:  $R=0.75$ ). In other words, those below the poverty line tend to have lower relative incomes in countries where the proportion of people falling below the line is comparatively larger. This suggests that these two indicators might have a common explanation in the form of the shape of the income distribution in the countries concerned being right-skewed (the higher tail being longer).

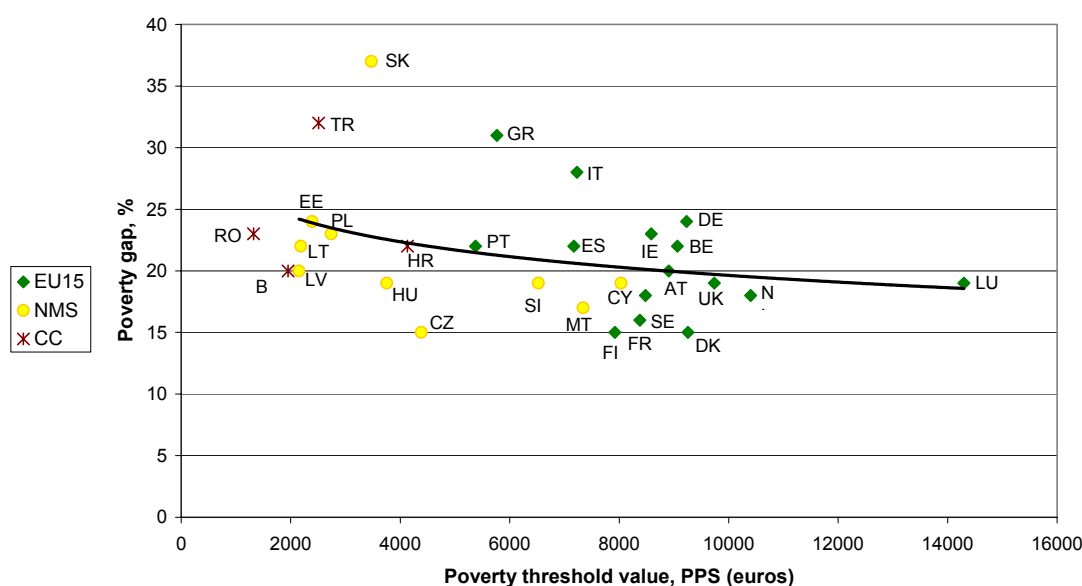
There is no relationship between the extent of poverty and the actual level of income represented by the threshold (see Figure 1.4). The extent of poverty is not significantly lower

or higher in countries with higher poverty thresholds, expressed in PPS terms, or indeed higher levels of median income. More importantly, however, the results suggest that there is considerable variation in the scale of the poverty gap between countries with similar income levels. In Denmark, for example, the gap is 15%, in Germany, almost 25%. The Candidate Countries appear to be outliers, in the sense that they have much larger poverty gaps than most EU25 countries with a similar level of average income.

### 1.3 Poverty gap and poverty rates (relative poverty rate)



### 1.4 Poverty gap and national poverty threshold



## CHANGES OVER TIME: LIMITED SIGNS OF INCREASING SOCIAL COHESION

As indicated above, there are major differences in the degree of income inequality and poverty across the European Union. In order to interpret these differences in a more meaningful way, it is necessary to examine changes over time and compare these within and across countries. Inequality may be wide in a particular country, but if it has declined significantly in the past decade, then the implications are somewhat different than if it has not changed. The specific questions addressed here, therefore, are, first, whether there is evidence of diminishing inequality and closer social cohesion in specific countries over time and, secondly, whether the degree of inequality is tending to converge or diverge across the EU<sup>11</sup> It is important to note at the outset that the data available to examine these questions are far from ideal, especially for the new Member States and candidate countries where data are of uncertain comparability both over time and relative to other countries, though also in the EU-15, where since the demise of the ECHP, national data sources have to be used, which are of equally uncertain comparability. A more satisfactory analysis of changes over time across the EU will have to await data from the new Survey of Income and Living Conditions (SILC). These data, however, will not necessarily be directly comparable with those assembled by the ECHP, so that it may take a few years before trends in income inequality and relative levels of poverty can be identified with any confidence.

### Poverty

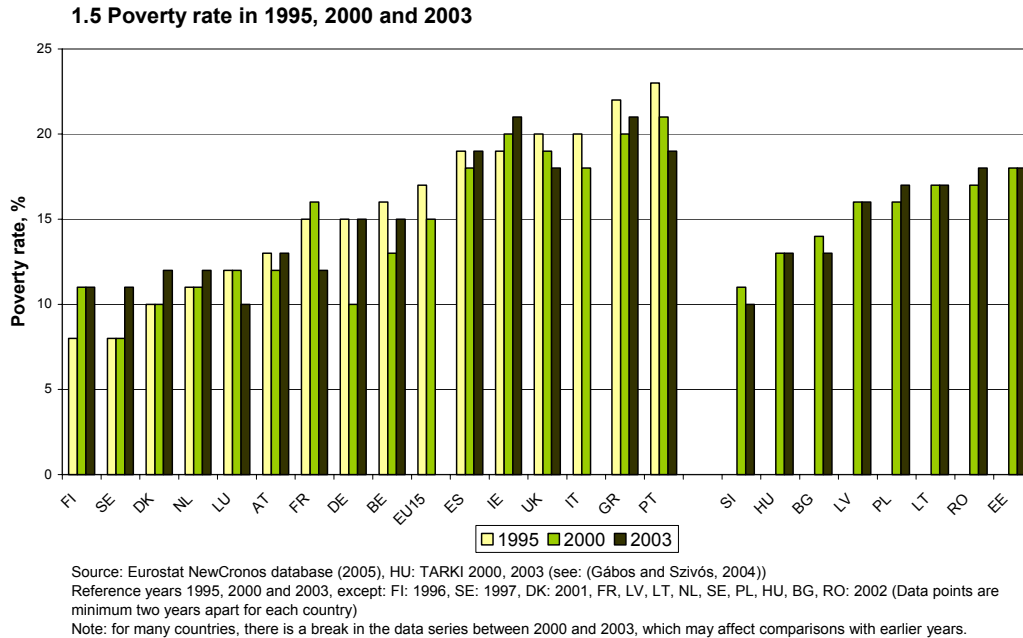
Changes of poverty rates suggest that there has been some convergence across the EU15 since the mid 1990s, though no overall reduction. In 1995, relative national poverty rates ranged between 8% and 23%; by 2000, this had changed to a range of between 10% and 21%, and the evidence suggests that it has not changed since then (Figure 1.5).

This convergence across countries, therefore, was partly due to rising poverty rates in the countries where they were previously the lowest, specifically in Finland, Sweden, Denmark and the Netherlands. (See Figure 1.6 for changes in the poverty rates. EU15 countries and NMS are each ranked according to the 1995 poverty rate, as in Figure 1.5). Poverty rates in Finland and Sweden have, therefore, increased above 10%, a significant rise relative to the level in the mid-1990s, though but they still remain well below rates in most other EU15 countries.

On the other hand, poverty rates have declined in countries with previously high poverty rates, in particular in Portugal, Greece, the UK and Italy. An exception to this general trend is Ireland, where the proportion of people below the poverty line, which was already relatively large in 1995, at 19%, has risen further to 21%.

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<sup>11</sup> Note, however, that the concept of income poverty used here is only one of the various measures of social exclusion (see e.g. Lelkes, forthcoming).



The significance of these changes needs further examination in order to try to determine how far it represents a trend. For this purpose, the period between 1995 and 2003 (the period for which harmonized data is available) is divided into two sub-periods: 1995–2000 and 2000–2003. The trend figures for the first period may be more reliable than in the second, as for some countries there was a break in the data series in 2001 or 2002<sup>12</sup>. There seems to be a clear declining trend in poverty rates in the UK and Portugal over the whole period and an increasing trend in Ireland. However, countries where recent changes are markedly different from changes over the previous 5 years need to be treated with some caution. The main features of the period are:

- in *Germany*, the decline in the poverty rate between 1995 and 2000 seems to be relatively firm since the data series suggest a continuous fall over this period. Some of the increase between 2000 and 2003, however, appears to be attributable to the break in the data series, though some seems to be genuine, as official figures published in the National Action Plan 2003–2005 show an increase of poverty from 11% to 12.7% from 2001 and 2002, due to the economic slowdown and increased unemployment;
- most of the recent decline in the poverty rate in *France* may be a statistical artefact, since the rate fell by 3 percentage points when a new data source was introduced. The subsequent fall (between 2001 and 2002) is by only 1 percentage point. Alternative indicators suggest a different trend: both “administrative poverty” – i.e.

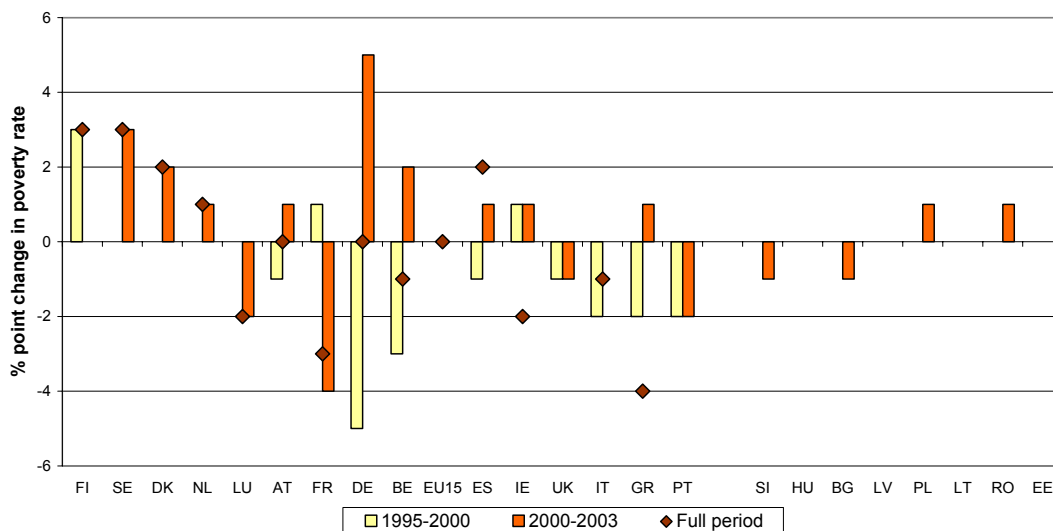
<sup>12</sup> For most countries, this means that the former European Community Household Panel data were replaced by data from other national surveys in the Eurostat database. As the methodology of the poverty indicator, however, did not change, this change in data source ought not to affect the validity of comparisons over time.

the numbers drawing income allowance (RMI) – and unemployment rates have risen (European Commission, 2005). Since the poverty rate seems to have remained much the same at 15% during the second half of the 1990s<sup>13</sup>, more investigation is needed to determine whether or not there has subsequently been a significant divergence from this in either direction;

- for *Greece*, it should not be assumed that the steady decline in the poverty rate between 1995 and 2001 has subsequently been reversed. The small increase between 2001 and 2003 might well be attributable to the break in the data series, and, in any case, it is probably within the margin of error.

All of these issues should be clarified, as noted above, when data from the new SILC, which should be comparable between countries and consistent over time, become available in future years.

**1.6 Percentage point change in the poverty rate, 1995-2000 and 2000-2003 (compared to level at the beginning of the period)**



Source and notes: see Figure 1.5

The extent of the decline in the poverty rate in countries where it was high initially, however, suggests a need to temper optimism about progress in this regard. Although in Portugal the poverty rate fell by 4 percentage points and while in the UK by 2 percentage points (Figure 1.6), the decline elsewhere was more limited. While in these two countries the fall in the rate implies a reduction in the relative number of people with incomes below the poverty line by 10% or more, in Greece and Italy, the reduction was only around 5%.

Any assessment of the magnitude of change, however, is also dependent on the poverty threshold used. As discussed earlier, the choice of poverty threshold greatly influences the

<sup>13</sup> Official French figures computed by INSEE and by CERC using the Fiscal Revenue Data 1997 and 2001 give a poverty rate of 13.5% with the 60% line in 1996, 12.7% in 2000 and 12.4% in 2001. This drop coincides with the economic recovery of the late 90s and a subsequent decrease in the unemployment rate and in the number of social assistance recipients from 1999. This differs from the EUROSTAT figures (which suggest a slight increase in poverty during the same period), which warrants for caution.

relative numbers with income below this level. Equally, the choice of the threshold affects the changes shown over time, not only in terms of scale but also at times in terms of direction. Typically, lower thresholds, because of the fewer numbers covered and their less stable sources of income, give rise to greater volatility and bigger apparent changes over time.

It is too early to examine how EU entry has affected the distribution of income in the NMS. Nevertheless, examination of the changes which are occurring is essential, as they affect the quality of life as experienced by the people living in these countries. As indicated by the literature on subjective well-being, people are very sensitive to income changes and they tend to judge their current incomes in relation to past levels as well as to the income of others (Diener and Oishi, 2000; Graham and Pettinato, 2002). In other words, income changes have subjective effects as well as objective ones.

There have been only minor changes in poverty rates during the early 2000s in those NMS and candidate countries for which data are available. The figures, based on the 60% of national median threshold, suggest a modest decline in Slovenia and Bulgaria, countries with relatively low levels of poverty, and a small increase in Poland and Romania. However, as the data for Bulgaria fluctuate significantly from year to year, more evidence is needed to identify the change which has occurred. In the other countries, including Hungary and the Baltic States, poverty rates seem to have been unchanged over this period, at least according to the data available.

### Income inequality

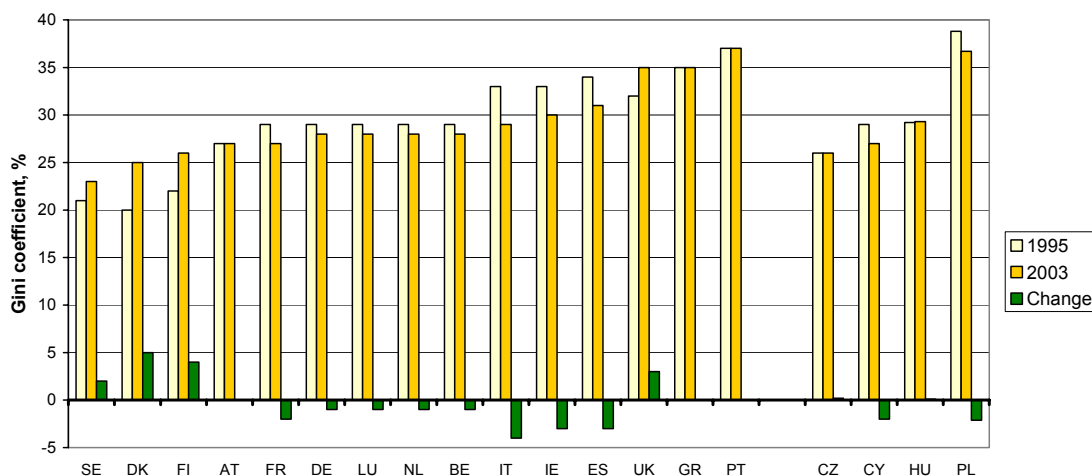
Indicators of *income inequality* suggest only small changes over recent years. The Gini coefficient, the indicator of income inequality used here (partly because it was also available for a few NMS as well as EU-15 countries) ranged from 0.20 to 0.39 in 1995 in the countries for which estimates are available (see Figure 1.7). By the early 2000s, this range had narrowed, the coefficient varying from 0.23 to 0.37. As this narrowing was partly due to an increase in the 'low inequality' countries, the change does not appear to have been wholly positive. Income inequality, therefore, increased in Sweden, Denmark and Finland, the three countries with the lowest Gini coefficients in 1995. Moreover, although there was a reduction in inequality in Italy, Spain and Ireland, there was no such decline in other countries with the highest coefficients, in particular, in Portugal and Greece, where the extent of inequality seems to have remained unchanged, and in the UK, where it increased.

Little is known about long-term inequality trends in the NMS. According to data compiled by the OECD, income inequality "moderately increased" in the Czech Republic and Hungary between the mid-1980s and the mid-1990s (Förster and d'Ercole, 2005, Table 1). This suggests that the rate of increase during this period was similar to that in Finland, the Netherlands and the UK and below that in Italy and Turkey. From the mid-1990s to 2000, a period of economic recovery, there was a small decline in inequality in Poland and no change in the Czech Republic and Hungary (Figure 1.7). Data for Cyprus also suggest a moderate decline.



Very limited data are available to assess changes in inequality in the NMS or the candidate countries. The Gini coefficients for the four countries presented in Figure 1.7 are based on an OECD data, and although they enable comparisons to be made over time and between the countries concerned, they are not necessarily suitable for comparing with EU15 countries. While the OECD data for the three NMS which are OECD members appear to have been subject to quality controls (see Förster et al, 2005, Annex 1 for a discussion of data sources), some caution is required when interpreting the figures since in some cases the estimates of inequality are somewhat different from those published by Eurostat. For Poland, for example, the Gini coefficient was 0.30 in 2000 according to Eurostat, but 0.37 according to OECD. For the Czech Republic, the estimates were much the same, while for Hungary, there is also a divergence – 0.26 as against 0.29 – which seems attributable to the choice of dataset. In this case, the higher figure appears to be the more valid<sup>14</sup>.

**1.7 Changes in income inequality: Gini coefficients for EU15 and some NMS, 1995 - early 2000s**



Source: EU15 and CY: Eurostat NewCronos database (2005); CZ, HU, PL: OECD (2005) (see Förster and d'Ercole, 2005, Annex)  
 Notes: Reference years: 1995 and 2003, except: CZ, FI, SE: 1996; CY: 1997; HU, PL: 2000; IT, PT: 2001; CZ, FR, NL, SE: 2002

## Poverty: a temporary or long-term phenomenon?

Long-term poverty has particular policy relevance, as it tends to increase the risk of social exclusion, i.e. withdrawal from some forms of social participation. Persistent risk-of-poverty is conventionally measured, in practice, as a state where income is less than 60% of the median in both the year of the survey and in two out of the preceding three years<sup>15</sup>. Comparing the results obtained with the relative numbers falling below the poverty line in the survey year gives an indication of the variability of the poverty rate and the extent to which it is permanent condition as opposed to a temporary one. If there is a significant difference between the two, it can be inferred that a relatively large proportion of people fall

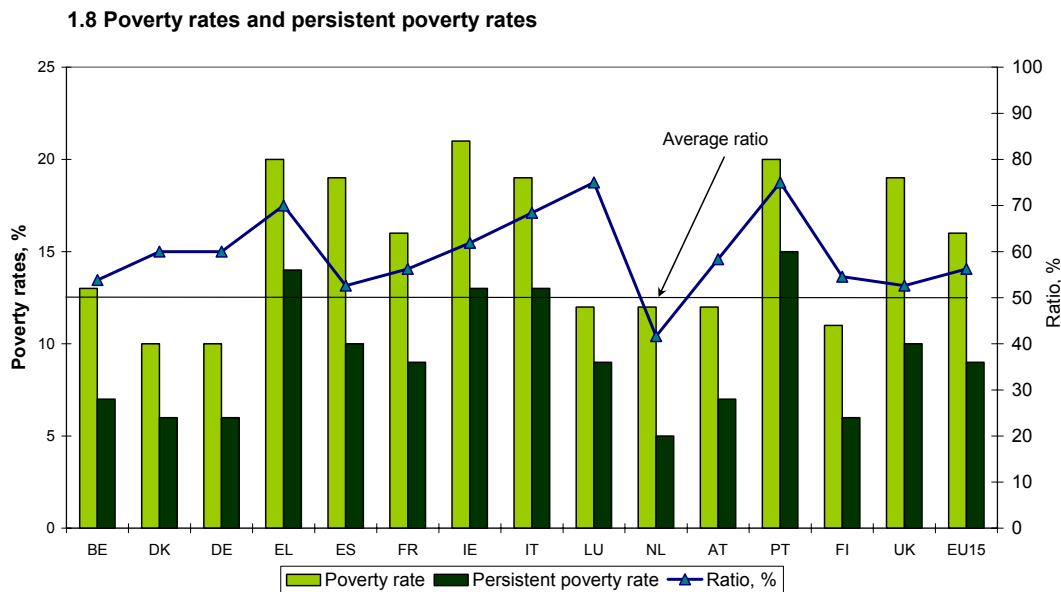
<sup>14</sup> The survey is more appropriate as there is a smaller extent of under-reporting of incomes.

<sup>15</sup> This is the definition of the Laeken indicator used to measure a persistent poverty rate. It takes account of the margin of uncertainty attached to the underlying data from the ECHP by allowing income to be above the poverty threshold for one year in four but still be defined as persistent.

below the poverty line for a temporary period only. (This, it should be noted, is compatible with the proportion itself remaining much the same from year to year.)

Long-term income poverty in the EU15 is on average 44% below poverty rates measured at one point in time. The correlation between the level of poverty and persistent poverty is relatively close ( $R=0.90$ ), which suggests that countries with higher levels of poverty tend to have higher persistent poverty. Indeed, persistent poverty is the highest (greater than 10%) in countries with high levels of poverty: Greece, Ireland, Italy and Portugal (Figure 1.8). The relationship, however, is far from being linear. In other words, the ratio of persistent poverty to poverty at one point in time varies across countries. In Spain, Luxembourg and Portugal, 70% of the people who are poor at one point in time are long-term poor. On the other hand, only 42% of the currently poor are persistently poor in the Netherlands, which is well below the proportion in other countries. These results also have implications for the relationship between inequality and mobility. If greater income inequality in a country were associated with greater income mobility, as is sometimes suggested, countries with higher poverty (which typically means higher inequality, as presented in Figure 1.1) would have lower persistent poverty. As the data suggest, this is not the case.

It remains to examine in future reports the factors underlying these results and the characteristics of those in long-term poverty in different Member States as opposed to those who move in and out of poverty from one year to the next.



Source: Eurostat New Cronos Database (2005)  
Reference year: 2001, except DE, FR: 2000

## AGE PROFILE OF POVERTY

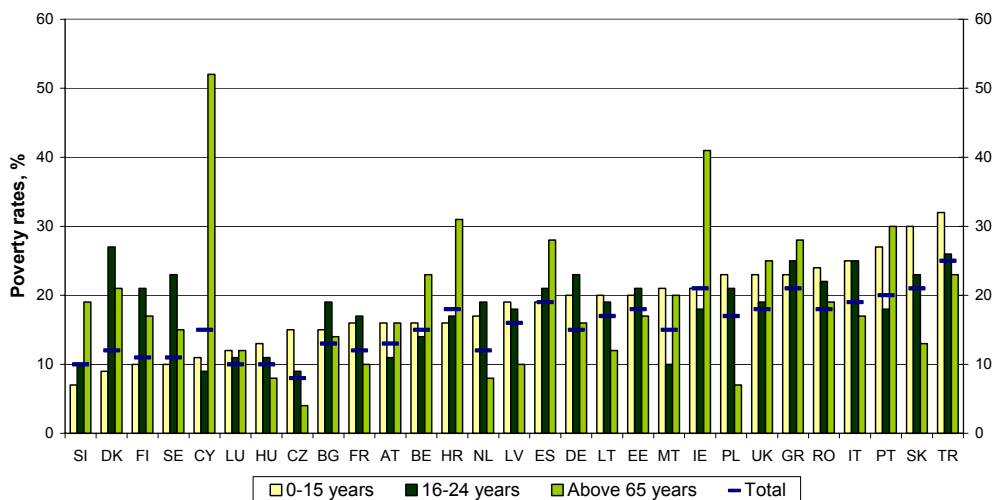
Income levels tend to vary across the life cycle of individuals, with typically a peak when they are economically active and have earnings from employment. As a result of this, the poverty rate is expected to be lower for working-age population on average than for the young and the elderly. The relative poverty rates of the young and older age groups, however, are also influenced by demographic and social factors (e.g. family composition) and social policies

(family support and pensions in particular), and therefore may differ significantly across countries.

The figures for relative income levels seem to suggest that poverty is comparatively high in old age in a number of EU Member States. In particular, in Greece and Ireland, a third or more of those aged 65 and over had a level of equivalised income which was below 60% of the national median in 2001 (the last year for which data are available for all, or nearly all, Member States), while in Portugal, Denmark Belgium and the UK, the proportion was a quarter or more (Figure 1.9). On the other hand, the proportion of old-age population in poverty is relatively low in France, the Netherlands and Italy.

In the new Member States (NMS), poverty in old-age seems to be lower in general than in the EU15 – though, of course, income levels in terms of purchasing power are also much less (see Box). An exception is Cyprus, where over half of the elderly population fall below the poverty line<sup>16</sup>.

**1.9 Poverty in specific age groups and total national poverty rate, 2003 or latest available year**



Source: Eurostat, New Cronos database (2005)

Notes: Reference year: 2003, except: FR, LV, LT; HU, NL, PL, SI, SE, BG, RO, TR: 2002; IT, PT: 2001; MT: 2000

The proportion of young people aged 16–24 with income below the poverty line is relatively high in Denmark, Finland, Sweden and the Netherlands both in comparison with the overall proportion of the population falling below this line and with the figures in other countries. This in part reflects the relatively large number of people in this age group living alone. For children under 16, the relative poverty rate (defined here and elsewhere as the proportion with equivalised income below 60% of the median) seems to be comparatively high in a number of countries, in particular, in the UK, Italy, Spain, Ireland, Portugal, Malta, Poland and Slovakia.

<sup>16</sup> This result does not seem to be attributable to data problems. Discussions with national experts confirmed the validity of this finding. A recent study by a Cypriot economist, Pashardes (2003), used the 1996–97 Family Expenditure Survey to examine the causes of poverty. The study finds that pensioners (aged over 65) have 58% higher probability of being below the poverty line than non-pensioners, other things being equal.

## Relative income across age groups

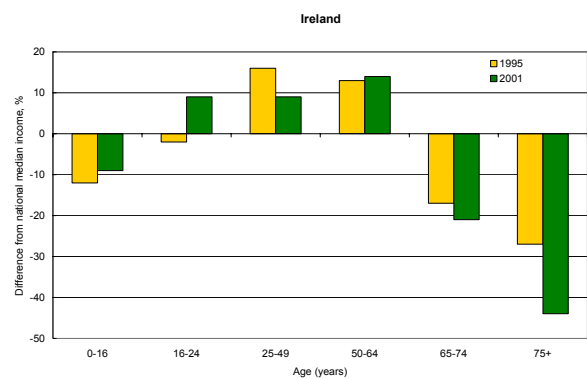
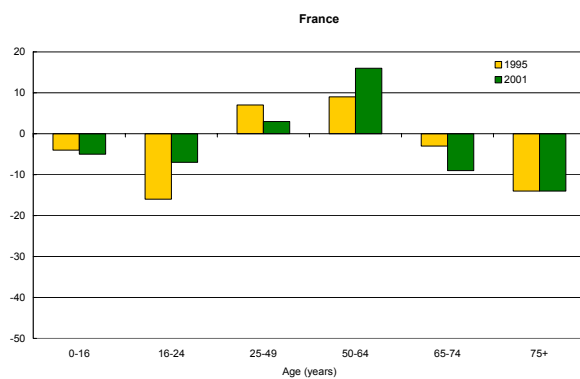
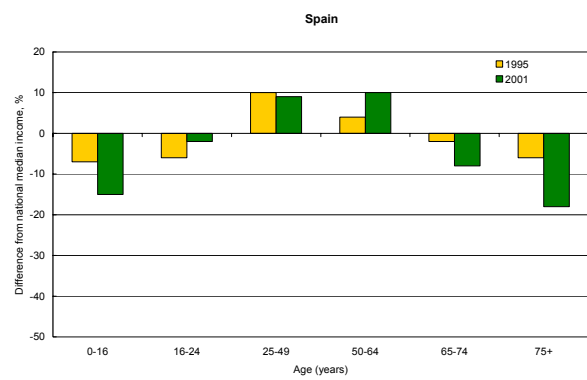
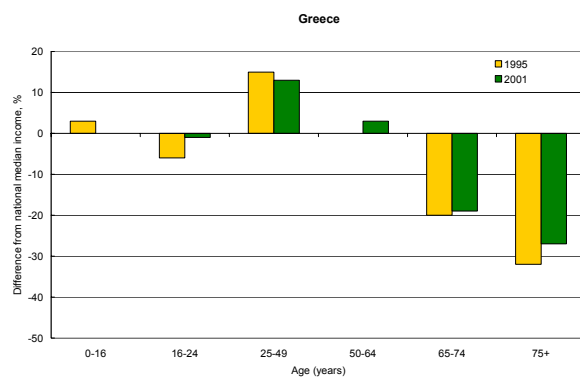
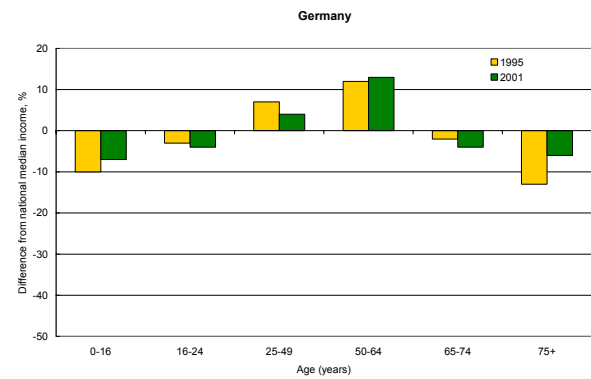
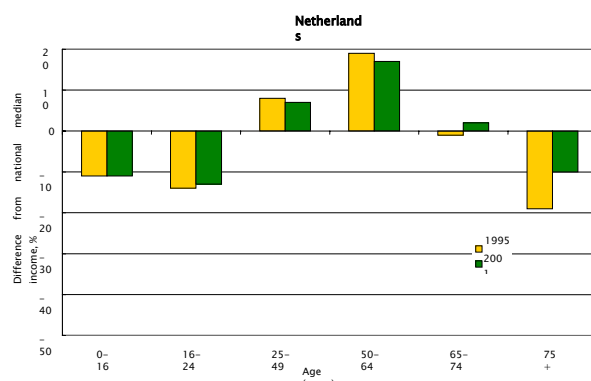
Although the relative number falling below the poverty line gives an indication of poverty and social exclusion, it reveals nothing about how poor those below the poverty threshold are or about the relative position of those who fall into the non-poor category. It is both informative and relevant, therefore, to extend the analysis to the incomes of those in the broad age groups distinguished above. In particular, the focus is on *relative* levels of income of the different age groups as compared with the average in the country concerned. National average income in this context can be interpreted both as a baseline for policy-makers and as a reference point for the people in the different groups – in the sense that people in society tend to compare their income to that of others. (See Figure 1.10, which indicates the difference between the average income of those in each age group and the national average – median– income).

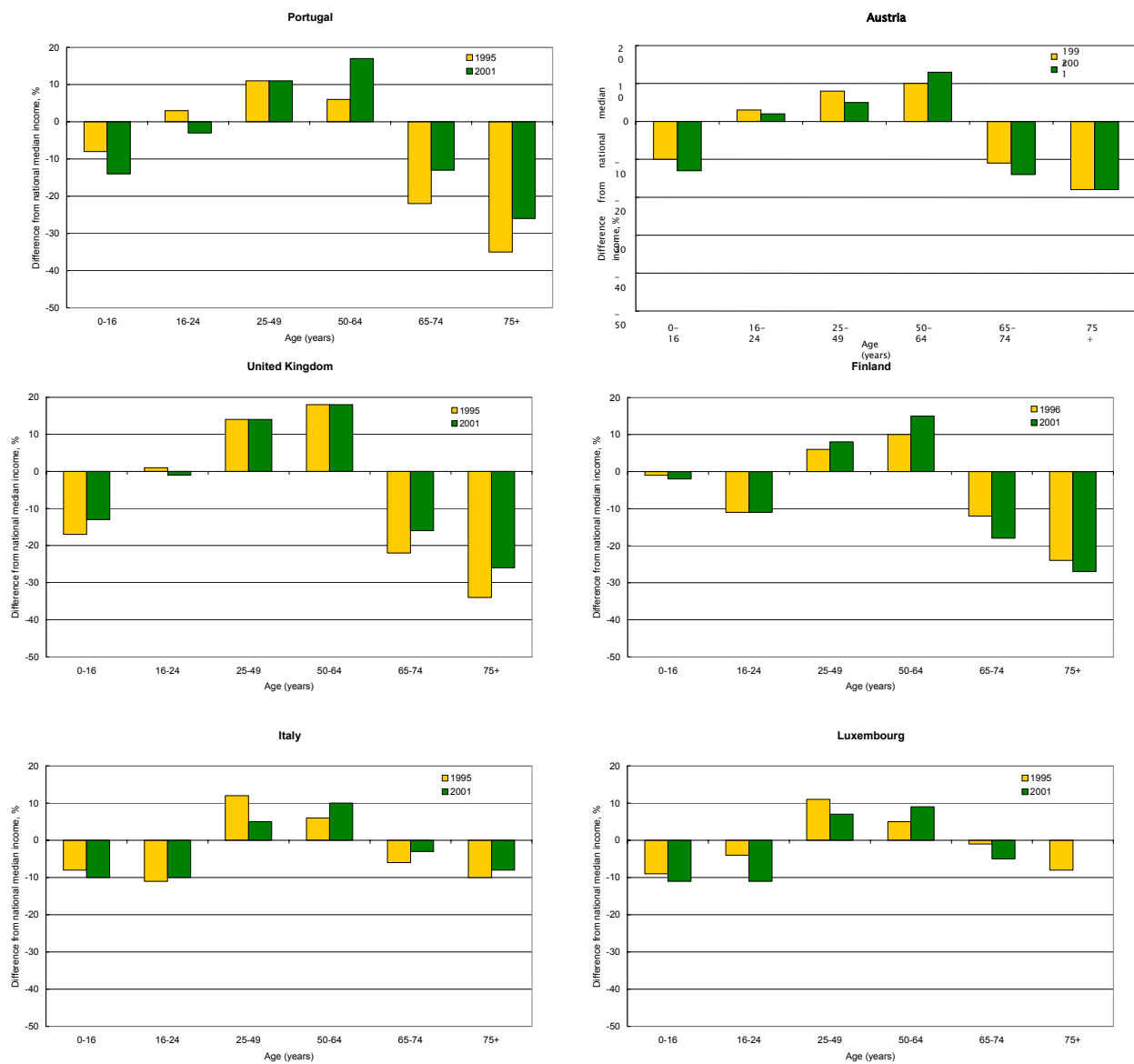
An examination of the variation of income levels between age groups reveals a life-cycle effect in nearly all countries: equivalised income tends to be low for both children under 16 and young people of 16–24, to rise when people are working and then to fall back again once they retire. Strictly speaking, however, the data does not necessarily show the distribution of income over a person's life cycle, which would require longitudinal data spanning many decades, though it may be indicative of this. It cannot be concluded, therefore, that in fifty years time the 16–24 age group would have the same relative income level as the 65–74 years age group has now., But it does show the relative income people in different age groups and at various stages of their life currently receive (or did receive in 1995 or 2001), which is equally instructive. It is also relevant for policy purposes insofar as income affects behaviour and decisions which have long-lasting consequences not only for individuals but for society as a whole, such as whether and when to have children.

There are great differences in the extent of age-specific variations in income levels across EU15 Member States. One group of countries – Germany, Italy and Luxembourg – show a relatively “flat” pattern across the life cycle, in the sense that while the average (median) income of younger people and older people is less than that of the prime age group, the difference is relatively small. At the other extreme, there are four countries – Ireland, the UK, Greece and Portugal – where differences in average income across age groups are substantial. In all of these countries with a high degree of inequality, average income tends to be much lower among the elderly than among children. Indeed, in Greece, the average income of children is above the average for the population as a whole, though in both the UK and Portugal, it is still around 10% lower than the national average. In all of these countries, also, the average income of young people aged 16–24 is either above or only slightly below average.

Children have relatively low levels of average income in Spain, Austria, Portugal and the UK, whereas in Belgium and Finland, levels are close to the median, while relative incomes of young people are particularly low, by EU15 standards, in Finland, the Netherlands and, despite their relatively even distribution across age groups, in Italy and Luxembourg.

### 1.10 Median equivalised net income of specific age groups relative to the national median income, 1995 and 2001 (% difference)





It is also possible to compare recent changes in the variation in average income between broad age groups across EU15 Member States, even if over only a relatively short period (Figure 1.10). Between 1995 and 2001, there was an unambiguous reduction in intergenerational inequality in the UK, Greece and the Netherlands, in the sense that the average (median) income of all age groups became closer to the national median. This was also almost the case in Belgium, where the 50–64 age group was the only one to show an increase in income relative to the average. By contrast, intergenerational income differences widened unambiguously in Spain, where there was a marked decline in the average income of both children and older people relative to the median, and in Finland, though much less so.

In the other EU15 Member States, the change in income differences is less clear-cut. In Ireland, the average income of those aged 65–74 and, most especially, those aged 75 and over, declined relative to the median (reflecting the substantial increase in the median over this period), while the relative income of children increased as did that, more markedly, of young people aged 16–24. The rapid pace of economic growth in Ireland and the job opportunities this created may, therefore, have been of particular benefit to people beginning their working careers. The relative income of those aged 65–74 also fell in Germany, Austria, France and Luxembourg, though in each case, the relative income of those of 75 and over either remained much the same or rose. In Portugal, the relative income of both groups aged 65 and over increased, accompanied by a reduction in the relative income of children and young people.

In sum, the only countries in which the average income of children increased relative to the median over the period, other than marginally, were the UK, Ireland and Germany, while the relative income of young people rose in around half the countries. The average income of those of 65 and over (including those over 75) fell in relative terms only in 5 countries (Ireland, Austria, Finland, Spain and France)<sup>17</sup>.

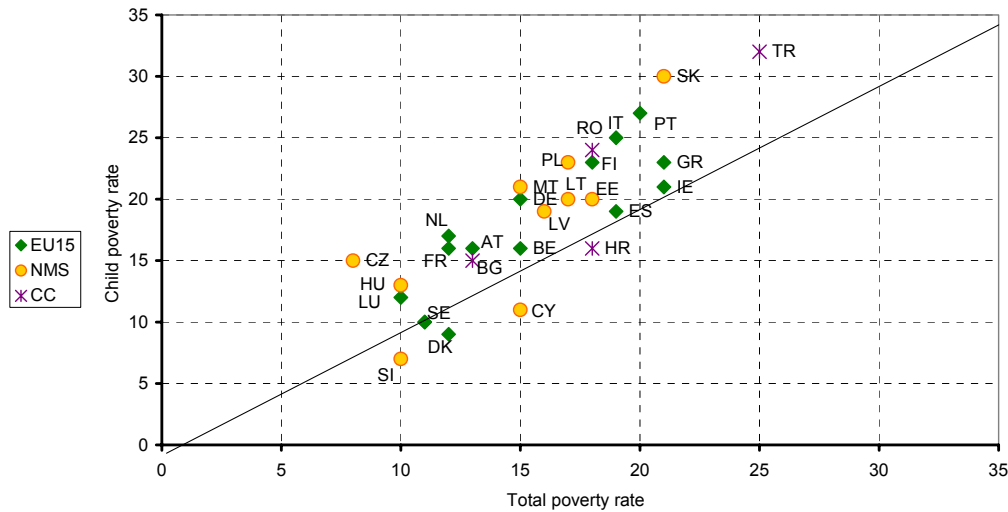
## Child poverty

Poverty rates, again defined in terms of income below 60% of the national median, are higher for children than for the overall population in most countries of the European Union (Figure 1.11). This (relative) poverty rate ranges, however, from 30% to 7% across the EU25, a fourfold difference. The OECD study by Förster and d'Ercole (2005, Table A7), using a lower poverty threshold (50% of the median), finds an even wider variation across OECD countries. According to this measure, child poverty rates vary by more than a factor of ten across the OECD, from less than 3% to 30%.

Figure 1.11 indicates both the level of child poverty and its relationship to the poverty rate of the population as a whole. The latter is one indicator of intergenerational equity. The fact that most countries cluster above the diagonal highlights the potential importance of child

<sup>17</sup> It is worth noting that the relative income of those of 65 and over is affected not only by the level of pensions in relation to earnings but the extent to which pension arrangements and the social welfare system more generally deal with non-standard cases, such as interrupted working careers, or with pensioners living alone. For an analysis of this, see G. Heinrich (2000).

### 1.11 Child poverty vs. total poverty in EU29, 2003



Source: Eurostat, New Cronos database (2005)

Notes. Reference year: 2003, except: see notes under Figure 1.9.

poverty as a policy issue across the EU and in this respect there is no great difference between “old” and “new” Member States.

The variation in the level of child poverty is greater among the NMS than in countries of the EU15. With the exception of Slovenia and Cyprus, child poverty is relatively high in all NMS, reaching 30% in Slovakia. Within the EU15, the three Nordic countries, Denmark, Sweden and Finland, have the lowest levels of child poverty. In these countries, the occurrence of low income is no greater among children than among the population as a whole. Moreover, this measure takes no account of non-monetary benefits which families with children have access to in these countries, which are significantly more extensive than elsewhere in the EU, as shown in Part IV below, and which accordingly serve to raise the effective income, or living standards, of families even higher. At the other extreme the rate of child poverty is highest in the EU15 in Italy and Portugal at around 25% or more. The rate of child poverty varies between 15% and 32% in the four candidate countries, according to the data available, with Turkey having the highest rate with one in three children living in households below the poverty line.

### Changes in the level of child poverty

There is a need for caution when drawing conclusions on trends in child poverty over recent years, as there is in respect of poverty as a whole. However, the issue of child poverty has been given increasing prominence by the publication over the past few years of a number of major reports (Vleminckx and Smeeding, 2001, UNICEF, 2005). It has also been argued from the data available that there was an increase in child poverty during the 1990s in the majority of developed countries (Bradbury and Jantti, 2001, Stewart and Micklewright, 2001) as well as in most transition countries (UNICEF, 2001). According to a recent study, (Förster and d'Ercole, 2005), though the rate varied markedly between OECD countries, child poverty was higher in 2000 than in either the mid 1980s or the mid-1990s. According to other



studies, however, the tendency over recent decades is not so clear in European countries (Oxley et al., 2001) and more recent findings come to the same conclusion for the 1990s, showing that the development was not the same across countries (Chen and Corak, 2005). In the following sections, data are presented for the years between 1995 and 2001 for EU15 and between 2000 and 2003 for the New Member States, the longest periods for which (apparently) consistent data are currently available at EU-level.

According to data from the ECHP, there was a modest decline in the proportion of children below the poverty line in the EU15 as a whole between 1995 and 2001, though by no means in all Member States. In particular, the proportion declined significantly in Belgium, Germany, and Austria (see Figure 1.12). Child poverty increased slightly in Spain and Luxembourg, while in most other countries it remained much the same.

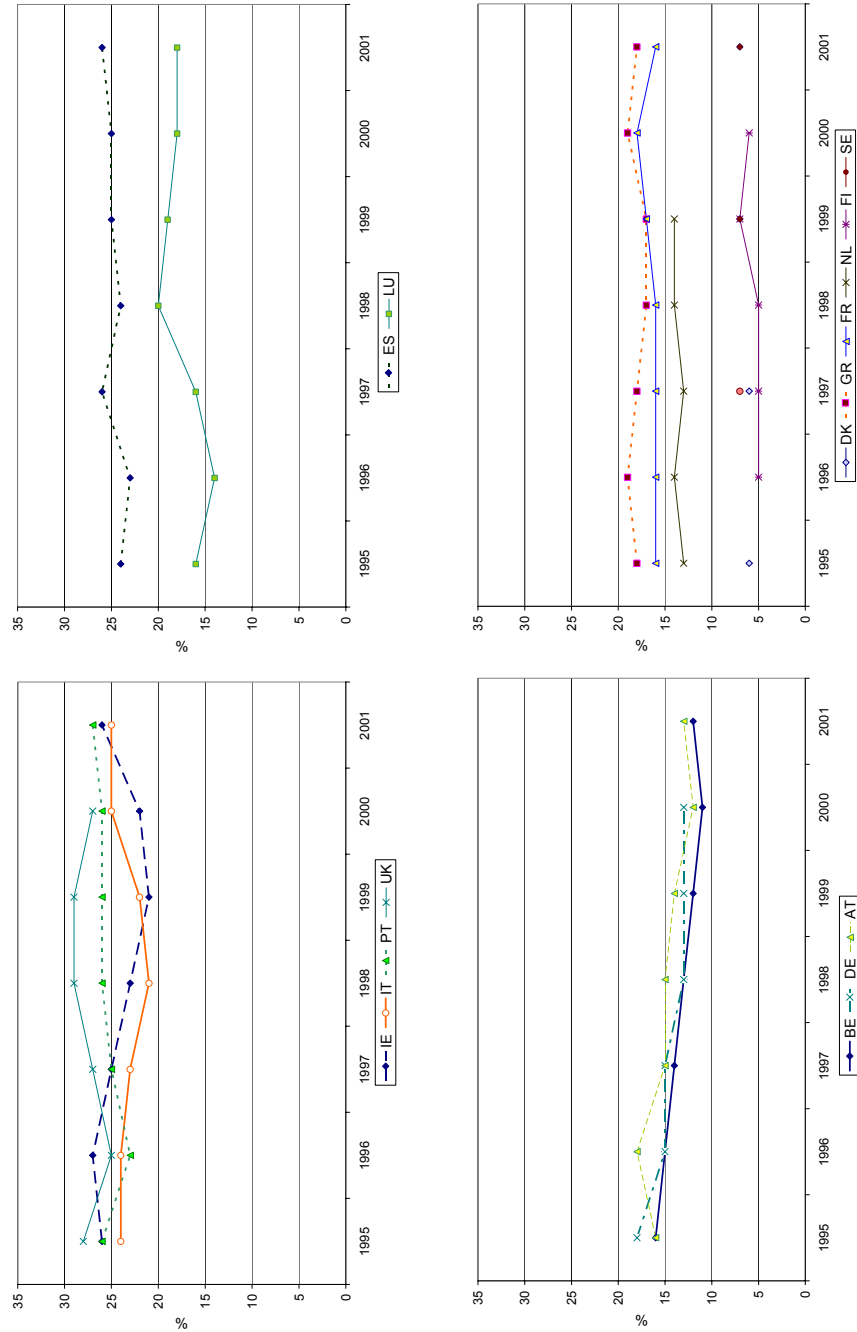
Although comparable data for the same period are not available for the new Member States, recent studies throw some light on developments in a few countries. In particular, in the Czech Republic, Hungary, and Poland, the evidence suggests that the rate of poverty among children increased between 1995 and 2000<sup>18</sup>. This apparent deterioration in the position of children was accompanied by increased targeting of benefits in these countries<sup>19</sup>.

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<sup>18</sup> See Table A7, Figures 16 and 24 in Förster, M., M.M. d'Ercole (2005). The poverty thresholds are set at 50% of median income, i.e. lower than the 60% threshold used here.

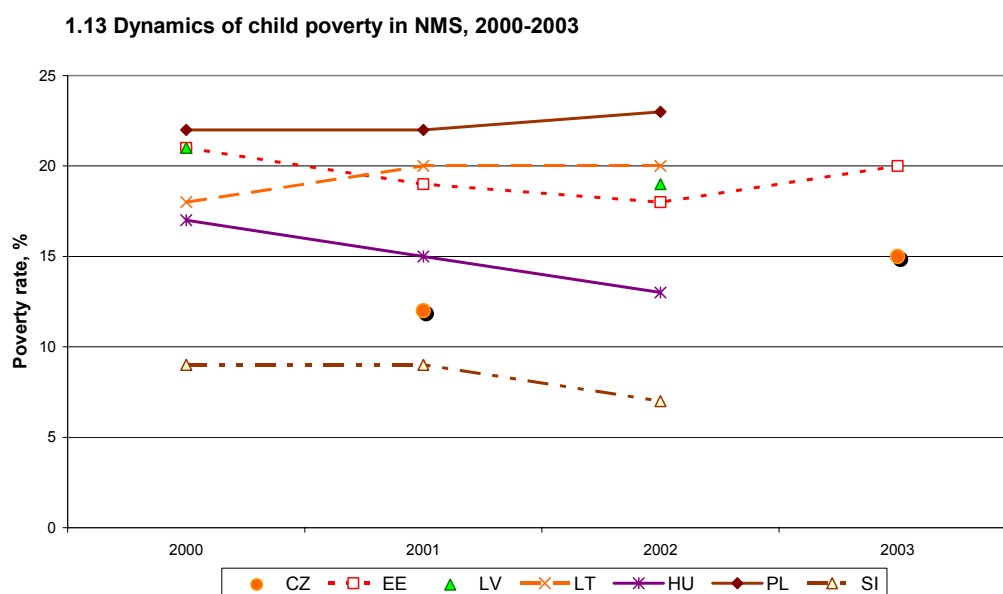
<sup>19</sup> Förster, M. F., Tóth, I. G. (2001)

1.12 Dynamics of child poverty in EU15, 1995–2001



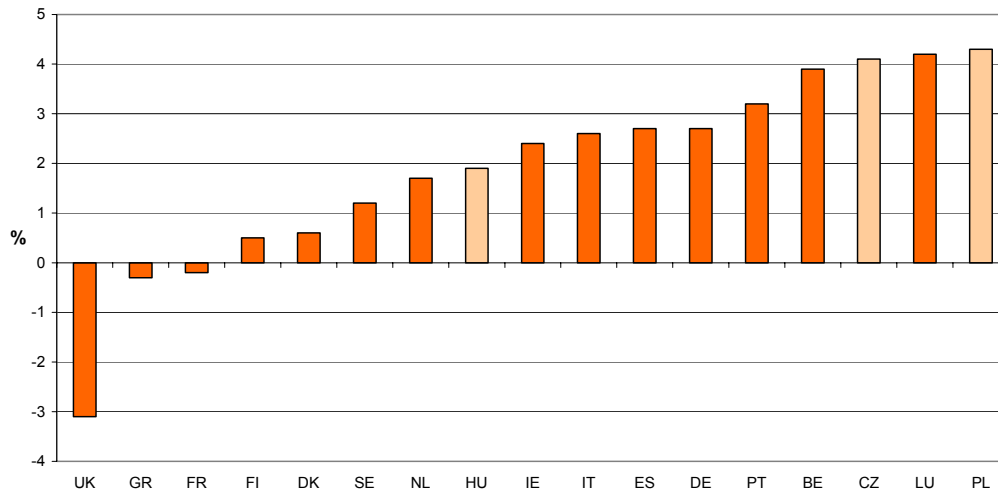
Source: Eurostat NewCronos database (2005)

Note: the data presents a comparable series over time, as data with break in the series were omitted



Consistent data series for NMS are available for a shorter, more recent period, between 2000 and 2003 (Figure 1.13). Although this is too short a period to identify trends, it still provides an insight into recent changes. The rate of child poverty seems to have increased over this period in the Czech Republic, while there was a small (but probably statistically significant) decline in child poverty in Slovenia and Hungary.

An alternative data source, covering a longer period, between the early and the late 1990s, indicates that child poverty has increased in most European countries, including in the three NMS, Hungary, the Czech Republic and Poland (Figure 1.14). According to the UNICEF analysis, the clear exception to the general trend is the UK, where the rate of child poverty declined by over 3 percentage points

**1.14 Changes in child poverty rates during the 1990s**

Source: Luxembourg Income Study, based on calculations of UNICEF (2005)  
 Notes: poverty threshold= 50% of median equivalised income  
 Reference years: 1991 or 1992, except BE: 1988; DE: 1989  
 2000, except FR, DE: 2001; HU, NL, GR, PL, UK: 1999; BE, AT: 1997; ES: 1995

Note, however, that while the earlier results suggest that Belgium, Germany, and Austria experienced falling child poverty over the 1990s (Figure 1.12), the alternative LIS (Luxembourg Income Study) data suggest that child poverty increased in all three countries over this period (Figure 1.14). These two sets of apparently conflicting results might be reconciled by the fact that they refer to different time periods: the ECHP (the basis of Figure 1.12) to the period between 1995 and 2001, the LIS to a longer period, starting in 1991 or 1992 for most countries. If the two datasets are regarded as both reliable, the implication is that there was a reversal of trend in child poverty in Belgium, Germany and Austria in the second half of the 1990s (which might possibly be associated with recovery from the economic recession of the early 1990s and the fall in unemployment accompanying this), but that the extent of the decline was less than the increase in the first half of the 1990s.

## CAUSES OF CHILD POVERTY

What are the main causes of child poverty? As children do not tend to have own incomes, they are recorded as being in (relative) poverty when they live in households with low income. The main factors affecting child poverty are the following:

- the employment status of household members:
  - households with jobless people tend to have relatively high poverty rates in all countries.
  - the security and quality of employment is also important, as low-skill, low-paid jobs pose a poverty risk. The evidence suggests that there is a positive

correlation between the incidence of low pay and the child poverty rate across the EU15 ( $R=0.63$ )<sup>20</sup>.

- family incomes tend to be greatly influenced by whether women are employed or not, and if so, the nature of the employment and whether the job is part-time or full-time<sup>21</sup>.
- household composition:
  - children of lone parents are particularly exposed to the risk of poverty. Families with three or more children also tend to face higher poverty rates (see below). According to a recent UNICEF report (2005) two major but opposing tendencies have been taking place in recent years: the increasing age and, as a result, the rising educational level, of parents which tends to increase incomes and reduce the risk of poverty and the growing prevalence of lone parenthood which increases the risk.
- government cash transfers:
  - the amount of family benefits, including both cash transfers and tax credits, which affect family disposable income.
- social services, especially child care facilities:
  - the availability of free or subsidised child care which reduces spending on private child-care arrangements, and which affects the ability of women to work and so household income.

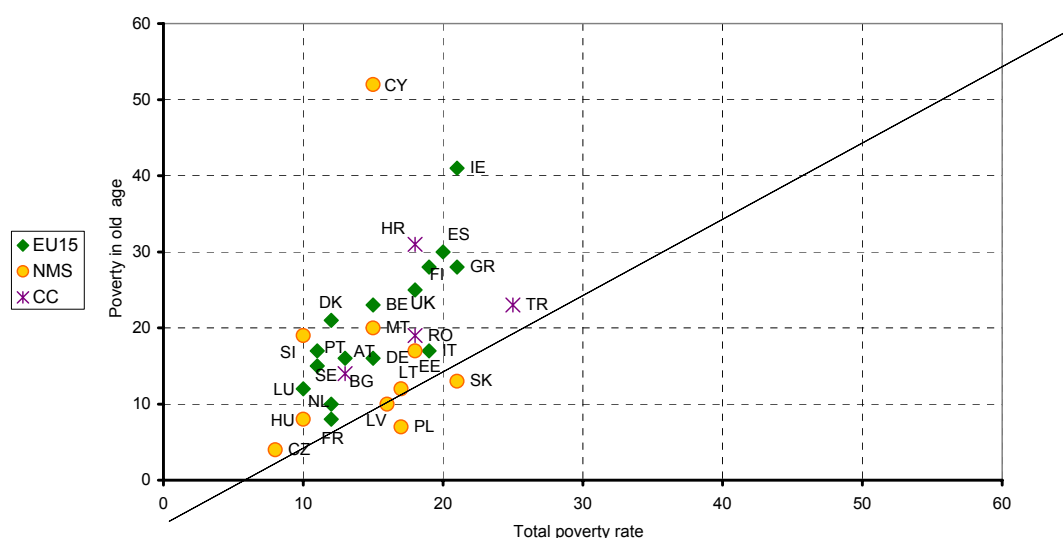
A recent analysis of the causes of child poverty focused on factors explaining changes in poverty rates during the 1990s (Chen and Corak, 2005):

- among countries where child poverty increased, changes in government transfers contributed to higher child poverty in Hungary and Italy, in addition to the demographic and labour market forces that were also tending to push up child poverty rates. In contrast, in West Germany and Finland, government transfers cushioned the impact of the other forces, but could not entirely neutralise them. In Hungary and Italy, the increase of child poverty was primarily caused by labour market factors;

<sup>20</sup> See the section on Poverty, inequality and the labour market below as well as (Makovec, O'Donoghue and Toso, 2005)

<sup>21</sup> See the section on Poverty, inequality and the labour market below.

1.15 Old-age poverty vs. total poverty in EU29, 2003



Source: Eurostat, New Cronos database (2005)

Notes. Reference year: 2003, except: see notes under Figure 1.11

- in the Netherlands, Belgium and Sweden there was no significant change in child poverty rates. According to the study, in the Netherlands “changes in government transfers on their own would have implied a significant increase in child poverty rates” (p. 36). In the other two countries, the role of the government was neutral;
- the UK has experienced a large fall in child poverty, changes in the amount of social transfers playing a major role in this;

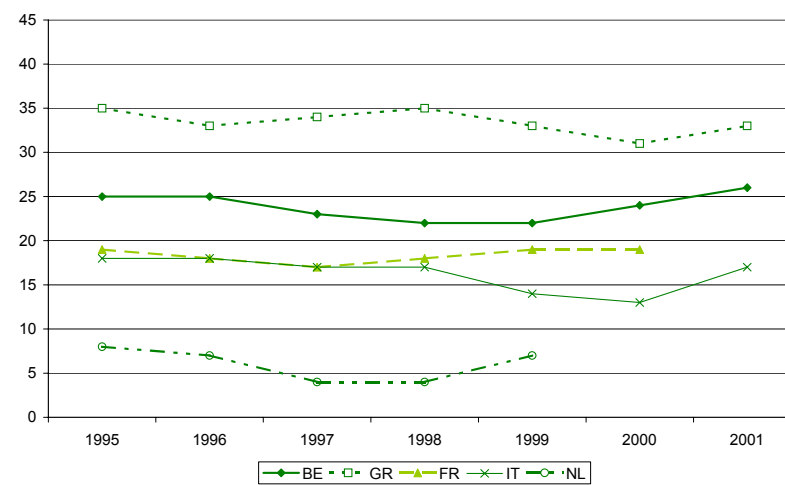
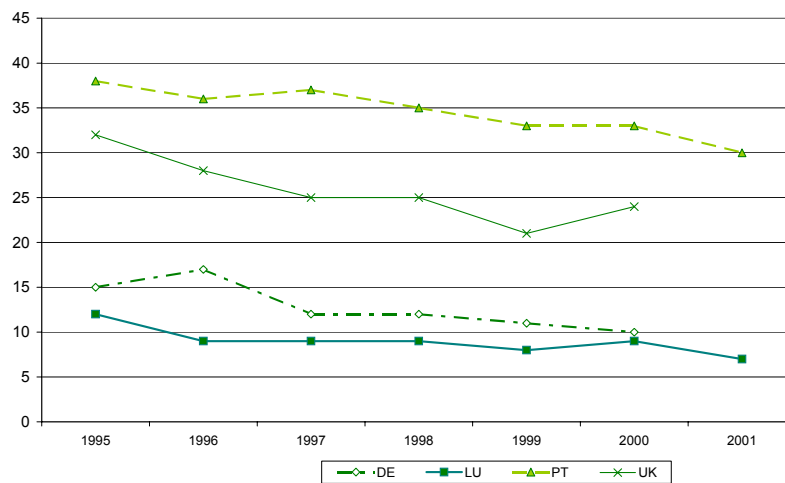
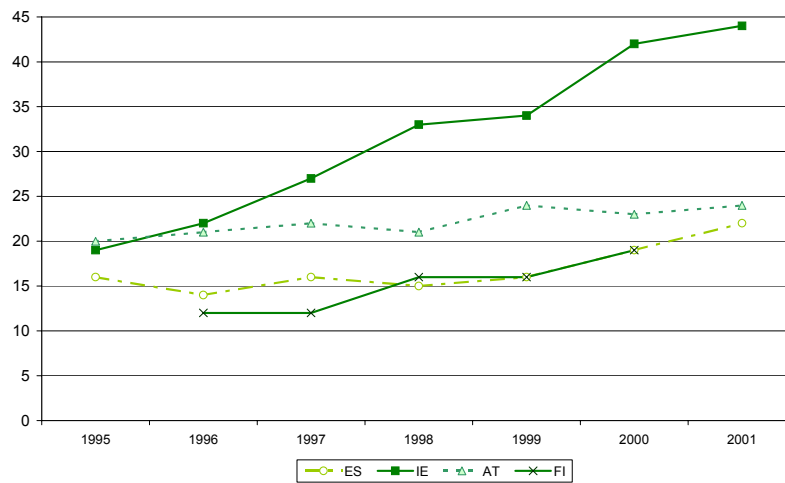
## Old-age poverty

The proportion of those aged 65 and over with income below the poverty threshold in the EU ranges from 4% (the Czech Republic) to 52% (Cyprus). In the EU15, the old-age poverty rate, so defined, tends to be higher than the overall poverty rate (Figure 1.15, where the data points for these countries lie mostly above the diagonal). In contrast, in most NMS, old-age poverty rates are less than the overall rate. The clear exception is Cyprus, where old-age poverty rates are exceptionally high, as noted above.

## CHANGES IN POVERTY IN OLD AGE

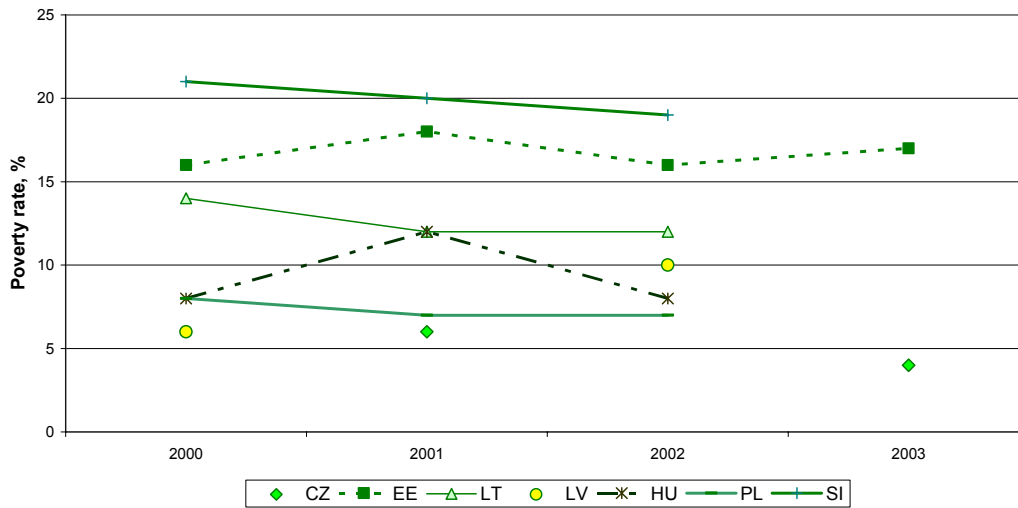
The proportion of people aged 65 and over below the poverty line rose by over twofold in Ireland in the 6 years up to 2001, according to the ECHP (Figure 1.16). The proportion also increased in Spain, Austria and Finland, although to a lesser extent. The relative number of older people below the poverty threshold declined in Portugal, Germany, the UK and Luxembourg.

## 1.16 Dynamics of poverty in old age in EU15, 1995–2001



Data exists only for a few NMS for the same period. A recent study, using an alternative data source suggests that poverty has fallen significantly among those aged 66 and over in Hungary and the Czech Republic since the mid 1990s<sup>22</sup>. The reduction has been particularly marked for those of 76 and over. In Poland, the proportion of those aged 66–75 with income below the poverty line declined slightly, but that of those aged 76 or more rose. This suggests, given the much larger increase in the relative number of children with poverty level incomes than older people in the early 1990s, that there has been a marked widening of inter-generational differences in income in these countries<sup>23</sup>.

1.17 Dynamics of poverty in old age in NMS, 2000-2003



Source: Eurostat NewCronos database (2005)

Note: The data are comparable series over time, as those with breaks in the series are omitted

More recent data, covering the period 2000 to 2003, suggest that there may have been only limited changes in the poverty rates of those aged 65 and over in the past few years (Figure 1.17). Poverty rates appear to have increased in Latvia since 2000 but to have declined to a small extent (by 2 percentage points) in the Czech Republic, Lithuania and Slovenia.

## CAUSES OF POVERTY IN OLD AGE

As labour market participation of those aged 65 and over is limited, their risk of poverty is influenced by two main factors:

- demographic factors:
  - household size: larger household size typically reducing the risk of poverty because of the income available from other household members,
  - gender: women tending to have higher poverty rates as their pensions are often lower (due to lower wages when in work, limited periods of employment)

<sup>22</sup> See Table A7, Figures 16 and 24 in Förster, M., M.M. d'Ercole (2005). The poverty thresholds are set at 50% of median income, i.e. lower than the 60% threshold used here.

<sup>23</sup> See Bradshaw, J. (2000), in which the analysis is based on data from the Luxembourg Income Study.



or because they are widows whose pension entitlement derived from their husbands is less than the initial entitlement)

- government transfers:
  - pension arrangements: since pensions tend to be the main source of income, their scale, the extent of indexation and whether this is related to price or wage increases, and the nature of pension entitlement significantly influence on the risk of poverty of those aged 65 and older;
  - health care or long term care costs: since these can be substantial for the elderly, the extent of government support through social services has a major impact on their risk of poverty; this, however, is not typically revealed by the data on income data and, therefore, does not appear in the measure of poverty used here. The relative scale of such services and how this varies across countries are examined in Part IV below.

### Poverty levels by type of household

Household structure, and the number of children in particular, can be expected to be one of the main factors underlying poverty. Comparing the relative numbers living in households with children who have income below the poverty line with the overall proportion falling below this line can give an indication of the relative poverty among the former. (See the charts in Figure 1.18 in which the distance from the 45 degree line indicates how much the poverty rates of different household types differ from the overall rate; a distinction is made between the EU15 countries and the new Member States to show the difference between them.).

Couples without children and one-child families typically have a lower risk of poverty across the EU25 than others in society, while both lone-parent families and large families with three children or more tend to have a higher risk. In the majority of countries, the poverty rate of the archetypal two-adult-two-child family is much the same as for the population as a whole. It should be noted, however, that these results may be affected by the method used to equalise household income, in particular by the specific weight given to children when adjusting household incomes for household size. (Throughout this report, it should be recalled, children are accorded a weight of 0.3 when calculating average equivalised household income, while the first person aged 16 or over is accorded a weight of one and others above this age, a weight of 0.5, some two-thirds more than for children. How far these weights reflect the true costs imposed on the household by children relative to other household members is uncertain and open to debate.)

In all Member States, apart from Luxembourg, the Netherlands, Latvia, Poland and Slovakia, the proportion of lone parents – who are predominantly women – below the poverty line is higher than the national average and very much higher in Ireland, Greece, Spain, Portugal, Austria, Finland and the UK among the EU15 countries and in Cyprus, Slovenia and Estonia

among the NMS. These findings do not necessarily signify that lone parenthood in itself increases the risk of poverty. But there is strong evidence that this risk, as in most cases, is very much related to whether or not the parent concerned is in paid employment and in a number of countries, it is evident that being a lone parent has a significantly adverse effect on the chances of being employed<sup>24</sup>.

Families with three or more children are around twice as likely to be poor as those with two children in the UK, the Netherlands, Austria, Poland and the Czech Republic. In these countries, therefore, the presence of a third child seems to imply an especially large adverse effect on the equivalised income of households, though it could equally be the case that households which are in any case prone to having poverty levels of income tend to have large families. The direction of causation, in other words, does not necessarily run from the number of children families have to their equivalised income levels. In Sweden, Finland and Belgium, on the other hand, poverty among families with three or more children seems to be relatively low, which may reflect the support available in these countries to enable women, even with large families, to work.

As noted above, therefore, these differences in the poverty rates partly reflect not only the extent of participation of women in the labour market but also whether they work part-time or full-time, which is greatly influenced by both the availability and the affordability of child care facilities and the ease with which women – and men – are able to combine employment with their family responsibilities<sup>25</sup>.

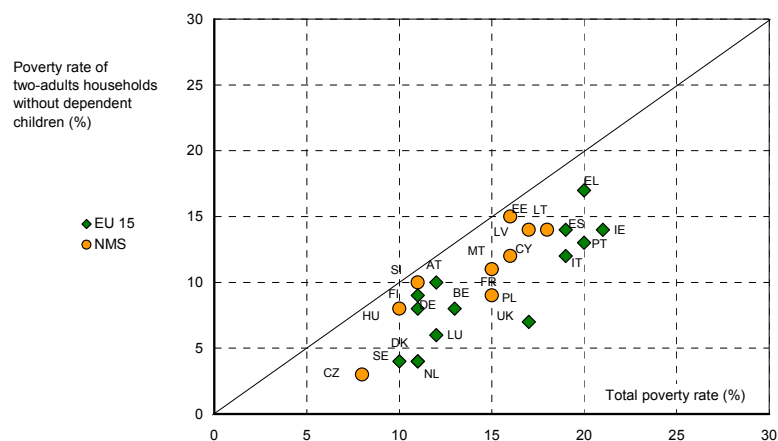
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<sup>24</sup> See Förster, M., and M.M. d'Ercole (2005), and *Babies and Bosses*, OECD, 2005.

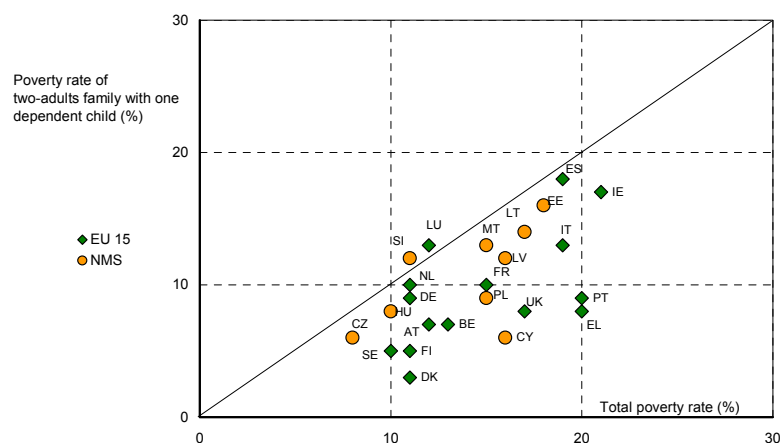
<sup>25</sup> See OECD, *Babies and Bosses*, op. cit. and Immervoll H and D Barber (forthcoming). See also Conseil Emploi Revenu Cohesion (2004), which finds that the relatively high rates of poverty among children in both large families and lone parent households, as well as among immigrant families, is a result less of low rates of pay than of poor employment conditions.

## 1.18 Poverty rates by type of household

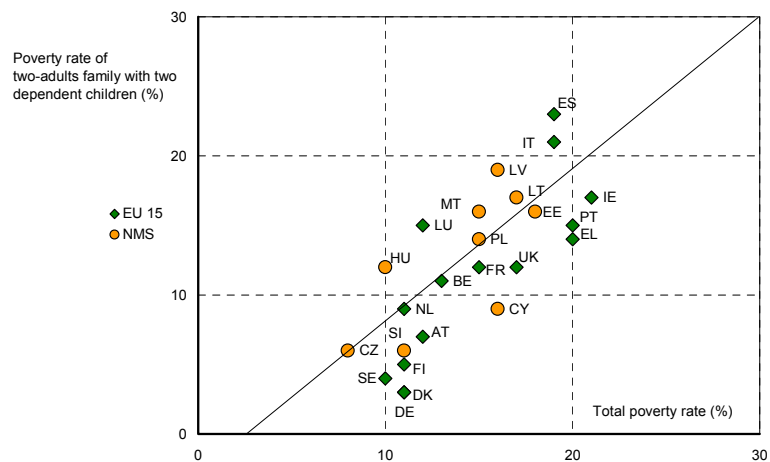
1.18a Poverty rates of two-adults households without children and total poverty, 2001



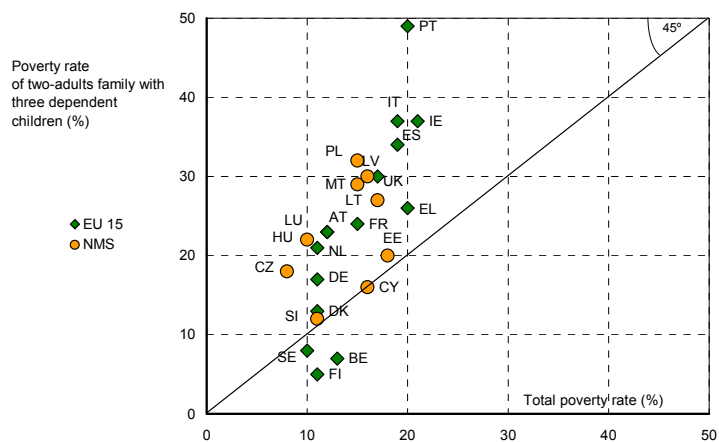
1.18b Poverty rates of two adults with one child and total poverty, 2001



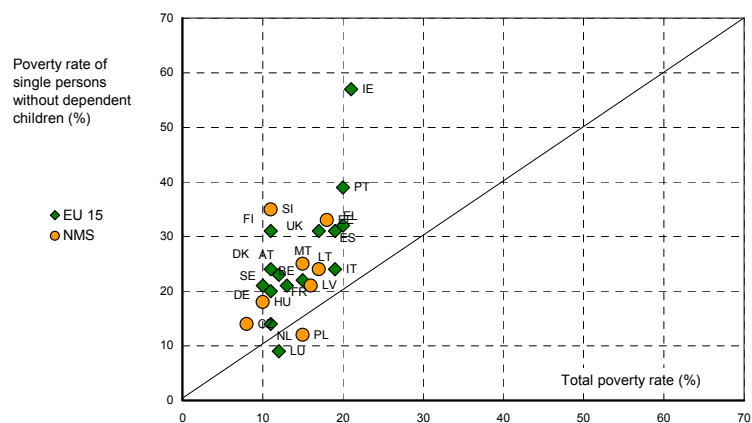
1.18c Poverty rates of two adults with two children and total poverty, 2001



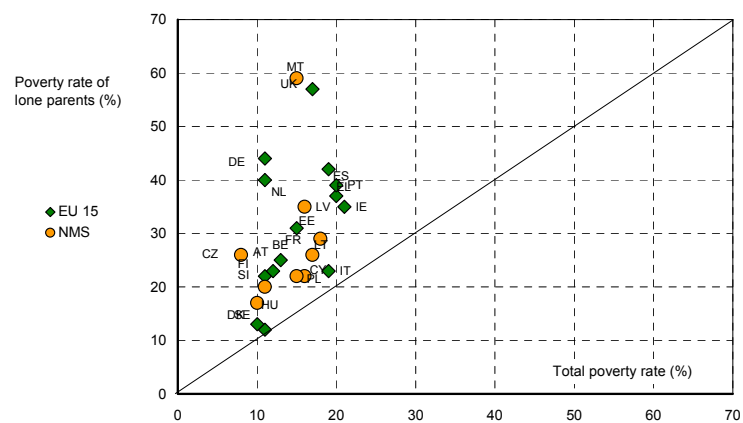
1.18d Poverty rates of two adults with three children and total poverty, 2001



1.18e Poverty rates of single persons without children and total poverty, 2001



1.18f Poverty rates of lone parents and total poverty, 2001



## CHANGES IN POVERTY RATES BY HOUSEHOLD TYPE

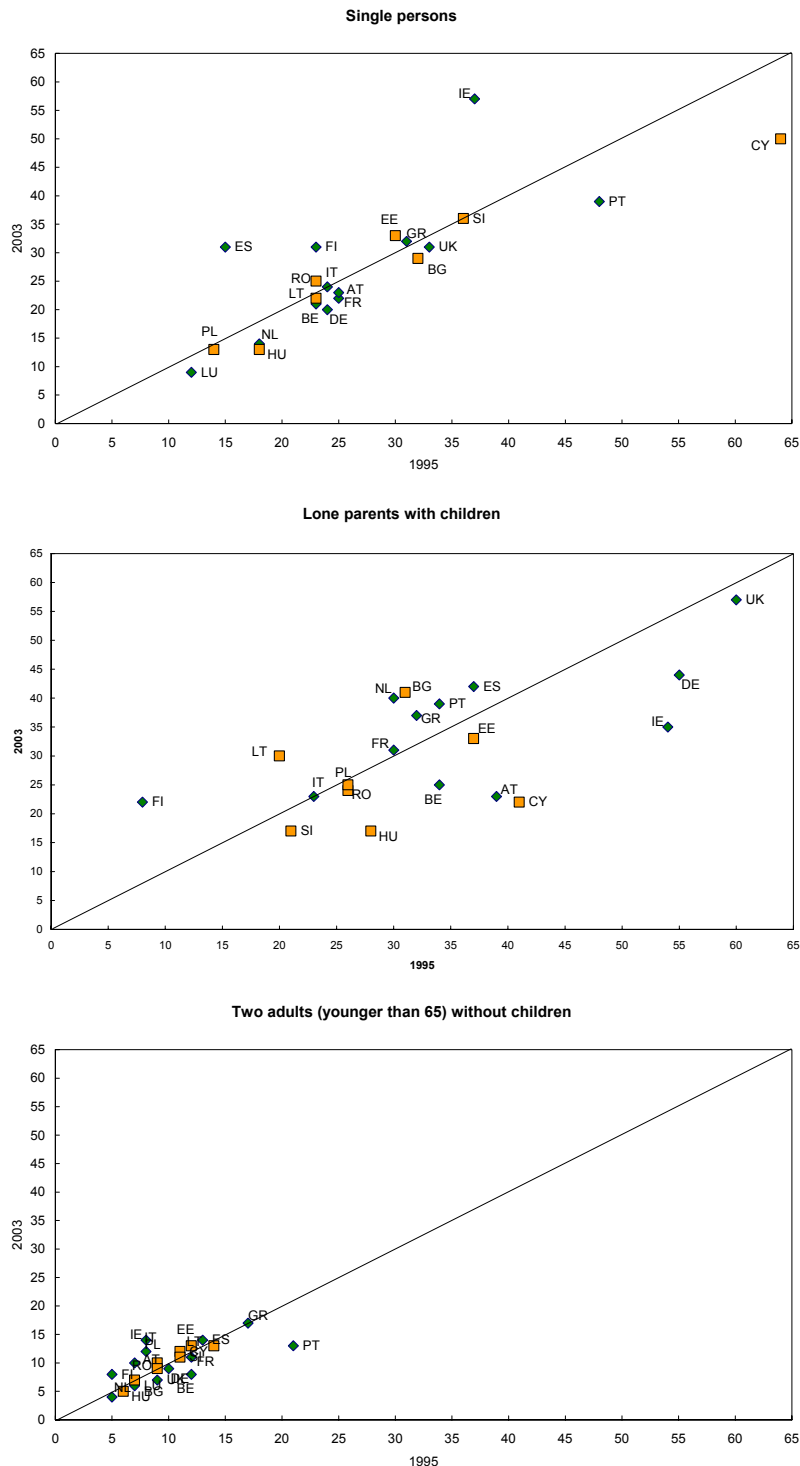
Over the period for which data are available – 1995 to 2001 for most Member States – the position of families with children seems to have improved in relative terms in a number of countries (in particular, the UK and Belgium), while the relative income of lone parents rose in Italy and Ireland, especially. In Spain, however, there was a reduction in the relative income level of households with children.

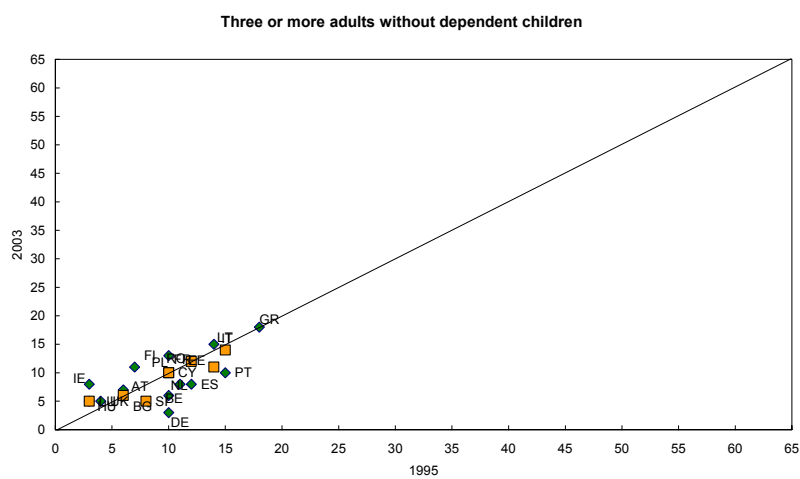
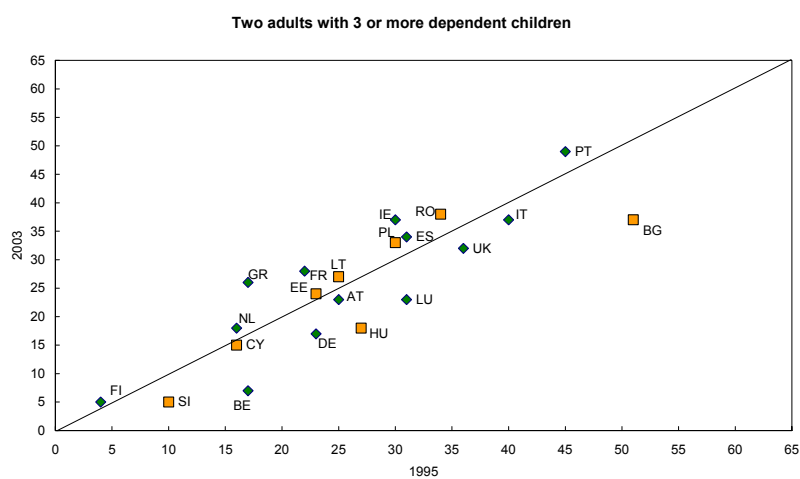
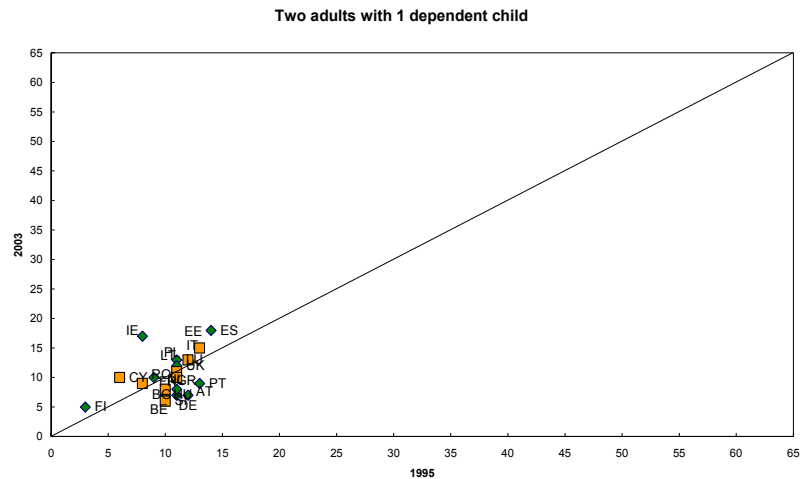
The changes which have occurred over recent years in the relative number of households of different types with income below 60% of the median seem to indicate that the variability of income for households with children is greater in most cases than for those without children. This is particularly the case for lone parents and families with three or more children, for both of which the poverty rate is especially high and for which there are a similar number of countries which showed significant increases in the proportion of poor as showed significant reductions. (See Figure 1.19, where the proportion of households of different types with income below the poverty threshold is shown for 1995 and 2001 or the latest year for which data are available – see notes to the Figures. The points below the 45 line show a decline in poverty over the period, those above the line an increase. The charts, however, need to be interpreted with some caution, as point estimates may not indicate trends and small differences may not be statistically significant. Moreover, for many of the new Member States, the years for which data are available are only two years apart.)

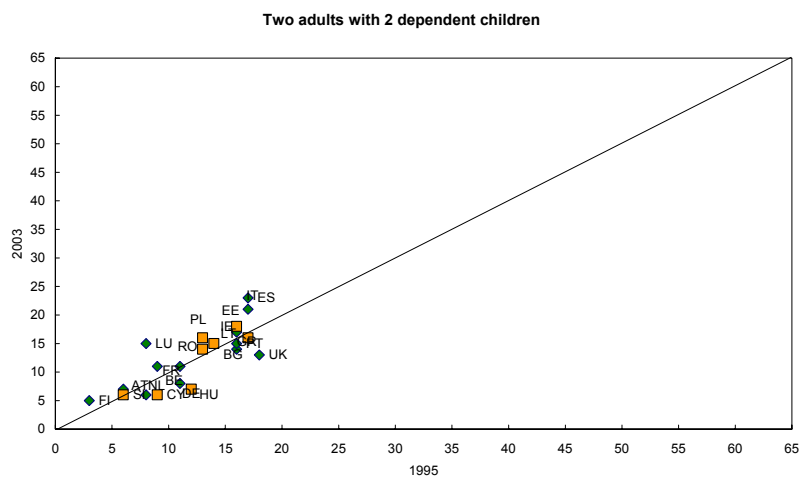
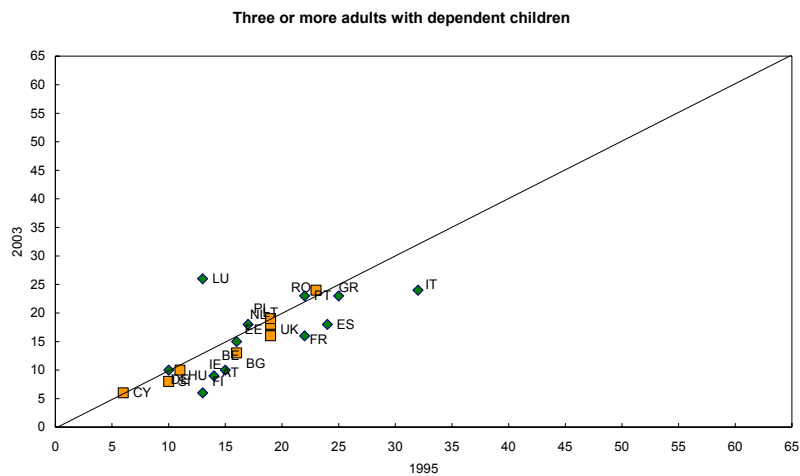
There is no apparent uniformity in the NMS, either in terms of the situation in the two end years or in terms of the changes between the two. In some countries – Hungary and Slovenia, in particular – the relative number with poverty levels of income was reduced as the economy recovered from the shock of the initial years of transition. In most, however, there is no clear sign of any systematic change in the poverty rate in either direction.

In some of the EU15 countries, the proportion of people living in particular household types with high poverty rates in 1995 declined significantly. This was particularly the case in Germany and Ireland in respect of lone parents.

### 1.19 Poverty rates by household type, 1995 and 2003 (% of people living in each household type with equivalised household income below 60% of the national median)









## Conclusions

Some 15% of European Union citizens are regarded as being poor. This means that on average 15% of the EU population have income below 60% of the national median equivalised income. This measure, however, is based on relative national thresholds, which vary greatly across countries. The euro equivalent level of the poverty threshold in the NMS is, therefore, over 60% lower than the average for the EU15.

Poverty rates are relatively high in Ireland, Slovakia, Greece and, most especially, Turkey. In these countries over one in five people are poor.

Enlargement did not increase poverty in the EU, defined in terms of the relative number of people with income below 60% of the median in each country. Poverty rates in these terms in the new EU Member States are no higher in general than in the EU15. Indeed, the average poverty rate (weighted by the population size) in 2001 was slightly lower in EU25 (15%) than in EU15 (16%).

The incomes of those below the poverty line are on average 22% lower than the poverty threshold, a level which might be regarded as the basic minimum to avoid social deprivation. The poverty gap so measured is positively correlated with the poverty rate, which means that those below the poverty line tend to have lower incomes in countries with higher relative poverty rates. There is no relationship, however, between the poverty gap and the actual level of the poverty threshold in monetary, or rather purchasing power parity terms, and, therefore, with the level of national median income measured in this way.

There seems to have been some convergence in the extent of poverty across the EU15 since the mid 1990s. This is partly attributable to declining poverty rates in several high-poverty countries. Partly, however, it is also due to rising poverty rates in low-poverty countries. Income inequality levels converged to a lesser extent, according to the Gini coefficient. All this suggests that social cohesion may not have strengthened much across the EU over this period.

The persistent poverty rate in the EU15 is just over half the poverty rate measured at one point in time. Persistent poverty tends to be the highest in countries where the poverty rate in any year is relatively high.

The rate of child poverty ranges from 7% to 30% in the EU25, a wider range than that for the population as a whole (8%–21%). The variation in the rate of child poverty is greater among the NMS than in the EU15. While there was a modest decline in the proportion of children with income below the poverty line in the EU15 as a whole between 1995 and 2001, the proportion appears to have increased in the few NMS for which data are available (Poland, Hungary and the Czech Republic). As a recent analysis of an alternative data source suggests, changes in child poverty rates during the 1990s were in many countries tempered by the increasing age, and so higher income, of parents. The main causes of increasing child poverty seem to have been changes in labour market conditions in Hungary and Italy, while

in the UK, the decline in child poverty seems mostly attributable to increased government action in the form of more transfers to families with children.

The proportion of older people of 65 and over with income below the poverty line varies between 4% (the Czech Republic) and 52% (Cyprus) in the EU. Poverty in old-age seems to be lower in the NMS in general than in the EU15. The poverty rate among the elderly has increased significantly in Ireland (by more than 5 percentage points) and Finland. On the other hand, the rate has declined in the UK and Germany. These changes primarily reflect changes in social transfers.

Couples without children or one-child families typically have a lower poverty rate in the EU25 than the national average, while both lone parent families and large families with three children or more tend to have higher rates. In the majority of countries, the poverty rate of the archetypal two-adult-two-child family is much the same as for the population as a whole.

Over the period for which data are available, 1995 to 2001 for most Member States, the position of families with children seems to have improved in relative terms in a number of Member States.

## Chapter 1 Tables

**Table 1.1 At-risk-of-poverty indicators 1995, 2000, 2002/2003, various thresholds (40%, 50%, 60%, 70% of national median)**

	1995				2000				2003 or 2002			
	40%	50%	60%	70%	40%	50%	60%	70%	40%	50%	60%	70%
BE	4	9	16	24	3	7	13	21	5	9	15	25
CZ	:	:	:	:	:	:	:	:	1	4	8	16
DK	:	:	10	:	2	4	10	19	4	6	12	19
DE	7	10	15	22	3	6	10	17	5	10	15	23
EE	:	:	:	:	6	12	18	27	7	11	18	26
GR	10	16	22	29	9	14	20	27	10	14	21	29
ES	8	12	19	27	6	12	18	25	6	11	19	27
FR	4	9	15	24	4	8	16	24	2	6	12	21
IE	2	7	19	28	5	13	20	28	7	13	21	28
IT	8	14	20	28	7	12	18	27	:	:	:	:
CY	:	:	:	:	:	:	:	:	4	9	15	23
LV	:	:	:	:	6	10	16	24	5	9	16	26
LT	:	:	:	:	6	10	17	25	5	10	17	25
LU	3	7	12	21	1	6	12	20	3	6	10	18
HU	:	:	:	:	4	7	13	20	4	8	13	21
MT	:	:	:	:	3	8	15	23	:	:	:	:
NL	5	7	11	20	3	5	11	20	3	6	12	21
AT	5	7	13	21	3	5	12	20	4	7	13	20
PL	:	:	:	:	5	9	16	24	6	10	17	24
PT	10	16	23	29	7	14	21	28	:	:	19	:
SI	:	:	:	:	3	6	11	18	3	6	10	17
SK	:	:	:	:	:	:	:	:	13	16	21	27
FI	2	4	8	16	2	5	11	20	2	5	11	20
SE	:	:	:	:	:	:	:	:	3	6	11	19
UK	6	12	20	29	7	11	19	27	5	10	18	27
BG	:	:	:	:	4	8	14	22	3	8	13	22
HR	:	:	:	:	:	:	:	:	6	11	18	25
RO	:	:	:	:	5	10	17	25	6	11	18	25

*Reference years 1995, 2000 and 2003, except: FI: 1996, SE: 1997, DK: 2001, FR, LV, LT, NL, SE, PL, HU, BG, RO: 2002*

*Source: Eurostat NewCronos database (2005), HU: TARKI 2000, 2003 (see: (Gábos et al., 2004))*

*Note: for many countries, there has been a break in the data series between 2000 and 2003, which may influence the results*

## **Annex 1: Trends in the structure of households across the EU<sup>26</sup>**

### **INTRODUCTION**

Both the risk of poverty and changes in this, which were the concern of the above analysis, are affected by the structure of households and their size, in the sense that the income required to achieve a given living standard, as measured by the level of equivalised income, depends on the extent to which people live alone as opposed to sharing accommodation and household expenditure, with others. The concern here is to provide a background analysis of the differences across the EU in household structure and the way that it tending to change over time, which not only affects equivalised income levels and the relative number of people with income below the poverty line but also has implications for social policy.

In particular, a major feature of long-term social developments across the EU has been a tendency for the average size of households to decline with the break-up of the extended family and an increased number of people living alone. This has consequences for both social cohesion and social welfare policy, most obviously in terms of the diminished extent of support available within the family and, accordingly, the greater call on the State to provide such support in the event of a need arising.

Although, however, the tendency towards smaller sizes of household has been common across the EU, the scale of the change which has occurred over the past 20 years or so varies significantly between countries and marked differences still exist in the prevailing structure of households and in the household circumstances of people in different age groups. These differences affect the demands on the social welfare system in place and, therefore, both the extent and nature of the support which it provides. But they are also a reflection of the system itself in the sense that this has an influence on social behaviour and, accordingly, on household structure. The lack of State support, in other words, can inhibit a reduction in household size if it continues to fall on the family to care for those in need, just as the availability of such support can, for example, encourage young people to move out of the family home or older people to continue living independently, or at least make it possible to do so.

At the same time, the features of the social welfare system in place are only one of a range of factors affecting household structure. In particular, the nature of the labour market and the availability of jobs, the system of education and training and changing social norms can all be equally important.

The aim here is not to explore these various potential influences on the structure of households but to review the changes in the latter which have occurred across the EU over recent years and to document the prevailing differences, especially as regards the new Member States and candidate countries about which there is less awareness. A particular focus is on the household circumstances, on the one hand, of young people aged 16 to 24 and the extent to which they live independently in different parts of Europe as opposed to remaining in the family home, and, on the other, of the growing number of older people

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<sup>26</sup> by Terry Ward and Hélène Calers

aged 65 and over. The concern throughout is with the support implications of the differences across Europe which are evident and with the changes over time which have occurred and with the extent to which people have access to income from employment.

The analysis is based on data from the EU Labour Force Survey (LFS) rather than from the ECHP or equivalent national surveys in order both to be able to cover a longer period of time – 20 years or so in the case the EU-15 countries – and to be able to examine household circumstances in the new Member States and candidate countries on a comparable basis. The LFS, moreover, in relation to the ECHP or most national surveys of households and income, is based on a much larger sample of the population and should, therefore, involve a smaller margin of error. The main drawback is that the LFS does not collect data on household income and, therefore, cannot be used to relate household composition or employment characteristics to this (see Box for a description of the LFS data in this regard).

#### **Household data from the Labour Force Survey**

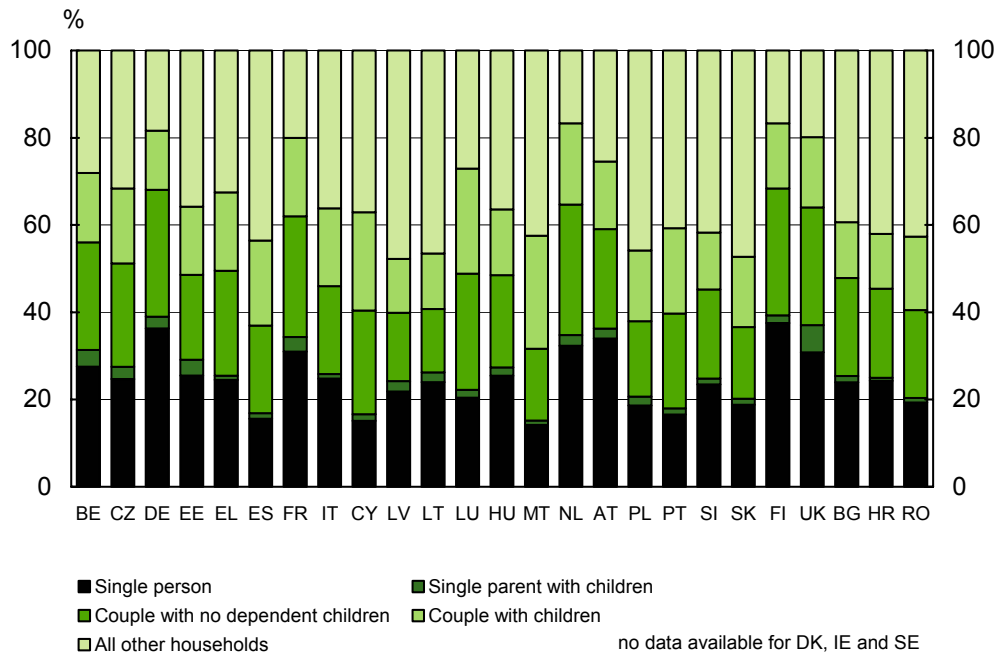
The data collected by the EU Labour Force Survey (LFS) include details of the relationships of each individual in the households covered with each other as well as about the dependent children they might have. They can, accordingly, be used to throw light on the structure of households in each of the countries. The analysis here is based on data for the reference person in each household and on details of their spouse, any dependent children (defined here as those under 16, instead of under 15 which is the norm in the LFS) and other people of 16 and over living in the household. In each case, information is compiled on the age, sex and employment status of the reference person and their spouse, the age of any children and the age and employment status of other people in the household.

Data are available for all EU Member States and candidate countries for the most recent years, except Denmark, Ireland and Sweden, in addition to Turkey for which as yet there is no LFS<sup>27</sup>. (For Sweden, there are as yet no household details collected as part of the LFS and for Denmark and Ireland, the household data are insufficiently reliable.)

## **HOUSEHOLD COMPOSITION IN THE EU IN 2004**

The proportion of households consisting of someone living alone, according to the latest LFS data – for 2004 – varies from just under 38% of the total in Finland and over 30% in Germany, France, the Netherlands, Austria and the UK to only 14% in Malta, 15–16% in Cyprus and Spain and slightly above this in Portugal. In general, the proportion is lower in the new Member States than in the EU-15 countries and lower in the southern than the northern Member States within the EU-15 (see Graph A1.1).

### A1.1 Structure of households, 2004



In all the new Member States, therefore, the proportion is below 26% and under 20% in Poland and Slovakia as well as in Cyprus and Malta, with the Czech Republic and Hungary having the highest figures at around 25%. It is also around 25% in both Greece and Italy. In the candidate countries, it is just under 20% in Romania and around 25% in both Bulgaria and Croatia.

A significant proportion of people living alone in most of the countries are aged 65 or over. These account for 9% or more of total households in all countries apart from Estonia, Spain and Cyprus (7–8% in each case). In Italy and Hungary as well as Germany, they account for around 14%. This is also the case in Bulgaria, while in Croatia, the figure is as high as 16%. The implication is that comparatively few people living alone are of working age in the southern countries and the new Member States as well as the candidate countries. Those aged 25 to 64 living alone represent under 10% or less of total households in all these countries, apart from the Czech Republic, Hungary and Latvia (11–12%) and Estonia (16%). In all the other, northern, EU-15 Member States, they account for between 16% and 20% and up to almost 24% in Finland (Table A1.1).

People living alone who have dependent children, who in almost all cases are women, varies equally widely across the EU. The relative number is particularly high in the UK, at over 6% of all households, significantly above the countries with the next highest numbers, Belgium and Estonia, where it is just under 4%. Apart from in these three countries and France (where it is just over 3%), the proportion is under 3% in all cases. It is particularly low in the southern Member States, where the proportion is only around 1% (in Greece and Italy) or slightly over (Spain and Portugal). It is also around 1% or just over in a number of the new Member States – Cyprus, Malta, Slovenia and Slovakia – while in some others, specifically in the Czech Republic and the three Baltic States, it is closer to 3% and the level in the northern EU-15

countries. In the three candidate countries for which data exist, it is similar to the level in the southern Member States and 1% or below in Romania and Croatia.

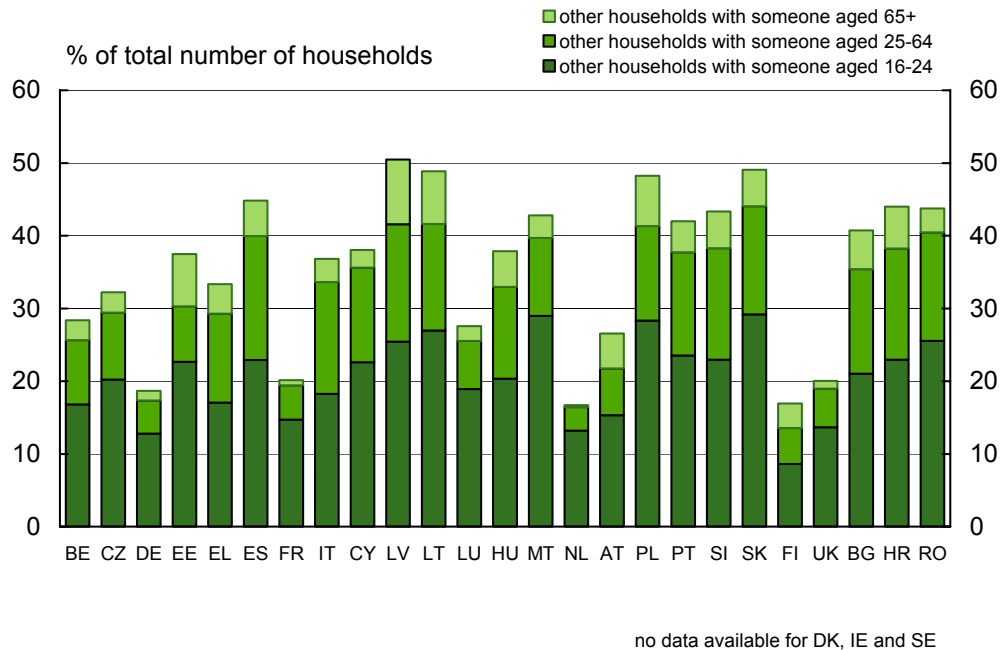
In the EU-15 countries at least, there is less variation in the relative importance of households comprising couples without children. In all the EU-15 Member States for which data exist, the relative number varies between 20% and 29% of total households, with again, the proportion being relatively high in Germany, France, the Netherlands, Finland and the UK, as in the case of single person households, and relatively low in Spain, Italy and Portugal. In the new Member States, by contrast, the proportion is above 20% only in the Czech Republic, Cyprus, Hungary and Slovenia – in the last, only marginally so – but under 24% in each case, while in Latvia, Lithuania, Malta and Slovakia, it is only 15–16%. In the candidate countries, the proportion is also lower than in most EU-15 Member States, at just over 20%.

The proportion of households comprising couples with children is also relatively similar across countries, varying between 13% and 20% for all Member States, except Latvia and Lithuania, where it is marginally below this, and Cyprus, Luxembourg and Malta, where it is above (23–26%). It is also below 13%, although only slightly, in Bulgaria and Croatia.

The implication of the differences between countries in the relative importance of single and couple households is that there are counterpart differences in the importance of other households, or those consisting of other people aged 16 and over in addition to the main person and their spouse. Such households, in which there are potentially other people to contribute towards household income or, alternatively, others which household income needs to support, represent under 30% of total households in all EU-15 Member States, apart from the four southern countries, and 20% or less in Germany, France, the Netherlands, Finland and the UK. In the southern countries and the new Member States, they account, in most cases, for well over 30% and over 40%, in Spain, Portugal and all the new Member States, apart from the Czech Republic, Estonia, Cyprus and Hungary.

A significant proportion of these households include young people aged 16–24, many of them households with couples without children under 16 but where older children are still living at home. Households with people of this age account for over 20% of total households in all the new Member States and candidate countries as well as in Spain and Portugal. On the other hand, in all the other EU-15 countries, the proportion is less than 20%, in Germany, France, the Netherlands and the UK, less than 15% and in Finland less than 10% (Graph A1.2 and Table A1.2). These differing proportions highlight the differences between countries in the age at which young people tend to leave the family home, this being lower in the northern EU-15 countries than in those in the south of the Union or in the new Member States (this point is pursued further below).

## A1.2 Other households by age of the other person(s) living in the household, 2004



It is also the case that there tends to be more of 'other' households in the latter countries with people aged 65 and over, who may contribute to household income through their pensions though who equally may be dependent on the income earned by others in the household, typically their sons or daughters. These households account for over 7% of the total in all three Baltic States and for 5% or more in Hungary, Poland, Slovenia and Slovakia as well as in Spain and Bulgaria and Croatia, but for only around 1% or less of the total in Germany, France, the Netherlands and the UK.

It is equally the case in the new Member States, southern EU-15 countries and candidate countries that a larger proportion of the 'other' households contain people aged 25-64, who are more likely to contribute to household income than those under 25 or 65 and over. Such households account for over 12% of the total in all the new Member States and candidate countries, apart from the Czech Republic, Estonia and Malta, as well as in all four of the southern Member States. In the rest of the EU-15, they represent under 7% of households in all countries except Belgium (9%).

## CHANGES IN HOUSEHOLD STRUCTURE, 1985-2004

The most marked trend in the composition of households over the past 20 years or so has been the increasing number of people living alone. In all EU-15 countries for which data are available for this period, Luxembourg apart, the proportion of households which comprise people living on their own increased between 1985 and 2004. (Data are not available for Ireland, Austria and the three Nordic countries.) In both Belgium and Greece, where the proportion was relatively low in 1985, the relative number rose by some 9 percentage points over this period, though it also rose by 6-7 percentage points in the Netherlands and the UK, where it was relatively high initially (Table A1.1).



The growth of people living alone was accompanied by an increase in lone parents in most of the northern Member States, most especially in Belgium and the UK, in both of which the proportion of such households more than doubled between 1985 and 2004.

This increase was accompanied by an equally widespread rise in the relative importance of households consisting of couples without dependent children. In all the EU-15 Member States, except Belgium, the proportion of such households increased between 1985 and 2004.

The counterpart of these two upward trends is a general reduction in households containing couples with dependent children, the proportion of which declined in all EU-15 Member States apart from Luxembourg (where the relative number with three or more children, in particular, rose). This decline is in most countries as evident for households with one or two children as for three or more. The exception is Ireland where the relative number of households with three or dependent children, which was well above that in any other country, fell markedly over the period for which data are available (up to 1995).

This pattern of change for the EU-15 countries seems to have continued in most cases throughout the period and, apart from Belgium, is as evident in the later years as in the earlier ones, suggesting an ongoing shift in household structure.

Although data from the LFS for the new Member States are only available for a comparatively short period of time for the new Member States, they, nevertheless, give an indication of longer term trends and the extent to which the changes evident in the EU-15 are also occurring in these countries. In the Czech Republic and Slovakia (where data are available since 1998), the same pattern of change is evident as in the EU-15 countries, with an increase in the relative number of households with someone living alone and a counterpart decline in households comprising couples with dependent children. The same pattern, however, is not apparent in Estonia, where household structure was much the same in 2004 as in 1998. This is also broadly the case in Cyprus and Malta, where data are available only since 2000. In both Hungary and Slovenia, however, the only other new Member States for which there are data since 2000, the proportion of households with people living alone was higher in 2004 than four years earlier and those comprising couples with children lower.

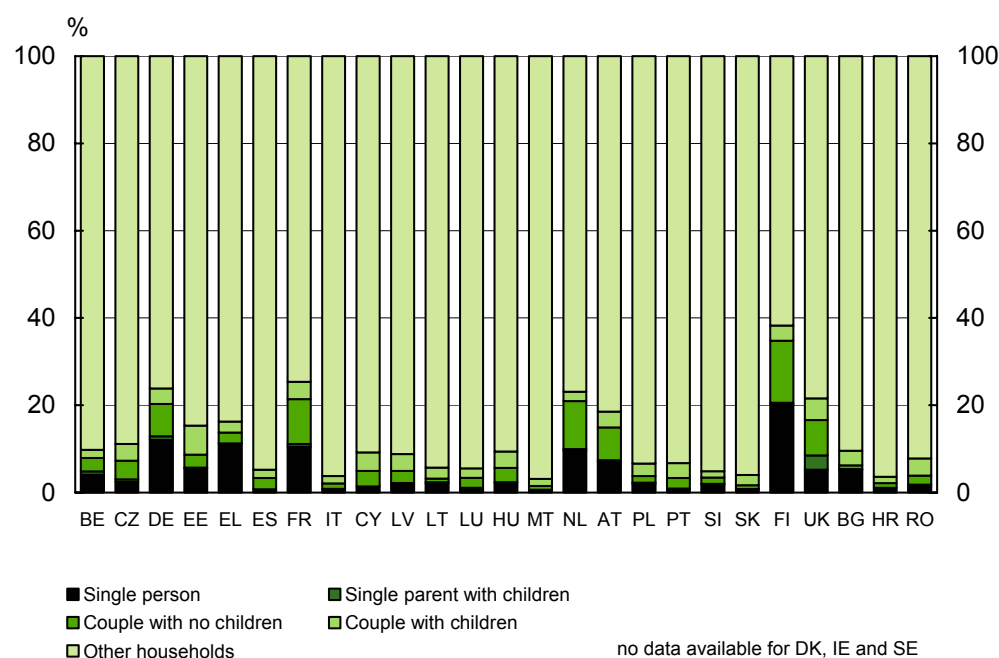
The household circumstances of young people aged 16–24 and older people aged 65 and over – groups whose circumstances have significant potential implications for social support as well as household income – are examined in more detail below.

## The household circumstances of young people aged 16–24

In all countries, the great majority of young people aged 16–24 live in the family home. Except in Germany, Greece, France, Finland and the Netherlands, less than 10% of people of this age in the EU and candidate countries live alone, according to LFS data for 2004, and in the great majority of countries, 5% or less. In the new Member States, apart from Estonia, the figure is around 3% or less, while in the southern countries, apart from Greece, it is under 1% (Graph A1.3).

Relatively few young people in this age group also live as couples with or without children, though significantly more in the northern EU–15 Member States than in the rest of the Union. In Germany, France, the Netherlands, Austria, Finland and the UK, the proportion exceeds 10%, while in contrast it is under 5% in Greece, Spain and Italy – and only slightly more in Portugal – as well as in half the new Member States and all the candidate countries.

### A1.3 Distribution of people aged 16–24 between household types, 2004



The counterpart of this is that, except in the northern Member States, over 85% of people aged 16–24 live either in the family home or, in a few cases, in multi-occupancy households in most countries, the only exceptions being Estonia, Greece and Latvia. In Italy, Malta and Slovakia as well as in Croatia, the figure is over 95%. In Germany, France, the Netherlands, and the UK, it is around 75% and in Finland around 60%.

Even in these latter four countries (Finland is excluded because data is only available for 2004), however, there is no evident tendency for the relative number of young people in this age group living alone or as couples to increase. In all these countries, the proportion of

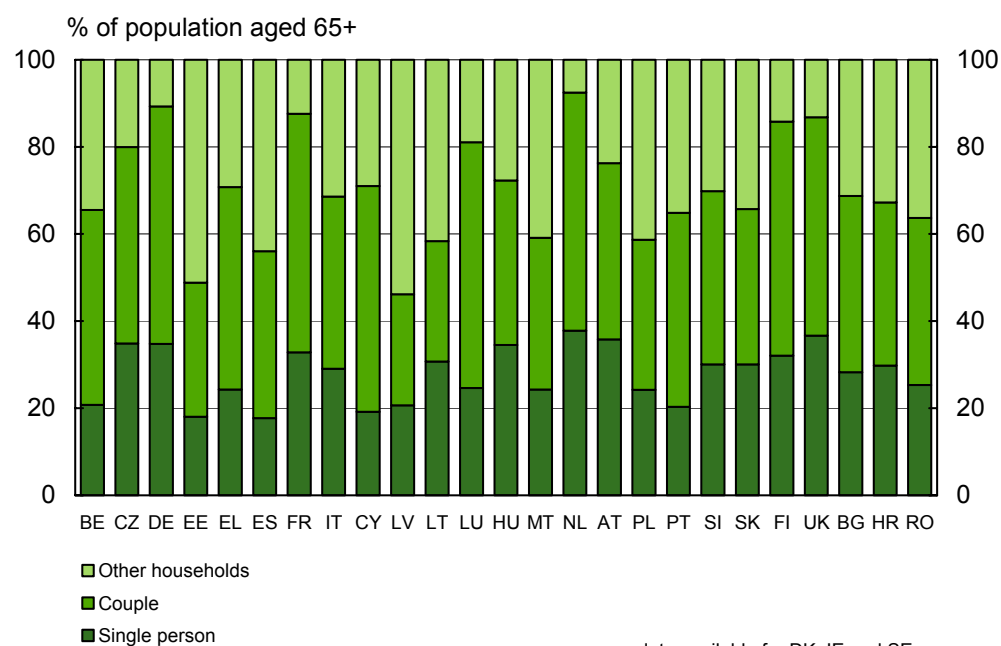
those aged 16–24 living in the family home was either much the same in 2004 as it had been in 1985 or higher, especially in the Netherlands. Equally, there is little sign of any reduction in the relative number living in the family home in most of the other Member States (Table A1.3).

### The household circumstances of older people aged 65 and over

Similar differences in the household circumstances of young people between countries are also evident for those aged 65 and over, though they tend to be more pronounced. In Germany, France, the Netherlands, Finland and the UK, therefore, around a third or more of people in this age group live alone and over half live as couples, leaving under 15% living in households with other people (Graph A1.4). By contrast, in half of the new Member States, some 40% or more of those aged 65 and over live in households with other people, while in the others, apart from the Czech Republic and Hungary – where it is only slightly lower – the proportion is around 30% or more. This is also the case in the southern EU–15 countries and the candidate countries. In these countries, therefore, a significantly larger proportion of those of retirement age live in households in which there are other people who might provide potential support.

Unlike for younger people, the tendency in the EU–15 at least has been for the proportion of those aged 65 and over living alone and as couples to increase and the proportion living in households with other people to decline significantly, the only exception being Belgium (for which the fluctuations shown by the data suggest possible breaks in the series) (Table A1.4). A similar tendency is also evident for the Czech Republic, Hungary, Slovenia and Slovakia, even if over a shorter period. On the other hand, no such tendency is apparent for Hungary or Romania, while in Estonia, the proportion living with other people has increased.

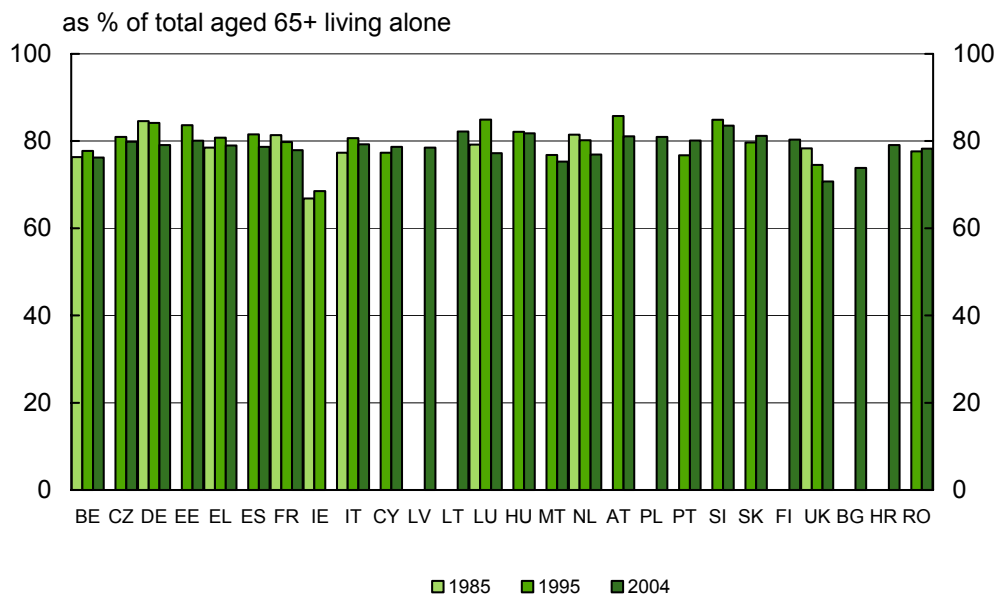
#### A1.4 Distribution of people aged 65+ between household types, 2004



### *Women aged 65 and over*

The great majority of older people aged 65 and over living alone are women. In almost all countries, therefore, 75% or more of those of this age living alone are women. In all the new Member States, the proportion is some 80% or more (Graph A1.5). This partly reflects the larger number of women than men in this age group and, underlying this, their longer life expectancy. On average in the EU-25, however, women make up under 60% of people of 65 and over, well below their share of those living alone. Although they represent a larger proportion in the new Member States than in EU-15 countries – over 60% in all cases – this is still some 20 percentage points less than their share of single-person households.

#### **A1.5 Women aged 65+ living alone**



## **CONCLUSIONS**

There are significant differences in the structure of households across the EU which has implications for social policy. The proportion of people living alone is much larger in the northern countries of the EU-15 than in the southern countries and in the new Member States. A substantial number of those living alone in all countries are aged 65 and over. The relative number of lone parents, almost all of whom are women, is much larger in the UK than elsewhere in the EU and is particularly small in the southern Member States.

The relative number of people living alone has increased over the long-term throughout the EU15 and has been accompanied by an increase in lone parents in most of the northern Member States. This increase was accompanied by an equally widespread rise in the number of couples without dependent children and a counterpart decline in households consisting of couples with dependent children. The same pattern of change, over a shorter period, is

evident in the Czech Republic, Slovakia, Hungary and Slovenia but not in Estonia, Cyprus or Malta.

In all countries, the great majority of young people aged 16–24 live in the family home. The proportion living outside the family home, however, is significantly larger in the northern EU15 countries than in southern ones or in the new Member States and there is no sign of any tendency for the proportion to increase in the latter countries.

There are wide differences across the EU in the household circumstances of those aged 65 and over. In most northern EU–15 countries, the great majority of these live alone or as a couple. Very few live in households with other people, in contrast to the position in the southern countries and new Member States, where a significant number of people of this age live in households where there is potential income support from other members. Throughout the EU, however, apart from in some of the new Member States, the proportion of elderly people living in such households has tended to decline.

## Annex 1 Tables

Table A1.1: The structure of households, 1985-2004

	BE	CZ	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	UK	BG	HR	RO	
<b>1985</b>																											
Single person	18.5		33.4		15.8	11.0	26.0	18.6	20.0				21.1			26.1			13.9				24.0				
Single person 16-24	0.8		3.3		1.5	0.1	2.4	0.9	0.5				1.2			3.5			0.2				1.3				
Single person 65+	10.0		14.5		7.2	7.1	11.6	9.4	10.9				9.1			9.4			8.4				13.7				
Single parent with children	1.5		1.8		1.0	0.7	2.2	1.5	1.2				1.5			2.2			1.7				2.6				
Couple with no dependent children	25.9		22.9		20.1	16.7	23.3	12.7	17.9				20.5			21.8			20.6				24.9				
Couple, of which at least one 65+	9.3		8.1		9.1	9.2	8.1	5.4	8.3				7.1			7.8			10.0				9.5				
Couple with one or two children	20.7		13.7		21.1	17.9	18.5	15.1	21.8				18.6			17.5			18.7				16.8				
Couple with three or more children	4.1		1.7		4.0	4.2	4.6	13.0	3.0				2.5			3.9			2.6				4.2				
All other households	5.8		5.5		10.1	13.0	4.8	9.5	9.2				9.5			6.1			10.0				6.5				
<b>1995</b>																											
Single person	27.3	20.4	34.3	26.0	20.8	12.2	28.9	22.8	23.0	14.7			16.7	24.0	14.9	30.6	29.0		13.9	23.2	16.7		28.3			20.0	
Single person 16-24	1.1	0.6	2.3	1.7	1.8	0.1	2.7	1.3	0.4	0.6			1.0	0.9	0.2	3.4	1.7		0.6	0.7	0.2		1.5			0.6	
Single person 65+	13.1	11.6	13.9	9.3	11.2	8.0	12.1	10.8	13.5	6.8			8.3	12.6	8.2	10.6	12.4		8.1	11.8	9.2		13.0			11.4	
Single parent with children	2.5	2.3	2.4	4.6	1.0	0.8	2.6	2.8	1.1	1.6			1.9	2.3	1.1	1.9	2.4		1.4	1.0	1.4		5.4			1.5	
Couple with no dependent children	22.7	22.4	26.9	19.0	23.3	16.7	25.7	14.9	17.8	24.5			22.6	20.8	18.3	29.9	22.0		20.2	19.0	16.2		26.2			19.5	
Couple, of which at least one 65+	9.4	8.9	9.0	6.1	12.3	9.0	10.0	5.5	9.3	10.4			8.6	9.0	7.6	8.6	8.0		10.0	7.7	7.7		9.2			8.8	
Couple with one or two children	14.8	18.1	14.5	14.7	16.8	19.0	15.9	14.1	17.3	18.3			21.7	14.4	20.3	14.7	15.5		16.7	13.8	16.4		14.9			16.5	
Couple with three or more children	3.3	2.2	2.1	2.7	2.2	2.5	3.8	8.0	1.8	6.5			4.0	2.3	4.0	3.9	2.4		1.7	0.8	3.7		3.7			2.5	
All other households	8.1	8.1	5.5	7.5	11.5	14.8	4.7	12.9	9.1				10.7	9.9	9.3	4.2	8.5		11.4	14.4	11.9		5.8			11.1	
<b>2004</b>																											
Single person	27.5	24.7	36.3	25.5	24.5	15.6	31.0		24.8	15.1	21.8	24.0	20.5	25.5	14.2	32.3	34.0	18.6	16.6	23.5	18.8		37.6	30.8	24.0	24.3	19.3
Single person 16-24	1.1	0.8	2.7	2.0	3.1	0.2	2.8		0.2	0.5	0.8	0.9	0.3	0.7	0.2	2.4	1.8	0.9	0.3	0.6	0.3		2.6	1.3	1.7	0.4	0.7
Single person 65+	8.9	12.2	13.8	7.5	11.4	8.4	12.2		14.3	7.0	9.3	13.3	9.0	13.8	9.1	11.5	12.8	9.5	9.6	12.6	11.1		11.1	13.0	13.5	15.7	10.8
Single parent with children	3.8	2.8	2.7	3.6	0.9	1.3	3.3		1.0	1.5	2.4	2.3	1.8	1.9	1.0	2.5	2.3	2.0	1.4	1.4	1.4		1.7	6.2	1.4	0.7	1.0
Couple with no dependent children	24.7	23.7	29.1	19.5	24.1	20.1	27.6		20.2	23.8	15.7	14.5	26.6	21.2	16.5	29.9	22.8	17.3	21.7	20.4	16.4		29.1	27.0	22.5	20.5	20.2
Couple, of which at least one 65+	10.5	8.9	12.0	6.9	12.5	9.6	11.0		10.7	10.5	5.4	6.2	10.3	8.6	7.4	8.9	7.9	7.4	11.4	8.3	7.5		8.9	9.8	11.0	11.0	9.4
Couple with one or two children	12.6	15.7	11.8	13.8	16.2	18.1	14.8		16.4	17.3	11.4	11.5	19.8	12.9	22.2	15.2	13.5	13.8	18.3	12.1	13.7		11.9	13.3	12.3	10.4	15.0
Couple with three or more children	3.3	1.5	1.7	1.8	1.8	1.5	3.1		1.4	5.2	1.0	1.2	4.3	2.2	3.8	3.4	2.0	2.4	1.3	1.0	2.4		3.1	2.8	0.5	2.1	1.7
All other households	8.8	9.2	4.6	7.6	12.2	17.1	4.7		15.4	13.0	16.1	14.7	6.6	12.6	10.7	3.2	6.4	13.0	14.2	15.4	14.9		4.9	5.3	14.4	15.3	14.9

Notes:

- 1985: data are of 1990 for ES and PT

- 1995: data of 1996 for CZ, EE, SK and RO and data of 2000 for CY, HU, MT and SI

- no data available for DK and SE

Table A1.2: The structure of 'other' households, 1985-2004

	BE	CZ	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	UK	BG	HR	RO
<b>1985</b>																										
Single person with someone 16-24*	2.0	3.4	3.4	2.8	3.6	2.8	4.6	2.6	2.6	2.3	3.7	3.7	3.7	4.3	4.3	4.3	4.3	3.8	3.8	4.4	4.2	3.0	3.7	3.7	3.7	3.7
Single person with someone 65+*	1.3	1.1	1.1	1.4	2.3	1.1	2.7	1.3	1.3	1.1	1.9	1.9	1.9	2.7	2.7	2.7	2.7	1.6	1.6	1.7	1.3	0.9	1.1	1.1	1.1	1.1
Single parent with someone 16-24*	0.6	0.6	0.6	0.4	0.9	0.8	1.2	0.7	0.7	0.5	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.3	1.3	1.1	0.8	1.0	1.0	1.0	1.0	1.0
Single parent with someone 65+*	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Couple with someone 16-24*	11.9	10.2	10.2	12.0	15.0	8.5	7.7	13.0	13.0	10.4	11.8	11.8	11.8	9.7	9.7	9.7	9.7	13.8	13.8	16.6	14.4	6.3	8.7	8.7	8.7	8.7
Couple with someone 65+*	1.2	1.0	1.0	2.7	3.4	1.1	0.8	1.1	1.1	0.9	2.0	2.0	2.0	0.3	0.3	0.3	0.3	2.6	2.6	2.6	1.8	0.5	0.7	0.7	0.7	0.7
Couple with children+someone 16-24*	6.7	4.8	4.8	7.1	11.8	6.3	11.7	8.2	8.2	10.0	6.2	6.2	6.2	6.7	6.7	6.7	6.7	9.8	9.8	9.0	4.9	4.0	5.8	5.8	5.8	5.8
Couple with children+someone 65+*	0.5	0.6	0.6	3.6	3.0	0.5	1.8	0.8	0.8	0.6	1.5	1.5	1.5	0.2	0.2	0.2	0.2	1.8	1.8	1.5	1.2	0.2	0.3	0.3	0.3	0.3
<b>1995</b>																										
Single person with someone 16-24*	3.7	3.8	1.8	5.3	2.6	3.4	2.5	4.7	2.8	2.3	2.2	2.2	2.2	4.6	2.4	1.8	2.9	4.3	4.3	4.4	4.2	3.0	3.0	3.0	3.0	3.0
Single person with someone 65+*	3.5	1.1	0.7	2.5	1.4	2.1	1.0	2.0	1.3	1.1	1.5	1.5	1.5	1.3	2.7	0.3	1.3	1.7	1.7	1.7	1.3	0.9	0.9	0.9	0.9	0.9
Single parent with someone 16-24*	0.9	0.8	0.4	1.3	0.4	0.8	0.8	1.4	0.5	0.5	0.5	0.5	0.5	1.0	0.8	0.4	0.6	1.1	1.1	1.1	0.6	0.8	1.0	1.0	1.0	1.0
Single parent with someone 65+*	0.1	0.1	0.0	0.8	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.3	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Couple with someone 16-24*	8.3	13.6	7.1	9.4	11.9	15.7	7.6	8.2	14.1	10.4	9.5	9.5	9.5	11.6	15.0	8.0	9.0	16.6	14.4	16.2	6.3	6.3	6.3	6.3	6.3	6.3
Couple with someone 65+*	0.8	1.6	0.7	1.3	1.9	2.7	0.8	0.6	1.2	0.9	1.8	1.8	1.8	2.0	0.6	0.1	1.4	2.6	1.8	2.0	0.5	0.5	0.5	0.5	0.5	0.5
Couple with children+someone 16-24*	4.3	5.9	3.8	5.2	5.9	10.1	5.7	10.7	6.4	10.0	6.5	6.5	6.5	5.8	10.7	4.3	4.9	9.0	4.9	9.2	4.0	4.0	4.0	4.0	4.0	4.0
Couple with children+someone 65+*	0.4	0.8	0.3	1.1	1.5	1.7	0.2	1.0	0.5	0.6	1.2	1.2	1.2	1.4	0.4	0.0	1.3	1.5	1.2	1.9	0.2	0.2	0.2	0.2	0.2	0.2
<b>2004</b>																										
Single person with someone 16-24*	4.0	3.6	2.0	5.9	2.6	3.2	2.3	2.2	2.4	2.4	7.6	5.7	2.3	3.9	2.6	2.1	2.4	4.9	3.1	3.5	4.2	2.3	3.1	3.9	3.1	4.8
Single person with someone 65+*	2.0	1.1	0.6	4.0	1.6	1.8	0.4	1.6	0.8	0.4	4.0	2.7	0.9	1.6	1.9	0.2	2.0	2.0	1.4	2.0	1.2	2.7	0.5	1.5	1.8	0.9
Single parent with someone 16-24*	1.3	0.8	0.5	1.4	0.4	0.6	1.1	0.4	0.8	1.3	1.9	0.9	0.9	0.9	0.6	0.7	0.6	1.2	0.8	0.7	1.0	0.2	1.4	0.6	0.4	0.8
Single parent with someone 65+*	0.1	0.1	0.0	0.8	0.1	0.1	0.0	0.1	0.1	0.1	0.6	0.7	0.1	0.2	0.0	0.0	0.2	0.2	0.1	0.2	0.2	0.0	0.0	0.2	0.1	0.1
Couple with someone 16-24*	7.6	10.8	6.7	10.1	9.5	12.9	6.5	10.4	10.4	10.2	12.5	9.4	10.1	15.6	6.5	8.0	14.1	13.3	13.7	16.1	3.7	5.5	12.5	13.1	14.2	14.2
Couple with someone 65+*	0.4	1.2	0.5	1.2	1.4	2.2	0.3	1.1	1.0	2.4	1.8	0.5	2.0	0.6	0.1	1.5	2.0	2.1	1.7	2.0	0.4	0.3	2.5	2.5	2.5	1.5
Couple with children+someone 16-24*	4.0	4.9	3.5	5.3	4.6	6.1	4.8	5.2	9.1	6.3	6.8	6.3	5.4	10.1	3.9	4.3	8.1	6.3	5.1	7.9	2.4	3.7	4.0	6.3	5.8	5.8
Couple with children+someone 65+*	0.3	0.5	0.2	1.2	1.0	0.8	0.1	0.4	0.6	1.9	2.0	0.5	1.1	0.6	0.1	1.1	2.7	0.8	1.1	1.6	0.3	0.2	1.1	1.3	0.8	0.8

\*Includes households with both someone 16-24 and 65+, total

Notes:

- 1985: data are of 1990 for ES and PT

- 1995: data of 1998 for CZ, EE, SK and RO and data of 2000 for CY, HU, MT and SI

- no data available for DK and SE

Table A1.3: Distribution of those aged 16-24 between types of household, 1985-2004

	BE	CZ	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	UK	BG	HR	RO
<b>1985</b>																										
Single person	2.1	1.5	10.5	4.9	5.5	0.2	8.9	2.8	1.1	1.6	1.6	3.1	2.6	0.5	12.1	5.7	1.4	2.0	0.4	1.4	2.0	0.4	1.4	2.0	0.4	1.4
Single parent with dependent children	0.2	0.4	0.7	0.9	0.1	0.0	0.5	1.0	0.0	0.3	0.3	0.4	0.4	0.0	0.3	0.8	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2
Couple with no children	7.7	4.1	3.8	7.9	4.5	2.5	1.4	10.3	1.9	1.8	4.8	4.2	4.9	1.9	14.6	4.5	1.7	1.6	1.2	1.7	1.6	1.2	1.7	1.6	1.2	1.7
Couple with children	7.9	3.4	9.0	5.4	7.2	3.8	2.0	4.5	2.4	3.2	6.3	5.1	5.4	2.6	3.0	5.4	2.4	1.7	4.3	2.4	1.7	4.3	2.4	1.7	4.3	2.4
Other households	82.1	88.3	85.4	75.5	82.5	88.2	96.3	75.7	91.9	93.9	86.9	87.2	86.8	94.9	70.1	83.6	94.3	94.5	94.0	94.3	94.5	94.0	94.3	94.5	94.0	94.3
<b>1995</b>																										
Single person	3.8	1.5	10.5	4.9	5.5	0.2	8.9	2.8	1.1	1.6	1.6	3.1	2.6	0.5	12.1	5.7	1.4	2.0	0.4	1.4	2.0	0.4	1.4	2.0	0.4	1.4
Single parent with child	0.4	0.4	0.7	0.9	0.1	0.0	0.5	1.0	0.0	0.3	0.3	0.4	0.4	0.0	0.3	0.8	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2
Couple with no children	4.1	3.8	7.9	4.5	2.5	1.4	10.3	1.9	1.8	4.8	4.8	4.2	4.9	1.9	14.6	4.5	1.7	1.6	1.2	1.7	1.6	1.2	1.7	1.6	1.2	1.7
Couple with children	3.4	9.0	5.4	7.2	3.8	2.0	4.5	2.4	3.2	6.3	6.3	5.1	5.4	2.6	3.0	5.4	2.4	1.7	4.3	2.4	1.7	4.3	2.4	1.7	4.3	2.4
Other households	88.3	85.4	75.5	82.5	88.2	96.3	75.7	91.9	93.9	86.9	86.9	87.2	86.8	94.9	70.1	83.6	94.3	94.5	94.0	94.3	94.5	94.0	94.3	94.5	94.0	94.3
<b>2004</b>																										
Single person	4.1	2.5	12.1	5.6	11.2	0.7	10.5	1.0	0.5	1.6	1.6	3.1	2.6	0.5	12.1	5.7	1.4	2.0	0.4	1.4	2.0	0.4	1.4	2.0	0.4	1.4
Single parent with dependent children	0.7	0.6	0.8	0.2	0.0	0.1	0.6	1.0	0.0	0.3	0.3	0.4	0.4	0.0	0.3	0.8	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2
Couple with no children	3.1	4.2	7.4	2.9	2.5	2.5	10.3	1.2	3.6	2.7	0.8	2.3	3.3	0.8	11.0	7.6	1.5	2.4	1.5	0.9	14.2	8.1	0.9	1.0	2.1	2.1
Couple with children	1.8	3.9	3.6	6.7	2.5	2.0	3.9	1.7	4.2	3.8	2.5	2.1	3.7	1.6	2.2	3.6	2.9	3.5	1.4	2.4	3.5	4.9	3.3	1.5	3.9	3.9
Other households	90.2	88.8	76.2	84.6	83.7	94.7	74.6	96.2	90.8	91.2	94.3	94.4	90.6	96.9	76.9	81.5	93.3	93.2	95.1	95.9	61.7	78.4	90.5	96.4	92.2	92.2

Notes:

- 1985: data are of 1990 for ES and PT

- 1995: data of 1998 for CZ, EE, SK and RO and data of 2000 for CY, HU, MT and SI

- no data available for DK and SE



Table A1.4: Distribution of those aged 65+ between types of household, 1985-2004

	BE	CZ	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	UK	BG	HR	RO
<b>1985</b>																										
Single person	26.5		41.3		18.2	14.6	35.7	26.0	29.4				27.0			33.1			19.0				36.1			
Couple	45.1		40.2		38.3	34.3	44.2	26.3	39.2				56.4			49.8			41.2				44.9			
All other households	28.4		18.4		43.5	51.1	20.0	47.7	31.4				36.7			17.1			39.8				19.1			
<b>1995</b>																										
Single person	33.8	31.3	39.8	24.1	23.8	16.6	33.6	32.0	31.0	20.3			22.6	32.4	22.6	36.4	33.5		18.6	29.4	24.4		36.5			29.9
Couple	44.9	41.8	46.4	31.6	44.7	34.6	50.7	30.7	37.8	56.1			42.8	39.8	37.3	53.1	39.2		42.0	36.9	35.1		46.8			40.3
All other households	21.2	26.9	13.9	44.4	31.5	48.8	15.6	37.3	31.3	23.6			34.5	27.8	40.1	10.4	27.3		39.4	33.7	40.5		16.8			29.8
<b>2004</b>																										
Single person	20.8	34.9	34.7	18.0	24.3	17.7	32.8		29.1	19.2	20.6	30.7	24.6	34.5	24.3	37.8	35.8	24.2	20.3	30.1	30.0	32.0	36.7	28.2	29.8	25.3
Couple	44.7	45.1	54.6	30.8	46.5	38.3	54.8		39.5	51.9	25.5	27.7	56.4	37.8	34.8	54.6	40.5	34.4	44.6	39.8	35.7	53.7	50.1	40.5	37.4	38.4
All other households	34.5	20.1	10.7	51.2	29.3	44.0	12.4		31.4	29.0	53.9	41.7	19.0	27.7	40.9	7.6	23.7	41.4	35.2	30.2	34.3	14.2	13.2	31.3	32.8	36.3

Notes:

- 1985: data are of 1990 for ES and PT

- 1995: data of 1998 for CZ, EE, SK and RO and data of 2000 for CY, HU, MT and SI

- no data available for DK, FI and SE

## CHAPTER 2 ESTIMATING THE RELIABILITY OF THE LAEKEN INDICATORS (OVERVIEW FOR 17 COUNTRIES)<sup>28</sup>

### Introduction

The main elements of the open method of coordination adopted by the EU in respect of social policy are common guidelines, national action plans, peer reviews, joint evaluation reports and recommendations. The aim is to help member states to develop their own policies, share best practices for influencing social processes and monitor social outcomes in a transparent, comparable way. In order to achieve these aims a set of social indicators were adopted at the Laeken Council meeting in 2001.

The set of indicators is composed of indicators of income inequality, income poverty, regional disparities in unemployment, the work status of household members, education and health. The reporting of developments in these indicators is the core of the monitoring process and is the basis for assessing different social policies. These indicators could also become a basis for setting policy targets in the future.

The estimation of the indicators is based mainly on the European Community Household Panel (ECHP) up to 2001 and, in the future, it will be based on the Survey on Income and Living Conditions, though data from this for all Member States will not become available for another year or more. Since both of these data sources are sample surveys, sampling errors need to be taken into account when comparing across countries or identifying changes over time. This note addresses this often neglected issue and attempts to assess the empirical relevance of sampling errors when examining cross-country differences in income inequality and poverty indicators. We first set out the methodology on which the estimates of these errors are based and then describe the results. More detailed results are included in the annex.

### Methodology

In order to draw policy conclusions from inequality and poverty data it is essential to take into account the fact that they are derived from surveys of a sample of households and inevitably, therefore, involve some margin of error. In surveys we do not observe incomes of all households but only of those belonging to a suitably selected sample of all households. When our survey is based on a probability sample we can use results of sampling theory to draw inference about population statistics (e.g. population poverty rate). Sampling error is of course a major potential problem in respect of small samples, but it might also be of some importance for large samples. To make meaningful comparisons between countries or over time, it is necessary to consider the standard error of the estimates and provide confidence intervals around these. Such standard errors of inequality indices might be based on asymptotic theory or on simulation methods such as the bootstrap (see below).

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### Problems of estimating margins of error of indicators of inequality

An approach based on asymptotic theory is discussed for example in Cowell (2000), Maasoumi (1994) or Nygard and Sandstrom (1981). Mills and Zandvakili (1997) argue against the use of standard errors based on asymptotic theory when estimating inequality indices. When a statistic – is a non-linear function of a random variable –as in the case of typical inequality indices–, confidence intervals based on asymptotic theory may not be accurate and their small sample properties are unknown. Another problem arises because some inequality indices are bounded (for example the value of the Gini-coefficient has to lie between 0 and 1). Standard asymptotic results may produce confidence intervals that extend beyond these theoretical limits. An alternative to asymptotic standard errors is the bootstrap. Instead of assuming a particular shape of the sampling distribution, bootstrapping involves empirically estimating the entire sampling distribution by examining the variation of the statistic within the sample. In practice a certain number of samples with replacement of size equal to the original sample are drawn from the sample. As the bootstrapped samples are samples with replacement, they will be a little different from the original sample. Some observations will be included more than once, other observations in turn will be left out. According to the theory of bootstrapping this variability allows us to estimate the true sampling distribution of a statistic (Mooney and Duvall 1993). As has been demonstrated, the bootstrap method is especially suitable for inference from small samples and takes account of the theoretical bounds of the statistic being examined (Mills and Zandvakili 1997).

Here we calculate bootstrap confidence intervals for the Gini and the income quintile ratio, S80/S20 (where S80 is the income of the top quintile – ie the 20% of the population with the highest income – and S20 is the income of the bottom quintile) inequality indices. Although in principle account should be taken of the way the survey is designed (Jolliffe and Krushelnysky 1999) when applying this method, for simplicity, it is assumed that data are a simple random sample of the population. Confidence intervals are reported on the basis of the “percentile method”, which divides the sample distribution into 100ths, with the lower bound being the 2.5th percentile and the higher bound the 97.5th percentile. The confidence interval estimates are based on 1000 replications. Standard errors of poverty rates are calculated from the simple formula for the variance  $P(1-P)/(n-1)$ , where  $P$  is the head-count index and  $n$  is the sample size (Kakwani 1993)<sup>29</sup>.

## Results

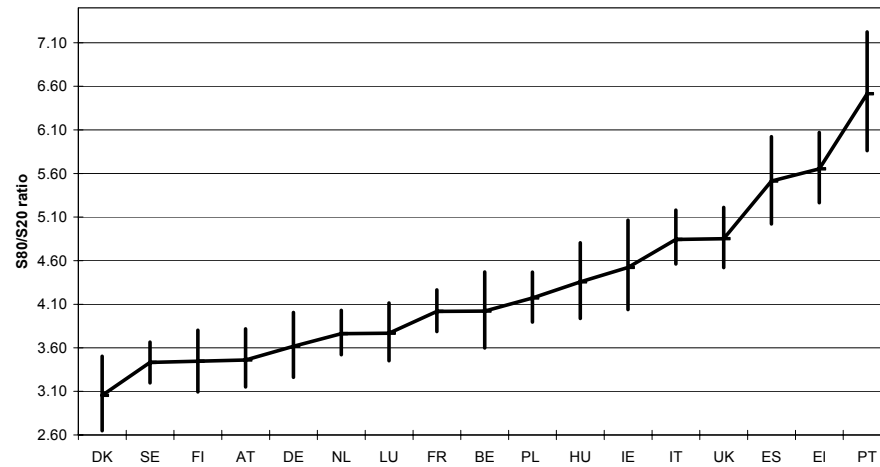
Calculations of confidence intervals for of the EU-15 Member States are based here on the 8<sup>th</sup> wave of the ECHP conducted in 2001 for income in 2000. For Poland, data are for 2000 and from the CHER database and for Hungary, they are for 2003 and from the Tarki Household Monitor survey. Data are not available in sufficient detail for the other new Member States or the candidate countries. Definitions of the inequality and poverty indices accord with the methodology outlined in Eurostat (2003).

In Figures 2.1 and 2.2 point estimates and bootstrap confidence intervals for the Gini and S80/S20 inequality indices are shown. Figure 2.3 shows the overall poverty rates and

<sup>29</sup> It has been argued (Jolliffe and Semykina 1999) that estimated standard error can be higher if account is taken of the more complex survey designs which are typical of household surveys.

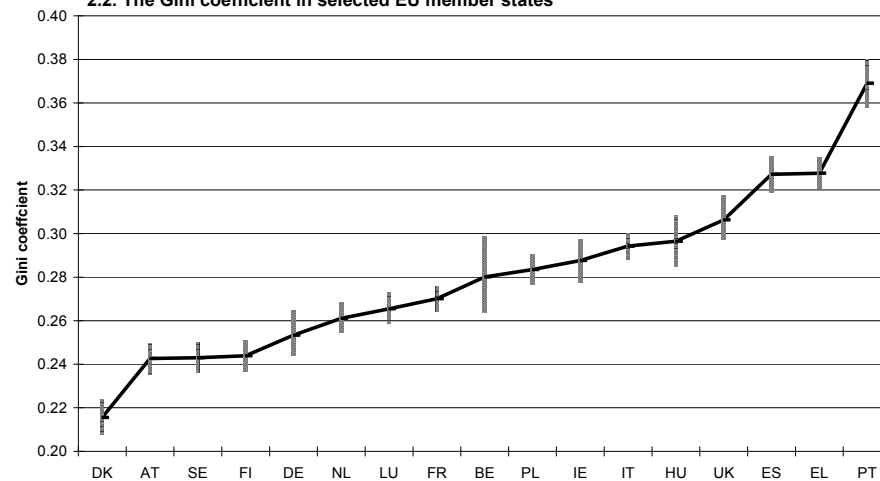
confidence intervals, while Figures 2.4 to 2.15 show confidence intervals for poverty rates for different subgroups of the population required by the Laeken indicators along with the overall poverty rate. Figures 2.16 to 2.30 are similar but in these population subgroups are defined by the status of the reference person in the household. To assess whether or not differences between countries and subgroups are significant, the concern is to examine whether the confidence intervals of the estimates overlap or not. Countries are ranked in each case according to the lower bound of the confidence interval.

### 2.1. The income quintile share ratio in selected EU member states



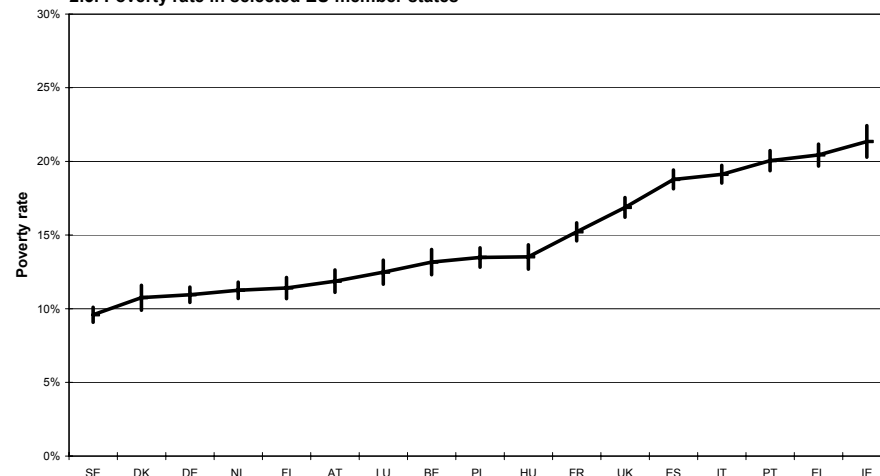
Note: Calculations based on ECHP 2001, except for Poland (CHER 2000) and Hungary (Tárki Household Monitor 2003)

### 2.2. The Gini coefficient in selected EU member states



Note: Calculations based on ECHP 2001, except for Poland (CHER 2000) and Hungary (Tárki Household Monitor 2003)

### 2.3. Poverty rate in selected EU member states



Note: Calculations based on ECHP 2001, except for Poland (CHER 2000) and Hungary (Tárki Household Monitor 2003)

An examination of the confidence intervals for the income quintile ratio (S80/S20) 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 (Figure 2.1). The latter is especially so for Belgium, Hungary and Ireland. If countries with overlapping confidence intervals are grouped together, then Denmark, Sweden, Finland, Austria and Germany form a first group, within which the degree of inequality is approximately equal. The last three countries, however, also overlap with a second group composed of Netherlands, Luxembourg and Belgium. Belgium is equally part of a third group, which comprises as well France, Poland, Hungary and Ireland. Ireland also overlaps with Italy and the UK. Spain, Greece and, most especially, Portugal, on the other hand, clearly have the highest income quintile ratio. In view of these overlaps, it is difficult to rank countries unambiguously in terms of the inequality of income since several countries appear in more than one group.

Estimates of the Gini coefficient show a very similar ranking of countries as the income quintile ratio. However, there is less overlap in confidence intervals (Figure 2.2). Denmark stands out as having the lowest degree of inequality followed by a group comprising Austria, Sweden, Finland and Germany and a second group consisting of Netherlands, Luxembourg and France a second group. Belgium, Poland, Ireland, Italy and Hungary have a Gini coefficient between 0.28 and 0.30, with the UK slightly above this and Spain and Greece higher still. Portugal again shows the highest degree of inequality with the coefficient in the 0.36–0.38 range.

In terms of the poverty rate (or, more accurately, a risk of poverty rate), there is a large group of countries which all have a rate between 10% and 14% (Figure 2.3). This group can be subdivided into countries with a poverty rate around 11% (Denmark, Germany, Netherlands, Finland and Austria) and those with one towards the top end of the range (Luxembourg, Belgium, Poland and Hungary). Spain, Italy and Portugal have a rate slightly below 20%, while Ireland and Greece have the highest rates at over 20%.

In Figures 2.4–2.16 poverty rates for different subgroups are shown. The vertical bars show lower and upper bounds of the confidence interval for the poverty rate of each subgroup examined. The horizontal stripe shows the width of the confidence interval for the overall poverty rate. They, therefore, enable cases where the poverty rate for a particular subgroup differs significantly from the overall rate to be identified.



So far as gender differences are concerned, in Finland, Austria and the UK, poverty rates of men are significantly lower than the overall rate and poverty rates of women are significantly

higher (Figures 2.4 and 2.5). In all the other countries, poverty rates do not differ significantly by gender.

Poverty rates for children (persons below 15 years of age) are significantly lower than the overall rate in Denmark, Finland and Greece (Figure 2.6). In Sweden, Belgium, Austria and France the confidence interval for child poverty rate overlaps with the interval for the overall poverty rate. Consequently, it is not possible to draw a definite conclusion on the direction of the difference (i.e. the observed difference might be the result simply of sampling error). In all the other countries, child poverty rates are significantly higher than overall rates. Rankings of countries are more or less the same as for the overall poverty rate, the Nordic countries showing the lowest rate of child poverty and the UK, Italy, Ireland, Spain and Portugal the highest rate (with more than 20% of those under 16 having income below the poverty line. Greece is the main exception, with a high: overall poverty rate but a rate for children around the average.

Estimates of poverty rates of those aged 16–24 are subject to relatively large errors (Figure 2.7). Ranking countries according to the lower bound of the confidence interval shows Luxembourg and Denmark in the middle group of countries, but in terms of to the upper bound, they would be ranked among countries with the highest rates. Only in Ireland is the poverty rate for this age group lower than the overall rate, while the rate exceeds the overall rate in Germany, Poland, Luxembourg, Denmark, France, Netherlands, Finland and Italy. The ranking of countries according to the poverty rate of those aged 16–24 differs markedly from that for the overall rate in a number of cases. In particular, Ireland, which has the highest overall rate, is among countries with the lowest rate for young people, along with Sweden, Austria and Belgium, while Finland has one of the highest rates, along with France, Netherlands and Italy.

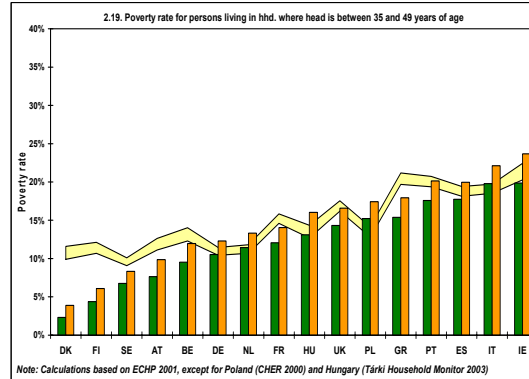
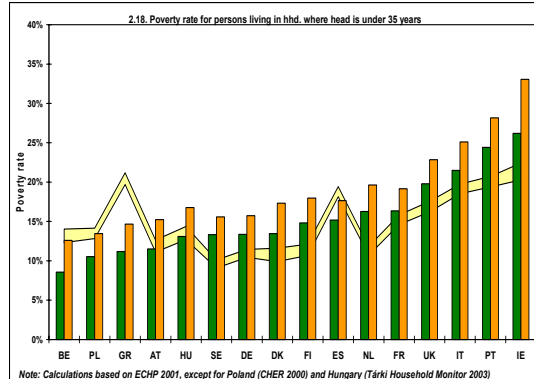
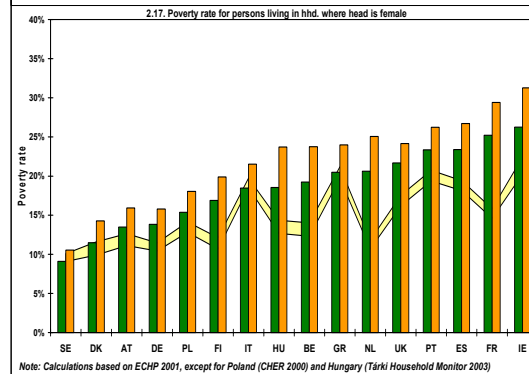
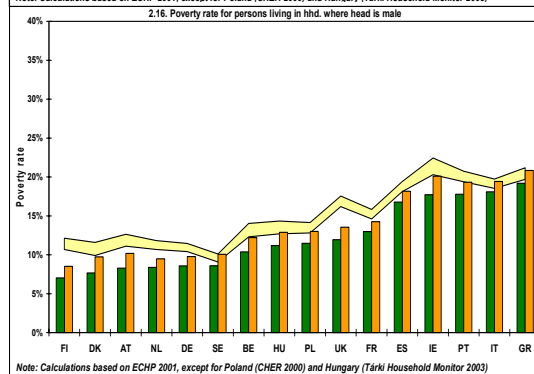
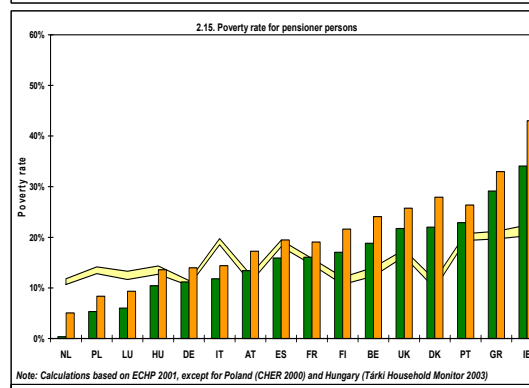
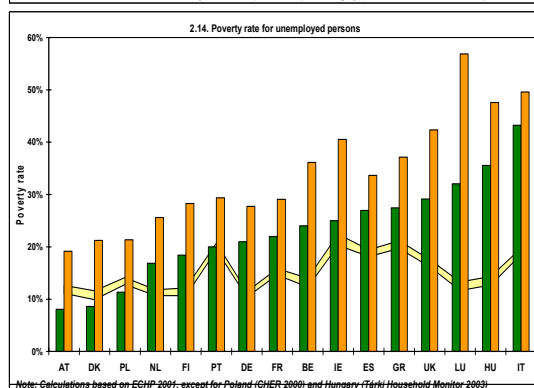
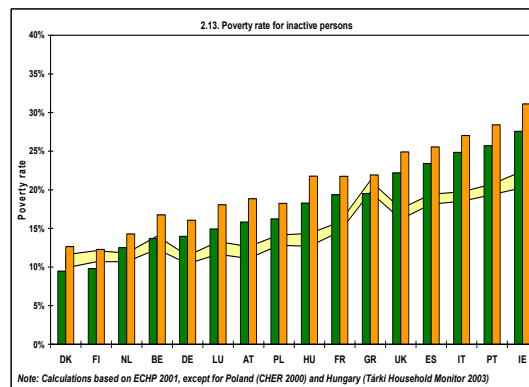
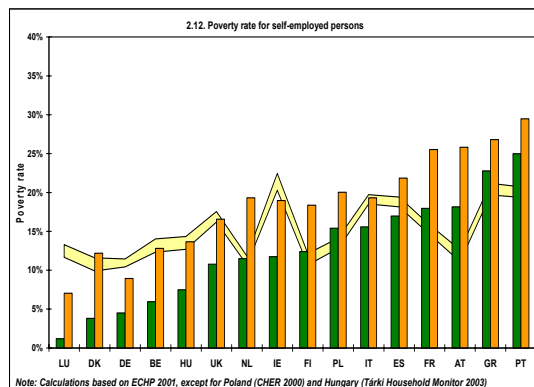
Poverty rates for those aged 25–64 are generally lower than the overall rate, but some exceptions occur. For Sweden, Hungary and Luxembourg, the rate for those aged 25–44 is higher, while for Greece, this is the case for those aged 45–64 (Figures 2.8 and 2.9). Poverty rates for the elderly (those aged 65 and over) are significantly lower than the overall rate in the Netherlands, Poland, Luxembourg and Hungary, while in Sweden, Germany and Italy, they are much the same. In all the other countries, poverty rates for the elderly are significantly above the overall rate (Figure 2.10).

The income of people and their risk of poverty are closely related to their employment status. The relative number of the employed with income below the poverty line is significantly lower than that of the population as a whole in all countries (Figure 2.11). The variation between countries in poverty rates for the employed is relatively small which leads to a considerable overlap in the confidence intervals surrounding the estimates. Luxembourg, Italy, Spain, Portugal and Ireland have the highest rates of poverty among the in employment and Austria, Belgium, Denmark and Hungary the lowest rates. But it is difficult to rank the other countries because of the overlap in confidence intervals.

The poverty rates of the self-employed (Figure 2.12) are estimated with less accuracy, quite apart from the uncertainty attached to the income reported, because the numbers involved



are relatively small and consequently relatively few are included in the samples covered by the surveys. In Luxembourg, Germany and Ireland, the poverty rate for the self-employed seems to be smaller than the overall rate, while in Poland, France, Austria, Greece and Portugal, it is higher.



Poverty rates for those who are not economically active but not in retirement are significantly higher than the overall rate in almost all countries. Exceptions are Sweden, Denmark, Finland and Greece, where the confidence interval overlaps with that for the total population. Ireland and Poland followed by Italy, Spain and the UK have the highest rates, with Hungary, France and Greece in the next group and the Nordic countries having the lowest rates (Figure 2.13). For the unemployed, the estimates involve a considerable margin of error because of the small sample size. Poverty rates, however, exceed the overall rate significantly in all countries except Austria, Denmark and Poland (Figure 2.14). For those in retirement, poverty rates exceed the overall rate in most countries but are significantly below it in the Netherlands, Poland, Luxembourg and Italy (Figure 2.15).

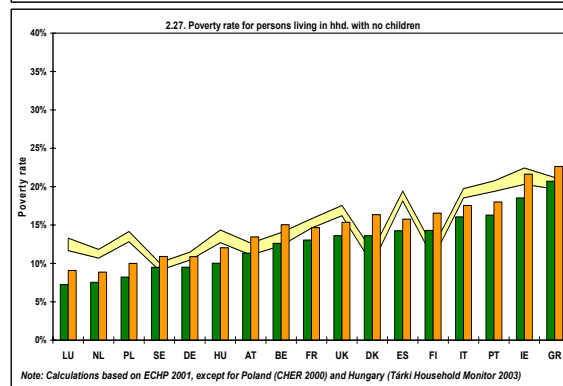
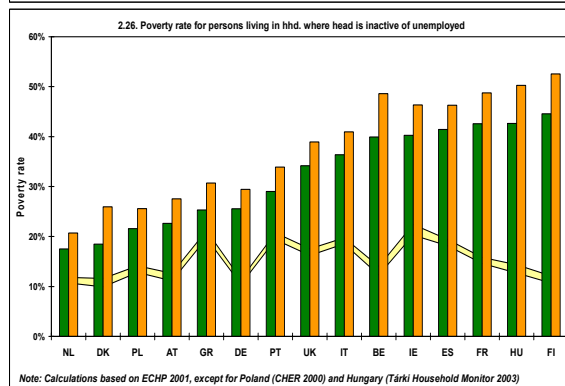
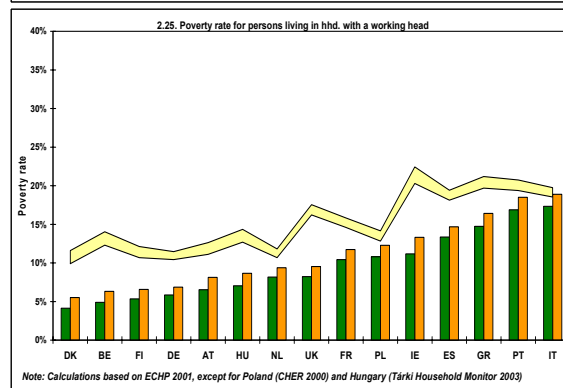
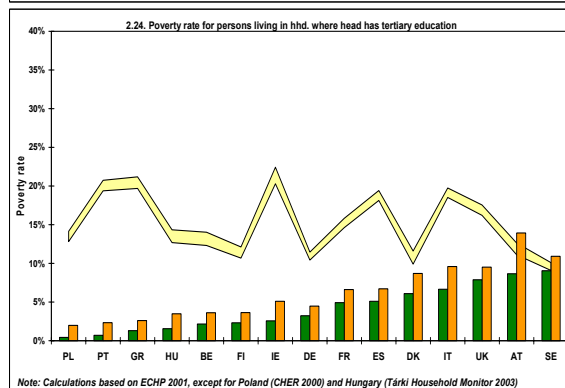
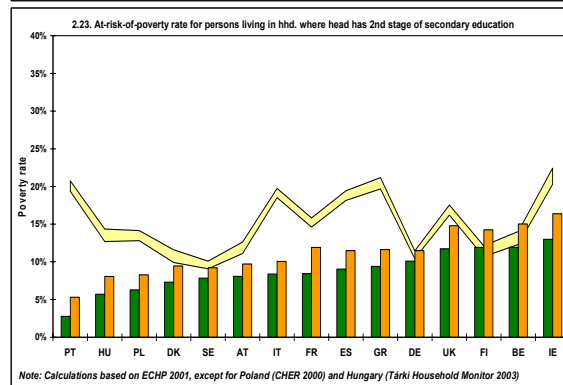
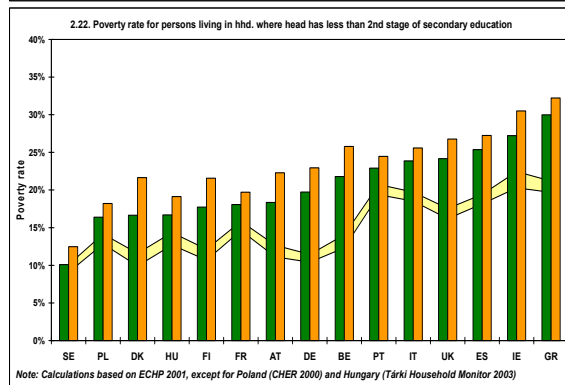
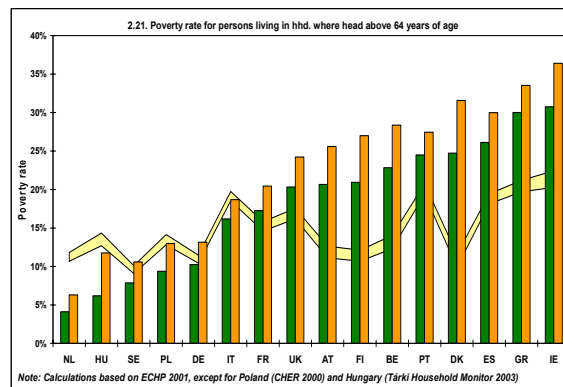
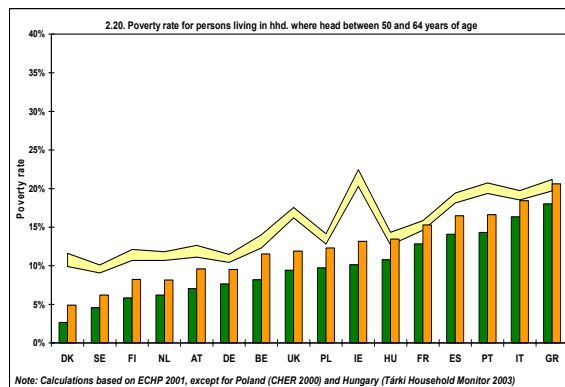
The last set of charts (Figure 2.16–2.30) show poverty rates according to the status of the household reference person. As household members are assumed to share income equally between themselves, the attributes of individuals might have less effect on their equivalised income than the features of the household in which they are living. This helps to explain why there are not more countries with poverty rates of women significantly above those of men. For those living in households where the reference person is a woman, however, poverty rates are significantly above the overall rate in almost all countries, the only exceptions being Sweden, Italy and Greece (Figure 2.17). The difference is substantial in Belgium, Netherlands, France and Ireland. The generally higher rates of poverty for this group as compared with women *per se* are in large part due to the greater weight of lone mothers with children and elderly women living alone.

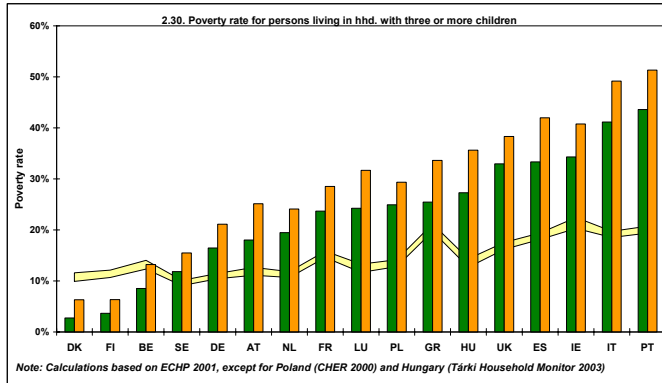
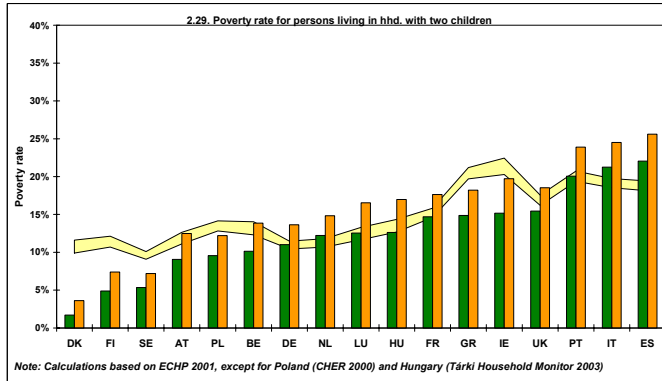
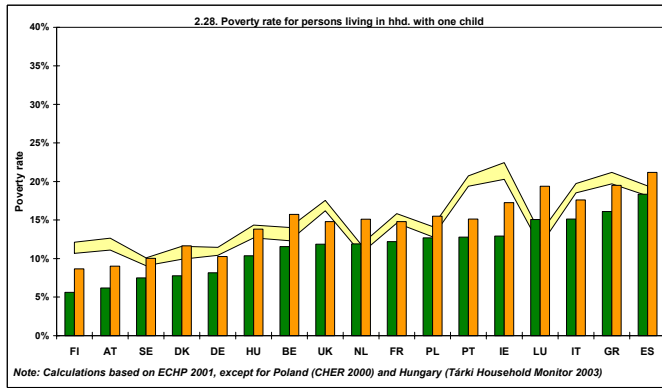
In terms of age groups, a focus on the reference person adds an additional dimension to the analysis of the differential risk of poverty faced by those at different stages of their life cycle. Those living in a household where the reference person is under 35 have a significantly higher-than-average probability of having income below the poverty line in most countries (Figure 2.18). The exceptions are Belgium, Poland, Greece and Spain, where their poverty rate is lower than the overall rate and Austria and Hungary where it is about the same. In the Nordic countries, Austria, Belgium, France and Greece, the poverty rates of those living in a household where the reference person is 35–49 are significantly lower than the overall rate, in other countries not significantly different (Figure 2.19). In all countries except Greece, the poverty rate in households where the reference person is 50–64 are significantly lower than the overall rate (Figure 2.20). By contrast, poverty rates in households where the reference person is above retirement age are generally higher than the overall rate and show similar differences between countries as the rates for older people described above, reflecting the large number of people in this age group who live alone or as part of an elderly couple (and correspondingly the relatively small number who live in households where the reference person is of working age) (Figure 2.21).

The education attainment level of the household reference person also strongly affects the risk of poverty (Figures 2.22 to 2.24). Members of households where the reference person has less than second stage of secondary education have significantly higher poverty rates than the overall rate in all countries except Sweden, while rates in households where the

reference person has tertiary education are less than the overall rate in all countries, though in Austria and Sweden, the rates are not statistically different from the overall rate. In the

It is equally apparent that the employment status of the reference person affects their risk of poverty, more so than the employment status of individuals as such (Figures 2.25 and 2.26). In a number of countries – Belgium, Ireland, Spain, France and Finland – poverty rates are as high as 40–50% for those living in households where the reference person is inactive or unemployed, reflecting both the larger weight assumed by lone person households than in the case of the analysis of individuals and the fact that there is less chance of someone else in the household being employed in these cases than in the case of individuals as such.





Finally, the presence of dependent children affects the risk of poverty in most countries (Figures 2.27–2.30). Households with three or more children have significantly higher rates of poverty than other households in all countries, except Denmark and Finland, where rates are lower, and Belgium, where there are about the same.

## Conclusion

The above analysis draws attention to the importance of considering sampling error when making cross-country, and cross-group, comparisons of poverty and inequality. The results show that it is difficult to rank countries unambiguously in terms of inequality or the risk of poverty when sampling error is considered. The most that is possible is to define groups of countries, which differ from each other but within which levels are similar. The problem is even more serious for subgroups of the population for whom, because of the smaller sample size, the margin or error is higher. Much the same conclusions apply to estimating changes

in indicators of poverty or inequality over time, implying that small year to year movements need to be treated with caution.

## **PART II**

# **INCOME AND THE LABOUR MARKET**

## **CHAPTER 3      POVERTY AND THE LABOUR MARKET: THE RELATIONSHIP BETWEEN LOW INCOMES AND EMPLOYMENT IN THE EU<sup>30</sup>**

### **Introduction**

The main aim here is to review the relationship between poverty levels of income, and relative income levels more generally, and a number of labour market factors, and the way that it varies across Member States and candidate countries as well as recent changes in this. The analysis is divided into three sections: the first reviews the relationship between low incomes and the most frequent economic activity status of individuals; the second describes how income varies with the labour market attachment of people living in different types of household; the third focuses on in-work poverty and on the main factors influencing this among the employed population; the last section summarises the main findings and presents some conclusions.

### **Income poverty and economic activity**

#### **POVERTY AND MAIN ECONOMIC ACTIVITY: RECENT COMPARATIVE EVIDENCE**

This section is concerned to investigate how the incidence of poverty varies across Member States and over time according to the main economic activity status. Relative poverty rates are compared for the following subgroups of the population: employees, the self-employed, the unemployed, the retired and other inactive, classified according to international conventions (as adopted by Eurostat). Poverty rates are measured as the percentage of individuals in the relevant population subgroups living in households whose equivalised income falls below the 60% of the national median equivalised income. The relationship between poverty rates according to labour market condition and total poverty for old and new Member States from the mid 90s until the most recent years available is illustrated in Figures 3.1a – 3.1e.

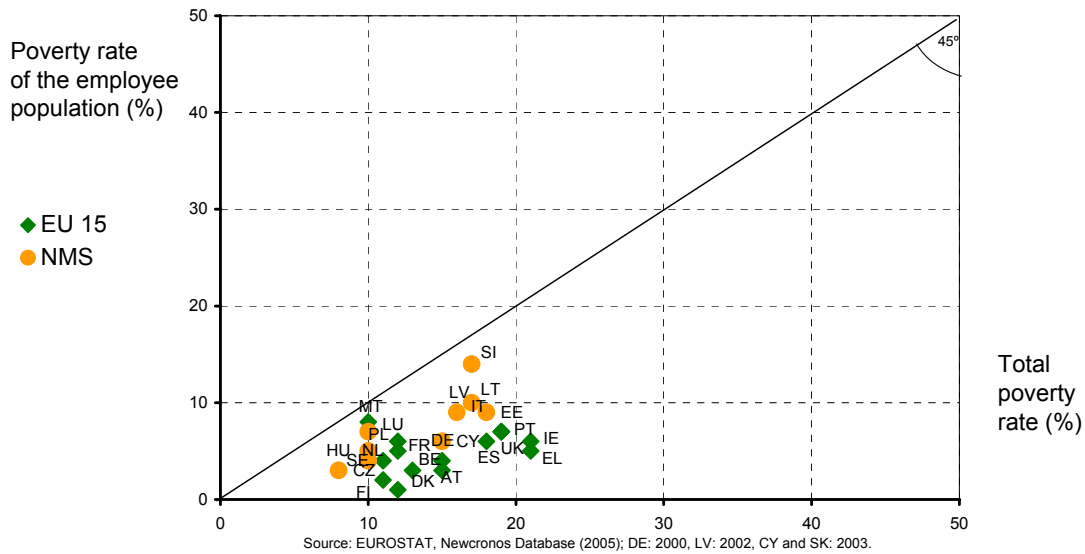
The charts offer a snapshot of how income poverty is related to economic activity, and show that poverty rates exhibit huge variations between different labour market conditions. Employees exhibit the lowest poverty rates with respect to all the population subgroups considered and to national poverty levels (Figure 3.1a), both by gender and over time. The variation of national poverty rates across countries for employees is also much smaller than the variation in total poverty rates, suggesting that in both old and new Member States labour market attachment is a key condition for protecting individuals against the risk of poverty.

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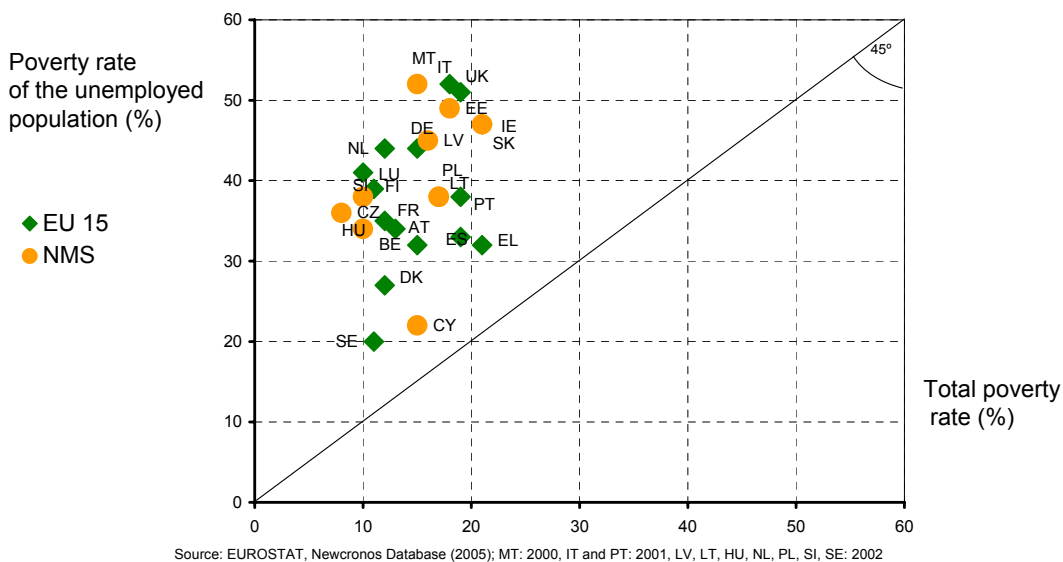


### 3.1.a Poverty rates: employees vs. total population (2001)



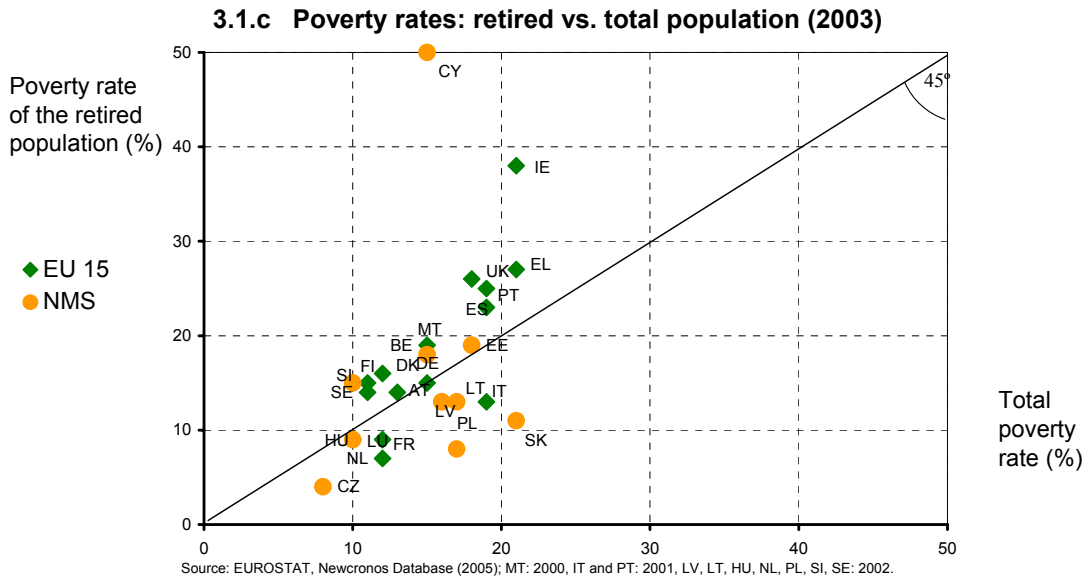
Poverty tends to be most widespread among the unemployed population (Figure 3.1.b). Poverty rates for the unemployed are higher than those for other population subgroups and the overall population. The incidence of poverty among the unemployed is particularly high in Italy and in the UK, among the EU-15 countries, and in Malta and Estonia among the new Member States, where one out of two unemployed has income below the poverty line. The countries with the lowest poverty rates among the unemployed are Denmark, Cyprus, Sweden and (27%, 22% and 20% respectively): in the Nordic countries, this might be a consequence of the generous social protection schemes in place for people who lose their job, though, the poverty rates of the unemployed are still well above their corresponding overall national poverty rates (12%, 15% and 11% respectively).

### 3.1.b Poverty rates: unemployed vs. total population (2003)



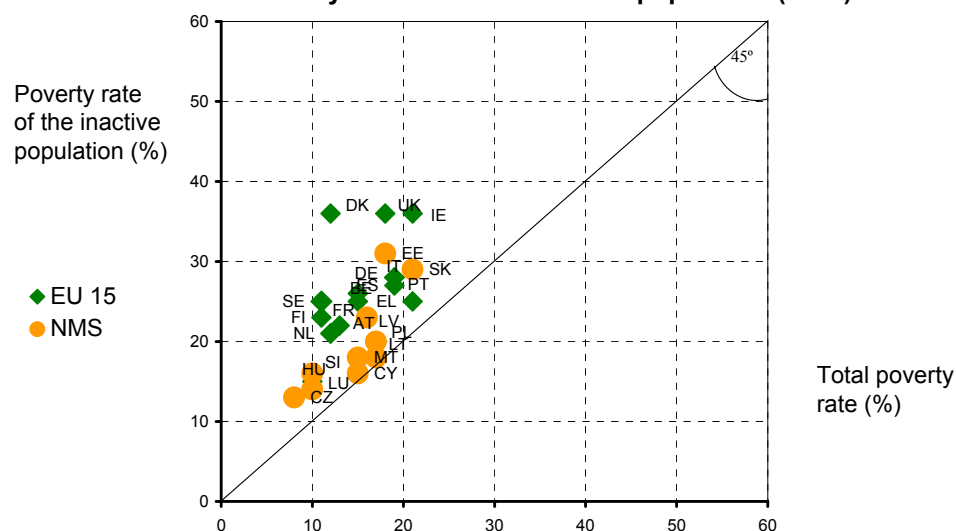
The economically inactive population represents the sub-group with the second highest poverty rate, mainly in the EU-15 countries, and in particular in Ireland, UK and Denmark

(Figure 3.1c). In the Anglo-Saxon countries, this might possibly reflect the shift in social transfers towards in-work oriented benefits which has occurred the end of the 1990s, as a result of which benefits to those not in the labour force tend to have declined in relative terms (Immervoll et. al., 2005). The relatively low poverty rates among the inactive population in the new Member States might partly be a result of systematic under-reporting of income by this group, reflecting extensive participation in the shadow economy.



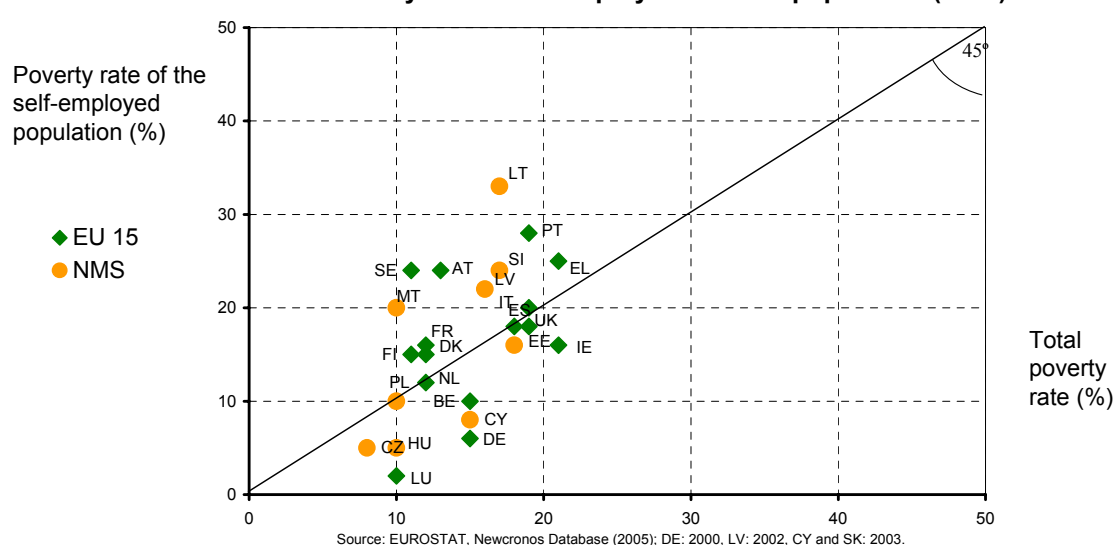
The poverty rate of the retired population in the EU-25 on average is about the same as the poverty of the overall population (Figure 3.1d). In some countries, however, including Portugal, UK, Greece, Ireland and Cyprus, the poverty rate among pensioners is significantly higher than the national poverty rate, while in others, for example Slovakia, Poland, Italy, Netherlands and the Czech Republic, it is relatively low. The incidence of poverty among pensioners is one of the core issues in the current economic and social policy debate in the UK. The higher poverty rates of the retired population here and in Ireland might be attributable to the increasing importance of the private component in pension provision, and to the flat-benefit structure of the public component, which is likely to widen income inequalities among pensioners.

### 3.1.d Poverty rates: inactive vs. total population (2003)



The last population sub-group of interest is the self-employed (Figure 3.1e). In this case, the distribution of poverty rates is relatively heterogeneous with respect to total poverty, and it is difficult to identify clear-cut patterns across countries. This might reflect the fact that income from self-employment is usually more subject to omissions and errors than income from other sources, which might distort the analysis. In the EU-15 countries, poverty rates for the self-employed are higher than for the total population mainly in Portugal, Greece, Austria and Sweden; Greece and Portugal are also among the countries with the highest share of self-employed in total employment: (42% and 25%, respectively). High poverty rates in these countries might be due to concentration of the self-employed in sectors of activity particularly exposed to income fluctuations, such as low-skilled, low-technology general services or agriculture.

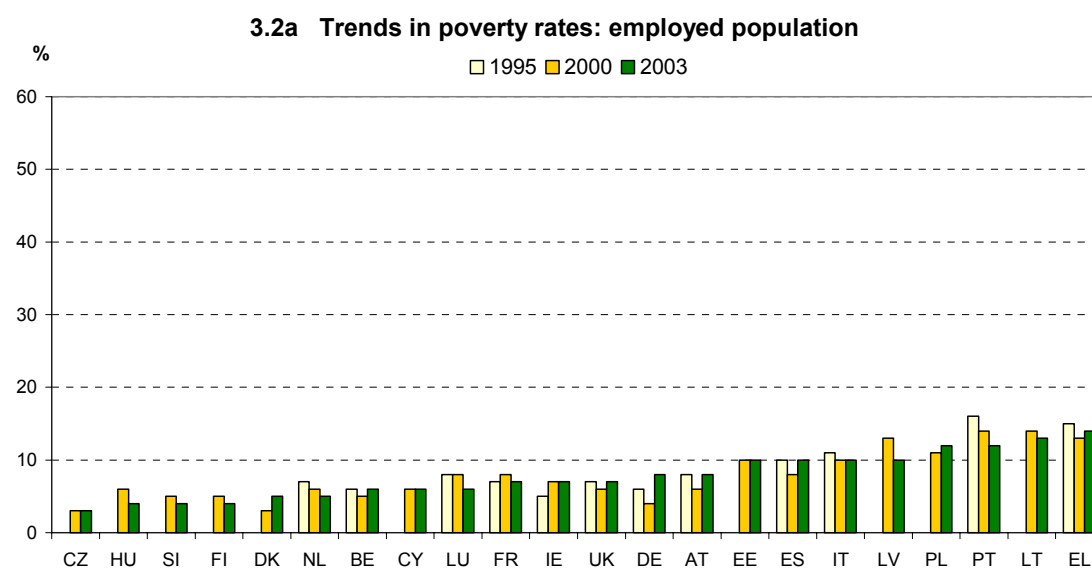
### 3.1.e Poverty rates: self-employed vs. total population (2001)



## TRENDS IN POVERTY AND INEQUALITY BY MAIN ECONOMIC ACTIVITY

As already noted in Part I of the report, the earliest cross-country comparable data relate to 1995 for the EU-15 Member States, while for the new Member States, comparable data on incomes are available only since 2000. For this reason, the focus is on changes over two periods: 1995 to 2000, and 2000 to 2003.

Changes in poverty rates by main activity status over time are shown in Figures 3.2a – 3.2d. As far as employees are concerned, poverty rates have been stable since the mid 1990s (Figure 3.2a), without major differences between men and women. A slight increase in the incidence of poverty of employees is registered only in Ireland, where such a tendency is associated with a general increase in overall poverty and in particular that of the number of working poor since the mid 1990s. By contrast, a clear declining trend can be observed for Portugal, Netherlands and Italy.



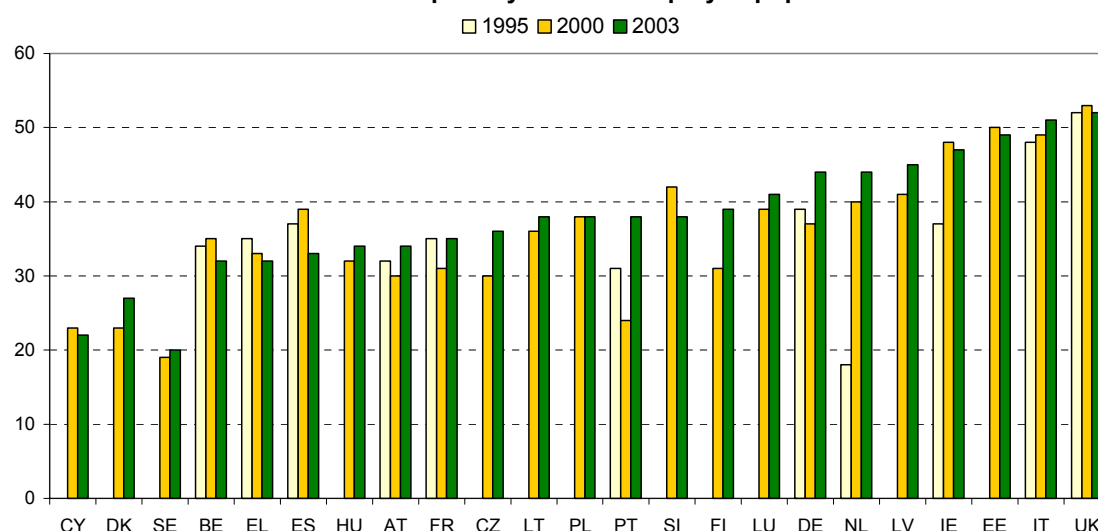
Source: EUROSTAT, Newcronos Database (2005); CZ and DK: 2001-2003; FR and NL: 1995-2000-2002; IT: 1995-2000-2001; CY: 1997-2003; LV, LT, HU, PL and SI: 2000-2002; PT: 1995-2000-2001; FI: 1996-2000-2003; SE: 2001-2002.

Poverty rates have instead increased over the period considered among the unemployed population in Italy, Ireland, and, most dramatically, in the Netherlands (Figure 3.2b), where the number of unemployed below the poverty line more than doubled between 1995 and 2003 (from 18% to 44%). In the UK, poverty rates have remained persistently higher than anywhere else in the EU, at above 50% throughout the period<sup>31</sup>. Short-term increases in poverty rates occurred also in Czech Republic, Hungary, Lithuania, Finland and Latvia, while a clear-cut decline in poverty among the unemployed during this period is evident only for Greece. Distinguishing between men and women, an increasing trend in poverty from the mid 1990s is evident in particular in Ireland among men (for women, it increased up until

<sup>31</sup> This may be in part a consequence of the omission of housing benefits, which are an important element of transfers to the unemployed, from the measure of income, which illustrates the need to take housing costs into account when assessing poverty levels. See Part IV below.

the end of the 90s but declined afterwards), and in Finland and in the Netherlands for both men and women, where it rose from around 20% in the mid-1990s to 40–50%.

### 3.2b Trends in poverty rates: unemployed population

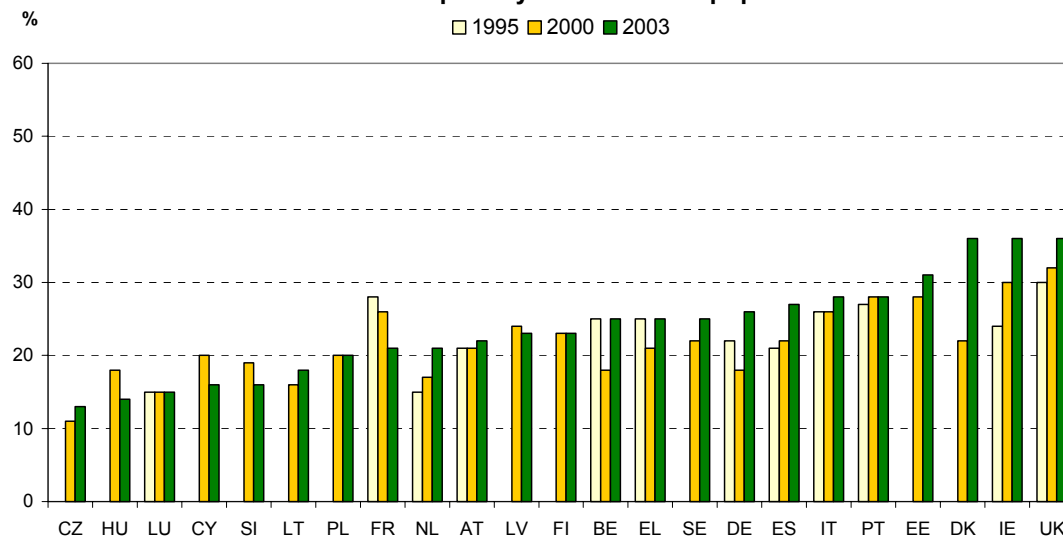


Source: EUROSTAT, Newcronos Database (2005); CZ and DK: 2001-2003; FR and NL: 1995-2000-2002; IT: 1995-2000-2001; CY: 1997-2003; LV, LT, HU, PL and SI: 2000-2002; PT: 1995-2000-2001; FI: 1996-2000-2003; SE: 2001-2002.

Among the inactive population (Figure 3.2c), poverty has increased substantially over the period mainly in the countries where poverty rates were already high in the mid 1990s, namely in the UK, Ireland, Italy, Spain and the Netherlands, and, to a minor extent, in Portugal, while it has declined only in France. So far as the retired population is concerned, significant increases in poverty have been less widespread and limited mainly to Ireland and Spain (Figure 3.2d), while in Portugal and Greece, in spite of the high poverty rates, the trend has been declining.

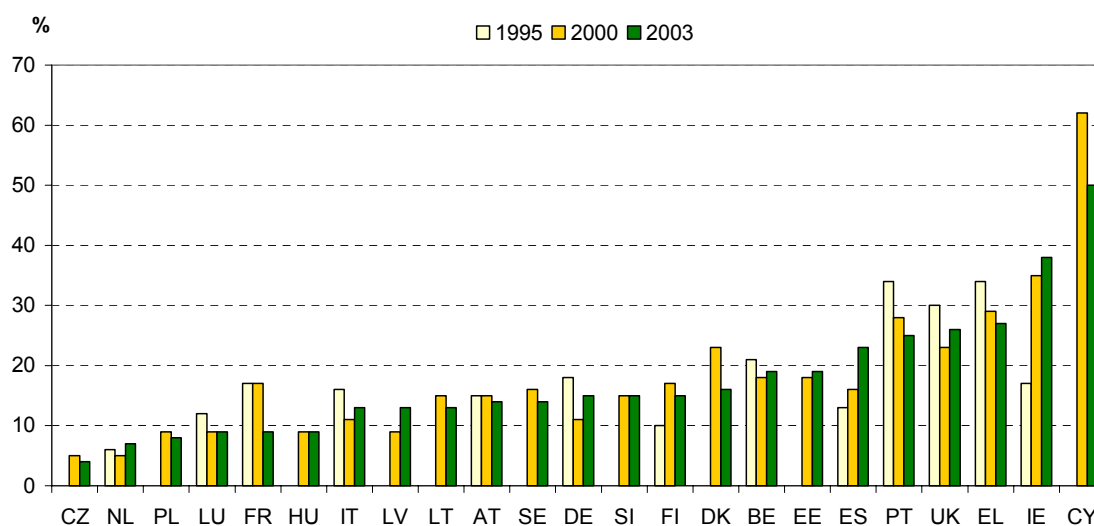
These findings are confirmed by the charts in Figure 3.3, which shows the change over the period in the percentage differences between median incomes by main activity status and national median income. Because of lack of available data for the new Member States, the comparison is confined to the EU-15 countries. Median incomes of employees have remained relatively stable during the period considered, though the extent to which they differ from the national median varies across countries. The unemployed population exhibits on average the biggest shortfall relative to the national median and there has not been any apparent tendency for differences across countries to narrow over time. For the inactive and the retired population, differences from the national median income are less pronounced and in a number of countries they amount to only 10%–15%; Ireland and the UK are exceptions, and in Ireland in particular the difference from the median has widened.

### 3.2c Trends in poverty rates: inactive population



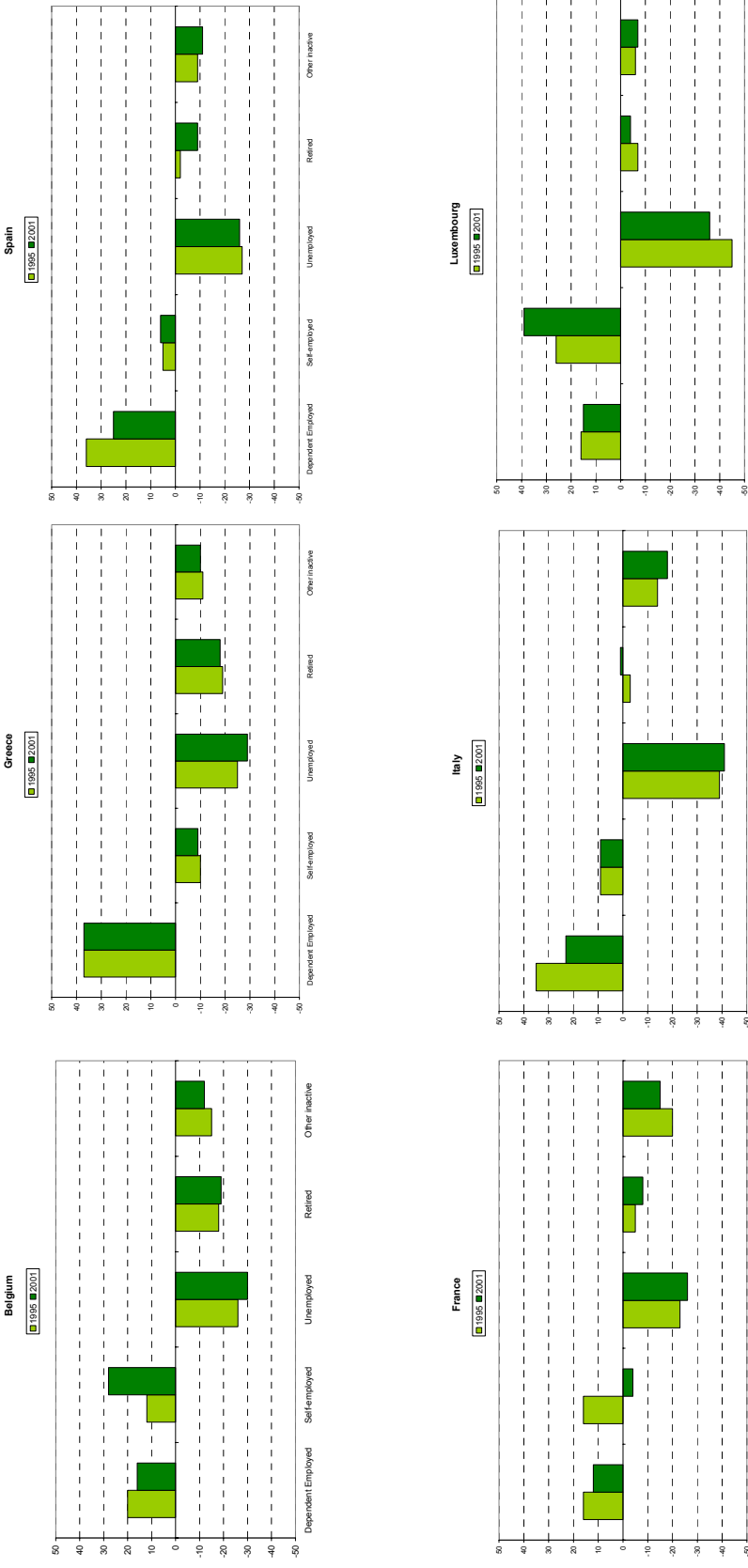
Source: EUROSTAT, Newcronos Database (2005); CZ and DK: 2001-2003; FR and NL: 1995-2000-2002; IT: 1995-2000-2001; CY: 1997-2003; LV, LT, HU, PL and SI: 2000-2002; PT: 1995-2000-2001; FI: 1996-2000-2003; SE: 2001-2002.

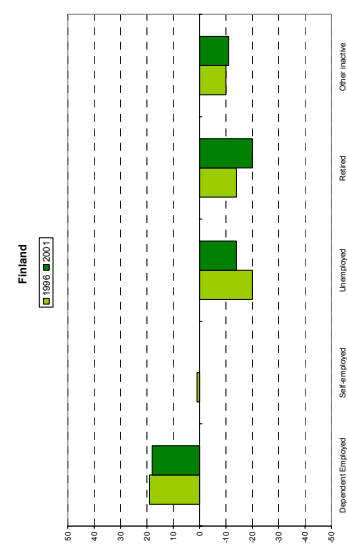
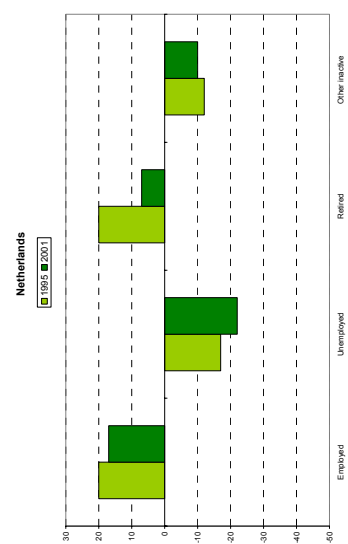
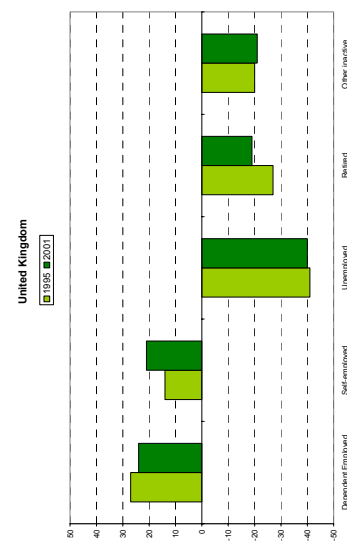
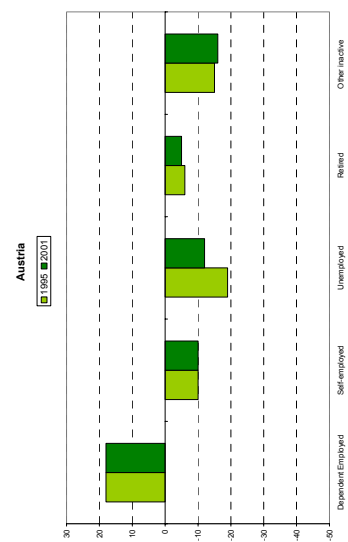
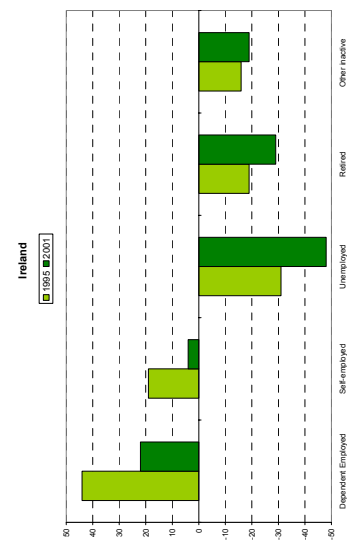
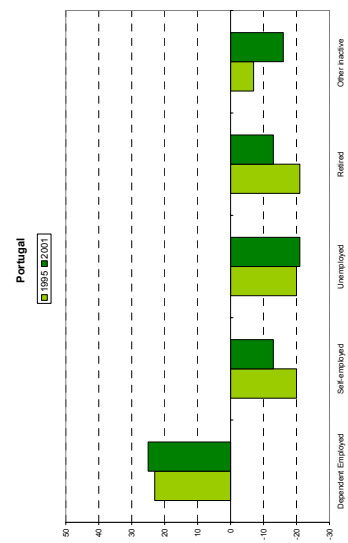
### 3.2d Trends in poverty rates: retired population



Source: EUROSTAT, Newcronos Database (2005); CZ and DK: 2001-2003; FR and NL: 1995-2000-2002; IT: 1995-2000-2001; CY: 1997-2003; LV, LT, HU, PL and SI: 2000-2002; PT: 1995-2000-2001; FI: 1996-2000-2003; SE: 2001-2002.

3.3 Trends in median equivalised net income by main economic activity status: % difference from national median







## Poverty and the labour market attachment of households

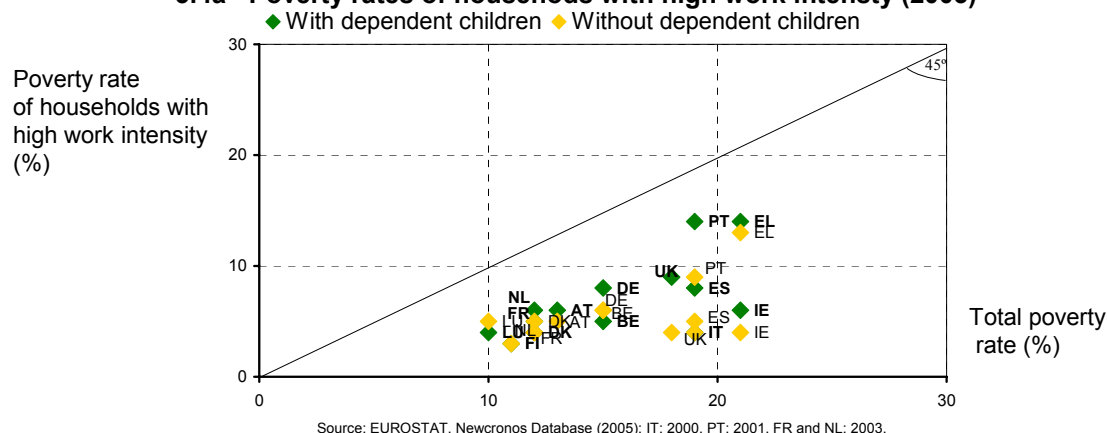
The analysis above has shown that employment is a key condition for protecting individuals and households from the risk of poverty in all Member States. This section further investigates the relationship between relative income levels and the work intensity of households at the national level. As the presence of dependent children greatly influences labour market participation of (primarily) women, it would be expected that there would be significant differences in both the labour market attachment and the poverty rates of households with and without children. In order to explore this issue, two household types are distinguished in the following analysis. The limited availability of comparable individual microdata for all 25 Member States, however, limits the analysis to the EU-15 Member States.

The approach adopted is based on the Eurostat definition of work intensity (Bardone and Guio, 2005): namely, the ratio between the number of months spent in employment during a year by household members of working age (i.e. aged 16–64) and the number of months during which household members are economically active. A work intensity index of 0 corresponds to jobless households, which means that none of the household members in working age is employed during a year. By the same token, a work intensity index equal to 1 corresponds to a situation in which all household members of working age are employed for the entire year, while an between 0 and 1 reflects a situation in which either only one household members is working for the full year or household members are working for part of the year.

### CROSS COUNTRY COMPARISON OF POVERTY AND WORK INTENSITY OF HOUSEHOLDS WITH AND WITHOUT CHILDREN

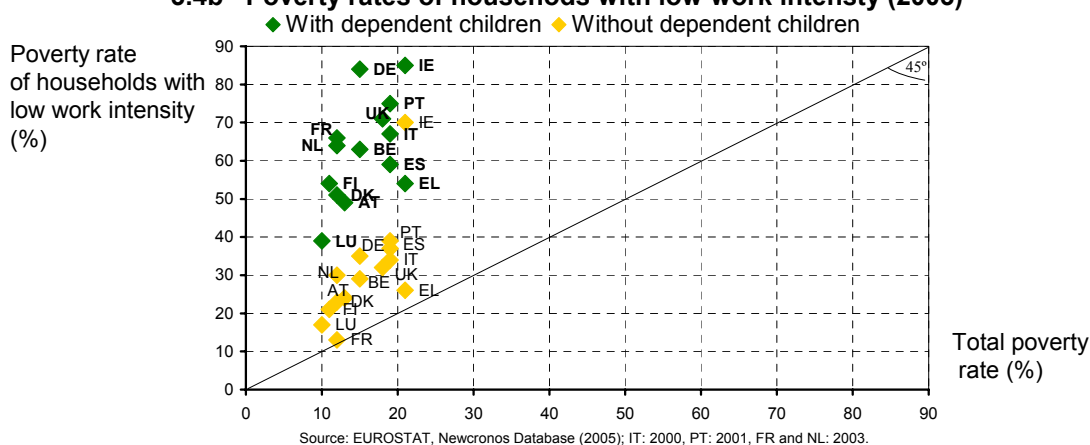
As the attachment of households to the labour market increases, poverty declines, as shown in Figures from 3.4a to 3.4c. Jobless households with dependent children exhibit by far the highest poverty rates when compared to national aggregate rates. With the exception of Luxembourg, half or more of jobless households with children falls below the poverty line in all EU-15 Member States; this share increases dramatically in Ireland and Germany, where around 85% of jobless households with children have income below the poverty line, and to a lesser extent, in Portugal and the UK, where this is the case for around 75% of such households. Poverty rates for jobless households without children are in general above the national levels as well, but largely below the corresponding Figures for households with children, with the exception of Ireland.

### 3.4a Poverty rates of households with high work intensity (2003)



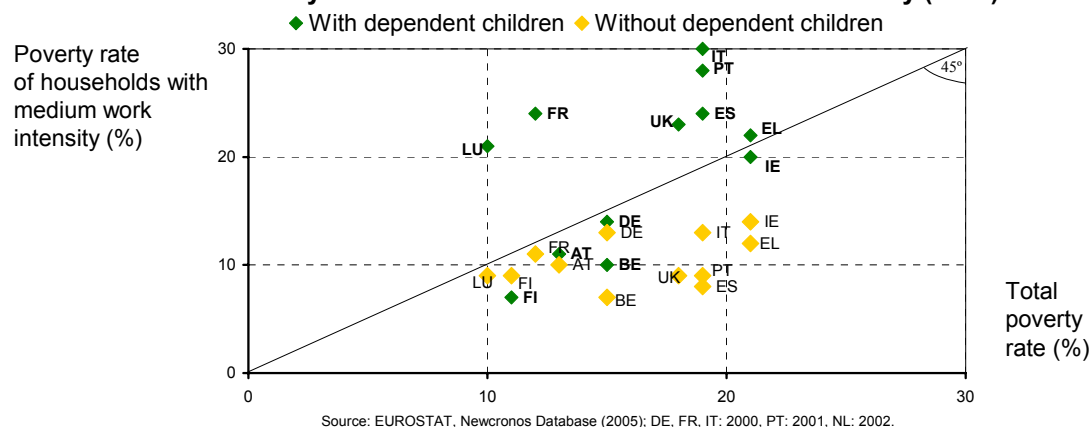
Full employment of all adult household members seems the key condition to protect individuals and households against poverty. In all the EU-15 countries considered, poverty rates of households with work intensity equal to 1 are lower than the national rates. For working households the effect of children on income levels is less marked, and the gap in poverty rates between households with and without children is narrower, and in some cases negligible.

### 3.4b Poverty rates of households with low work intensity (2003)



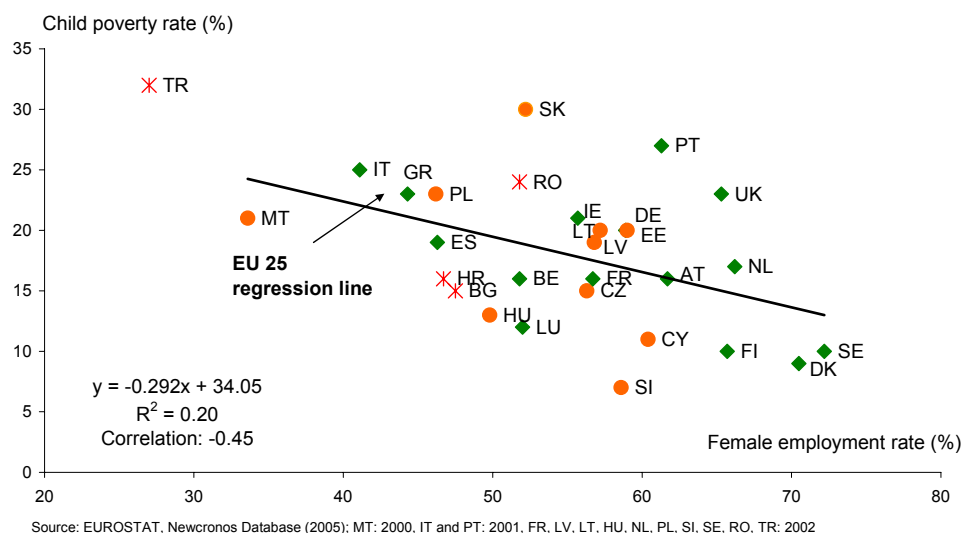
The situation of households where at least one person is employed, but not all members have worked full time during the year (which means a work intensity index between 0 and 1) is more polarised. On the one hand, in a number of countries, including Finland, Austria, Belgium and Germany, households with and without children exhibit very similar poverty rates (7%, 11%, 10% 14% respectively), each below the national rate. On the other, in Italy, Portugal, Spain, France and UK, households with children experience higher (even if not markedly higher) poverty rates both compared with national levels and with households without children (30%, 28%, 24%, 24% and 23% respectively).

### 3.4c Poverty rates of households with medium work intensity (2001)



Another illustration of the relationship between the labour market attachment of households and poverty outcomes is given by Figure 3.5, which shows the negative correlation between employment rates of women of working age and child poverty in EU-25 Member States together with Bulgaria, Romania, Croatia and Turkey.

### 3.5 Female employment and child poverty (2003)



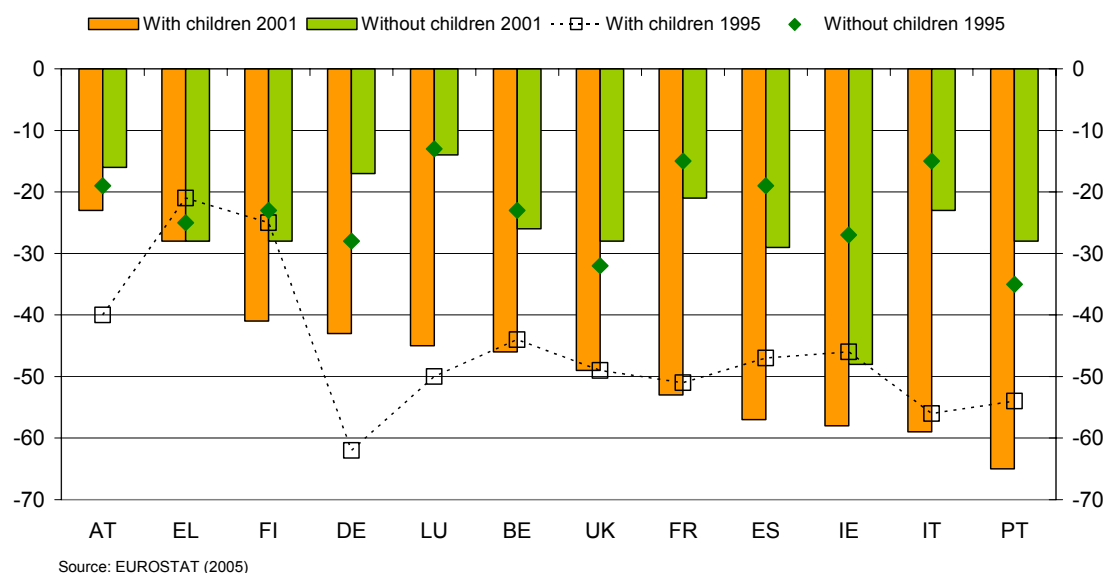
## TRENDS IN INCOME INEQUALITY AND THE LABOUR MARKET ATTACHMENT OF HOUSEHOLDS WITH AND WITHOUT CHILDREN

The question addressed here is whether or not the role of the labour market attachment of households has become more important over time in explaining differences in income levels. This is examined on the basis of changes over the period 1995 to 2001, using the longest consistent time series available. The focus is on median equivalised income for households with different work intensities and with or without children, which is compared with the national median income. The percentage point differences between the median income of different types of household and the national median are reported in Figures 3.6a – 3.6d, where the countries are sorted in ascending order by the differences in median incomes for households with children in 2001. These Figures enable differences in median income between specific household types to be examined in each country, so supplementing the above analysis of poverty rates. More interestingly, they present evidence on changes in relative incomes between 1995 and 2001.

Jobless households with children tend to experience the biggest shortfalls of income relative to the national median, particularly in Portugal, Italy, Ireland, Spain, and France, where the shortfall exceeds 50% (Figure 3.6a). Over this period, there was a considerable improvement in Austria and Germany in particular for jobless households with children. By contrast, the relative income of jobless households, either with or without children, fell over the period in Ireland and Spain.

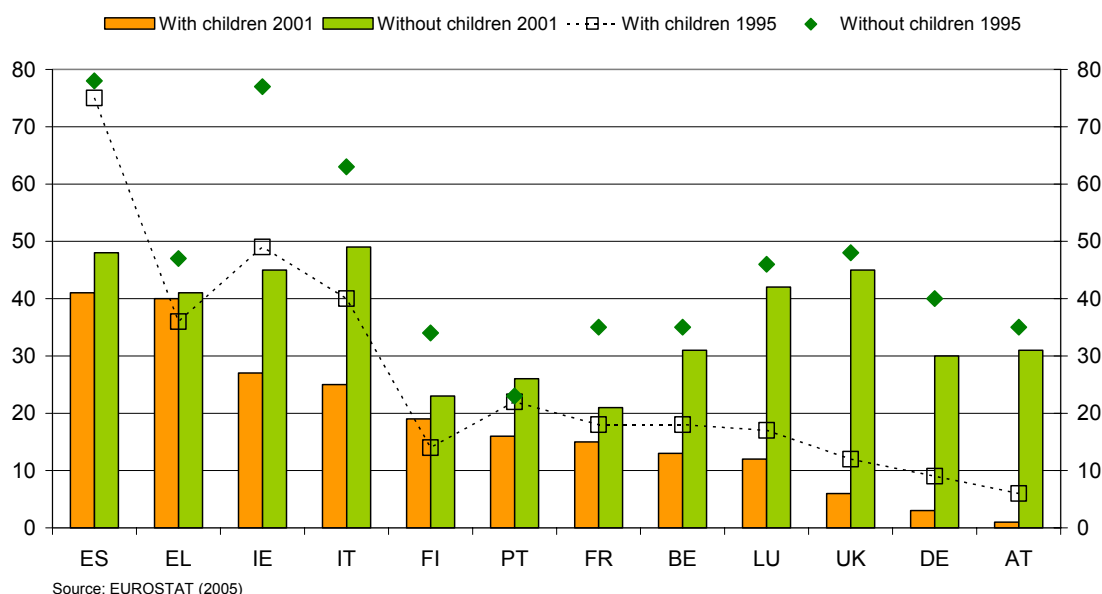
As noted above, greater work intensity of households tends to reduce the risk of poverty and to raise average incomes. The magnitude of these changes is significant: while jobless households with children tend to have incomes which fall between 20% and 64% below the national median income, households where at least one household member works for the full year have incomes that fall by a maximum of 22% below the national median.

**3.6a Trends in median equivalised net income:**  
% difference from national median (work intensity = 0)



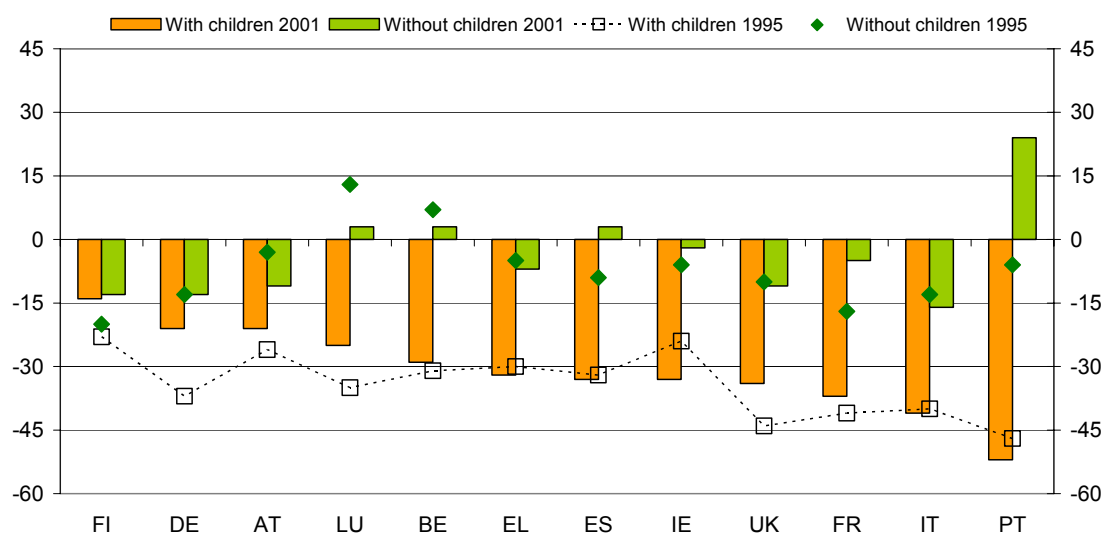
Changes in the relative income of households with work intensity greater than 0 but smaller than 1 were relatively diverse. The relative incomes of households with children rose in Germany, the UK and Luxembourg but fell in Ireland.

**3.6b Trends in median equivalised net income:  
% difference from national median (work intensity = 1)**



There was a significant increase in the relative incomes of households with low work intensity (0–0.5) and no children in Portugal. Overall, there was a moderate decline in the relative position of households where at least one adult was fully employed (households with work intensity greater than 0.5 but smaller than 1) in most countries. The extent of this decline was especially marked in Ireland, in particular for households without dependent children.

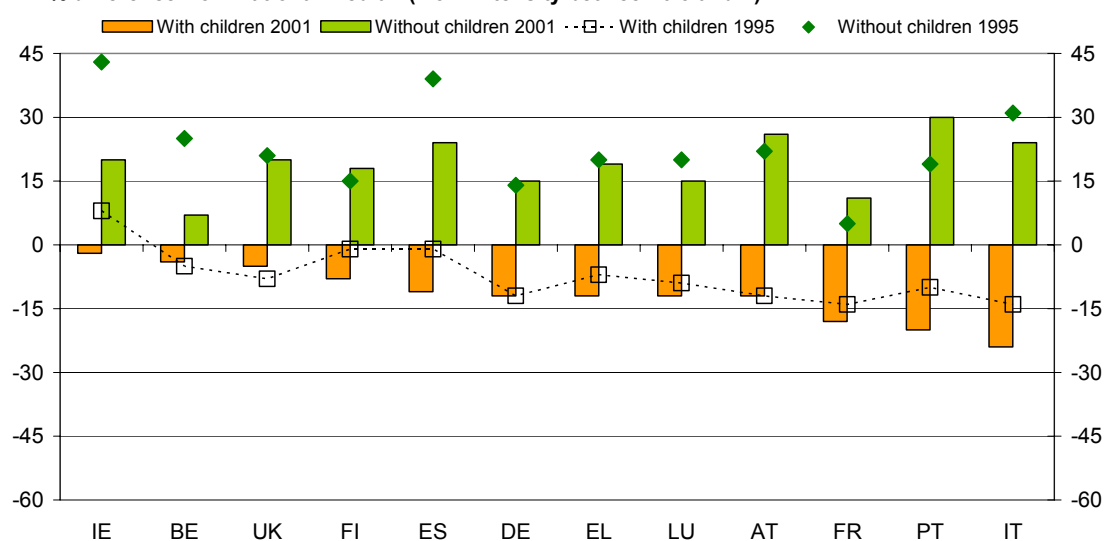
**3.6c Trends in median equivalised net income:  
% difference from national median (work intensity between 0 and 0.5)**



Source: EUROSTAT (2005)

Households where all adults work full time (with work intensity equal to 1) exhibit median incomes higher than the national median: this is particularly the case in Spain, Greece, Ireland and Italy among households with dependent children.

**3.6d Trends in median equivalised net income:  
% difference from national median (work intensity between 0.5 and 1)**



Source: EUROSTAT (2005)

This suggests that in these countries the effect of labour market participation on household incomes is greater than the presence of dependent children as such. Note, however, that countries differ greatly with respect to the relative position of families with and without children. In some countries, especially the UK, Germany and Austria, there is a major difference in the relative incomes of these two household types, while there is only a small difference in case of Greece, Spain, Finland and France.

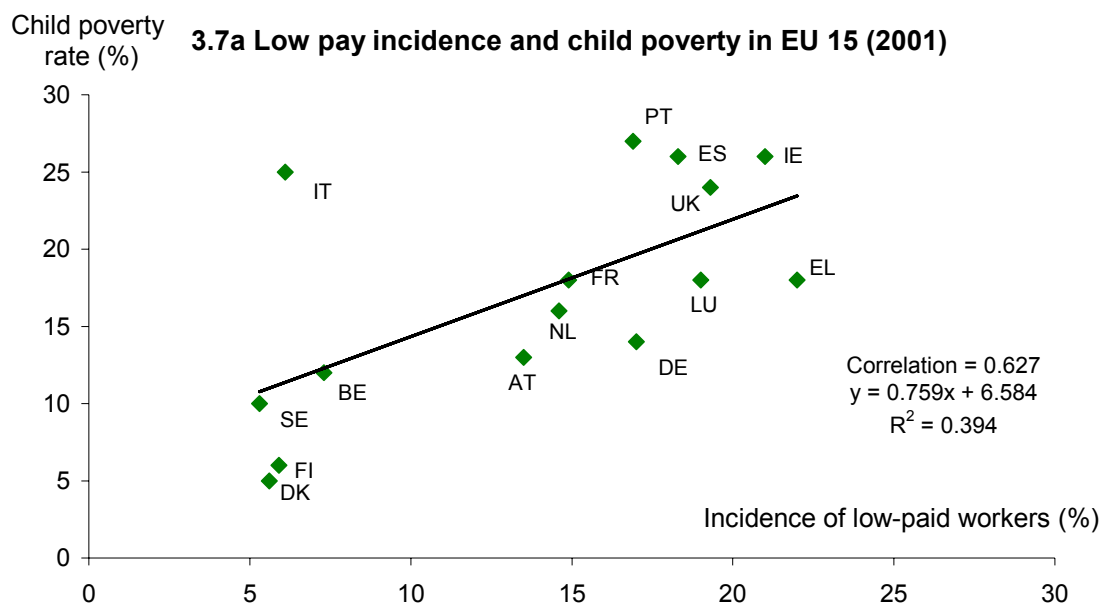
The data for the period indicate an overall reduction in the relative incomes of households with high work intensity (equal to 1) compared to the national median. With respect to households with children, the extent of the change was the greatest in those countries where such households had an advantageous position in the mid-1990s, including Spain, above all, Ireland and Italy. Such changes seem in line with the overall decline in income inequality observed for these countries over the period (see Figure 1.7 in Part 1). In addition to the above mentioned countries there has also been a tendency towards a lessening of income advantage of households without dependent children in Finland, France and Germany.

## In work poverty

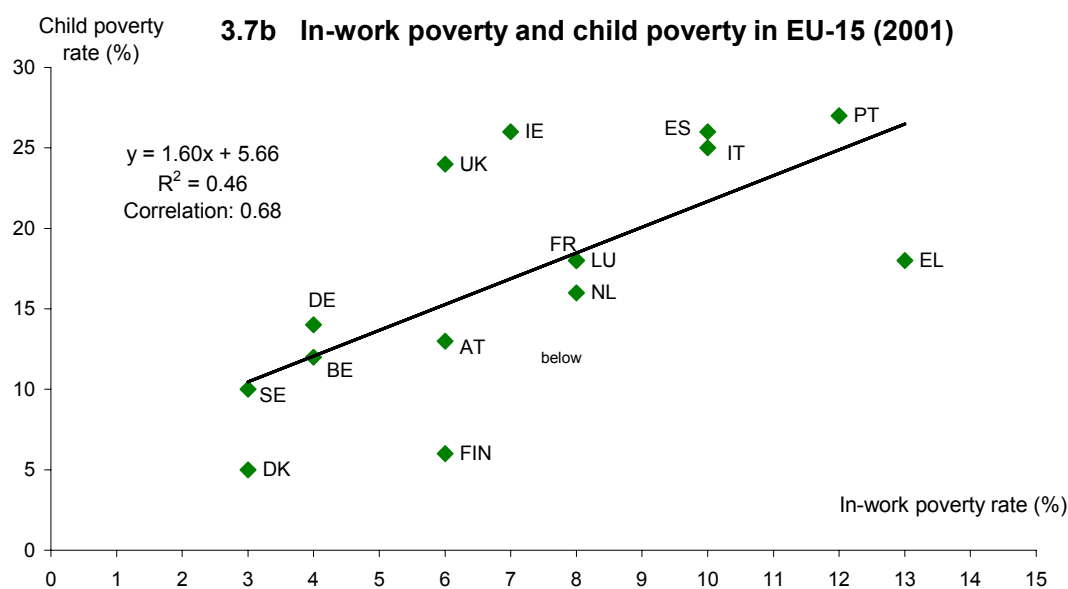
This section examines the incidence of poverty among the employed population in more detail. The category of “working poor” has received increasing attention from both policymakers and researchers over recent years (Asplun *et. al.*, 1998, Bazen *et. al.*, 1998, Peña-Casas and Latta, 2004). The existing empirical literature on low-paid workers has provided a number of findings of policy-relevance: low-paid workers experience recurrent transitions between low-pay and unemployment, but fewer transitions towards medium-high paid jobs. Moreover, the incidence of low-paid workers in the economy is associated with other aspects of policy interest, in particular, child poverty, as shown by Figures 3.7a and 3.7b. Indicators of in-work poverty are also included in the set of the Laeken Indicators which the European Commission uses to monitor progress in terms of social cohesion and social inclusion in the Member States.

Various definitions of “working poor” have been adopted in the economic literature, focusing mainly on the distribution of earnings rather than on household income. A standard definition is the number of workers with earnings below a given level relative to the median wage. The Eurostat definition is slightly different, identifying individuals as “in-work poor” if they live in a household with equivalised income below 60% of median equivalised household income and if “employment” is the most frequent economic activity over the year (i.e. for at least 7 out of 12 months). This approach combines earnings (households with members who are low paid are more likely to have income below the poverty line, other things being equal) with total household income, taking account of other factors such as number of children.

The incidence of poverty among the working population is examined here in relation to age, gender, educational attainment, and type of employment contract using the latest Eurostat data. The limited availability of data for the new Member States, however, prevents these from being included in the analysis.



Source: EUROSTAT, Newcronos Database (2005) and OECD (2003). Incidence of low paid workers is defined as % of workers with wage below 2/3 of the median full time earnings over the total number of full time employed.



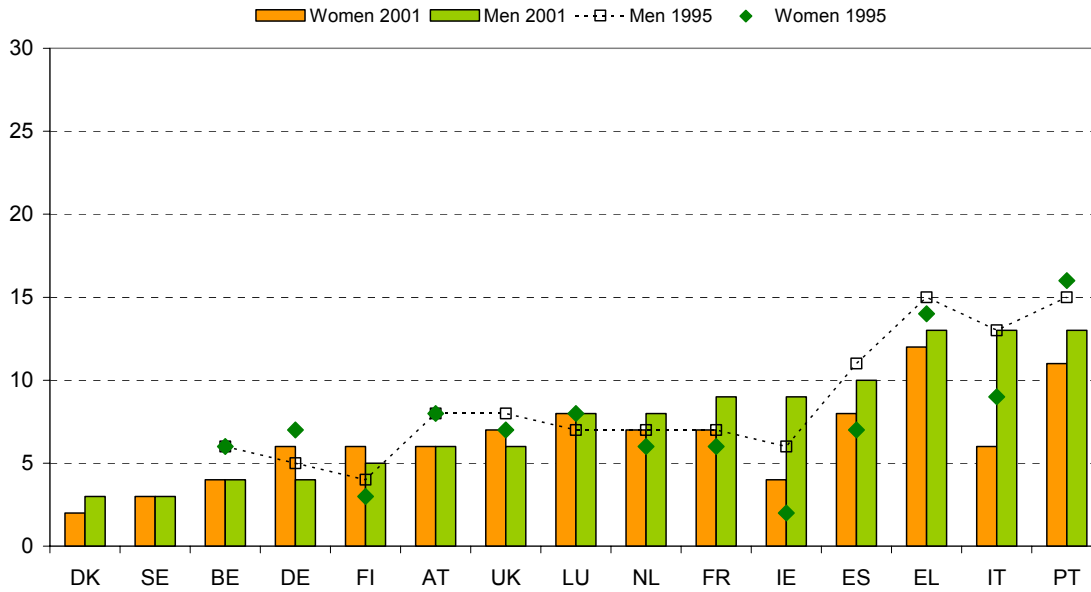
Source: EUROSTAT, Newcronos Database (2005); MT: 2000, IT and PT: 2001, FR, LV, LT, HU, NL, PL, SI, SE, RO, TR: 2002.  
 In work poverty rate: % of employed individuals living in households below the poverty line over the total population

## IN WORK POVERTY AND DEMOGRAPHIC FACTORS

Comparison of Figures 3.8 and 3.9 shows that cross-country variations in in-work poverty rates between age groups are wider higher than those for gender. This is not surprising, since on the definition adopted for the working poor, equivalised household income results from pooling the income of each member of the household, so that gender differences are netted out, and poverty rates by gender are mainly likely to reflect differences in household composition.



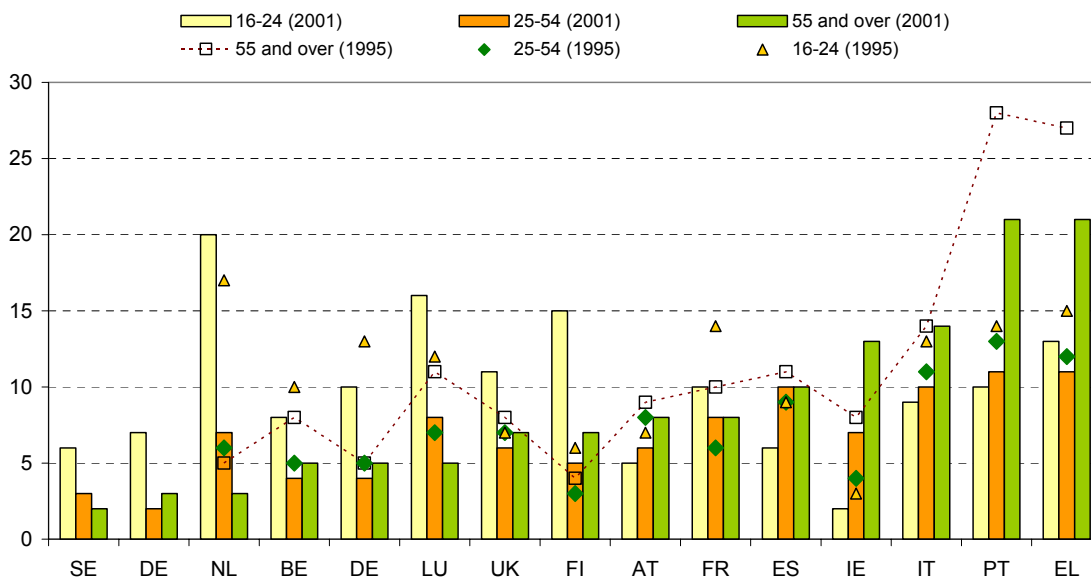
### 3.8 In work poverty by gender



Source: EUROSTAT Newcronos database (2005); AT: 1996.

In addition, the incidence of poverty among different age groups is relatively diverse. The rate of poverty among workers aged 55 and over is higher than for other age groups in Greece and Portugal (both 21%), despite being much lower than in the mid 1990s (27% and 28% respectively). In both countries, on the other hand, poverty rates among younger workers aged 16 to 24 are below the corresponding national poverty rates (10% as against 20% and 13% as against 20%, respectively) and in line with the rates for total working population (13% and 12% respectively).

### 3.9 In work poverty by age group



Source: EUROSTAT Newcronos database (2005); FI: 1996, NL: 1999.

The opposite is evident in the Netherlands, Luxembourg and Finland in particular, and, to a lesser extent, in the UK, Germany, Belgium, Sweden and Denmark. In these countries, the incidence of poverty among older workers is relatively low, while poverty rates are relatively

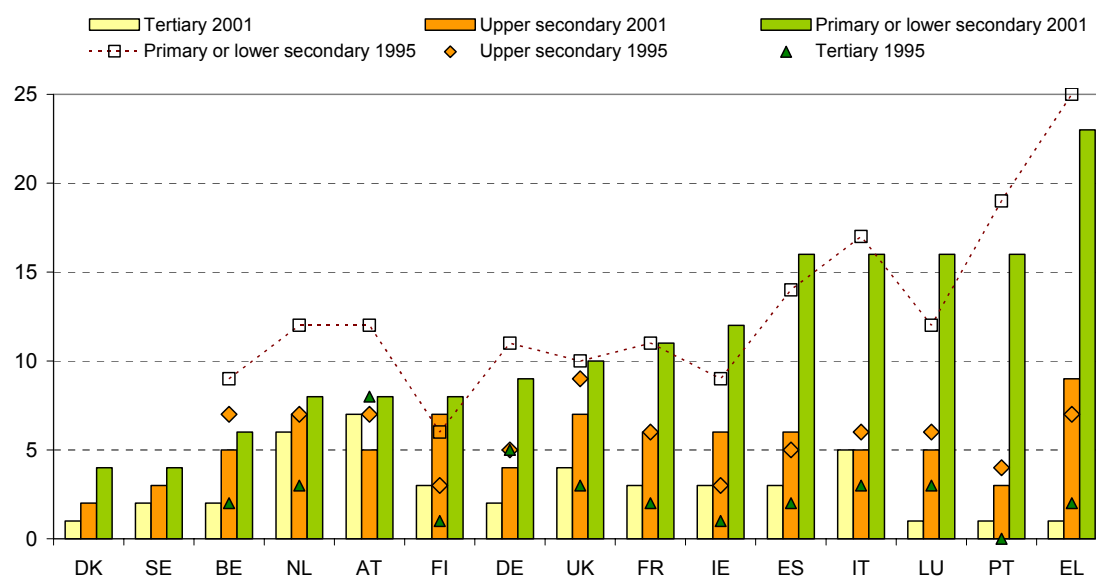
high among younger workers aged between 16 and 24 (20%, 16% and 15% in the first three countries, respectively).

These differences almost certainly reflect differences in household structure. In the latter group of countries, many more young people live outside of the family home and are therefore more at risk of having low income levels. By contrast, , younger workers in Southern European countries remain in the family home longer and accordingly are able to share in the income of their parents (see Part 1 above for an analysis of differences in the household circumstances of young people between the two groups of countries).

### IN WORK POVERTY AND EDUCATIONAL ATTAINMENT

The earnings capacity of individuals depends critically on their educational attainment level. Figure 3.10 shows how the incidence of poverty among the employed population varies with the highest level of education achieved.

**3.10 In work poverty by educational attainment**



Source: EUROSTAT Newcronos database (2005); FI: 1996, NL:1999.

As expected, individuals with at most lower secondary education (ie no more than compulsory schooling), are most likely to become working poor: their poverty rates are above the overall national “in-work” poverty rates though, with the exception of Greece, still less than the overall poverty rate in the country concerned. For this group, poverty rates remained much the same over the period considered, but with some reduction in Belgium, the Netherlands, Austria, Portugal and Greece.

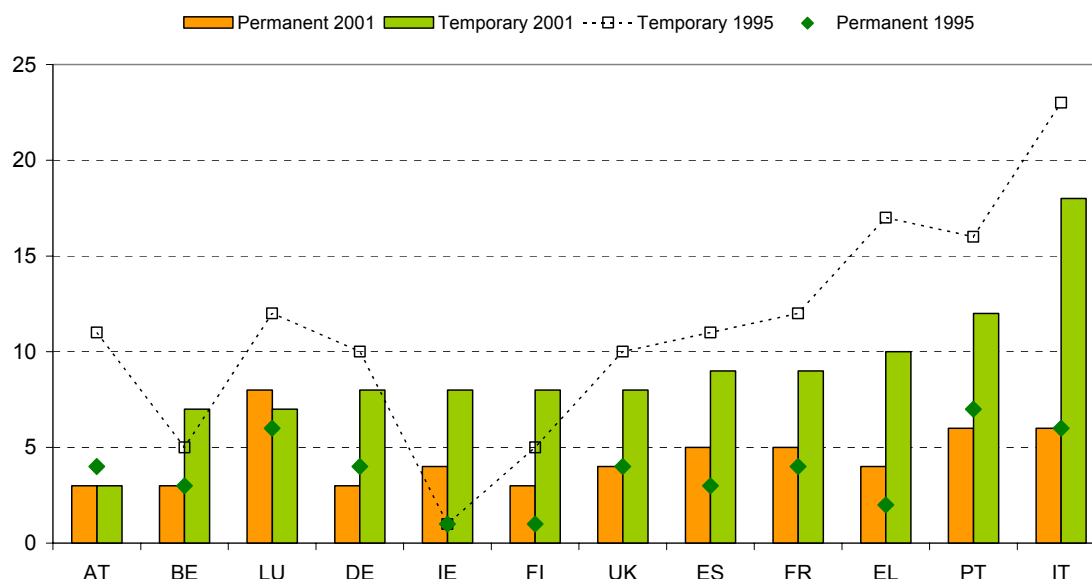
### IN WORK POVERTY AND TYPES OF EMPLOYMENT CONTRACT

The incidence of poverty among workers with different employment contracts and with different working time arrangements is illustrated in Figures 3.11 and 3.12. The charts show a clear declining trend in poverty rates for workers with temporary jobs over the period considered for the majority of EU-15 Member States. The largest falls occurred in countries

with the highest poverty rates for such workers in 1995, namely Italy, Portugal and Greece. On the other hand, poverty rates increased markedly in Ireland (though remaining still below the national poverty level) and to a lesser extent in Finland.

Poverty rates for workers with permanent employment contracts are generally relatively low and similar across countries, ranging from 3% to 8%, and have not changes much over time.

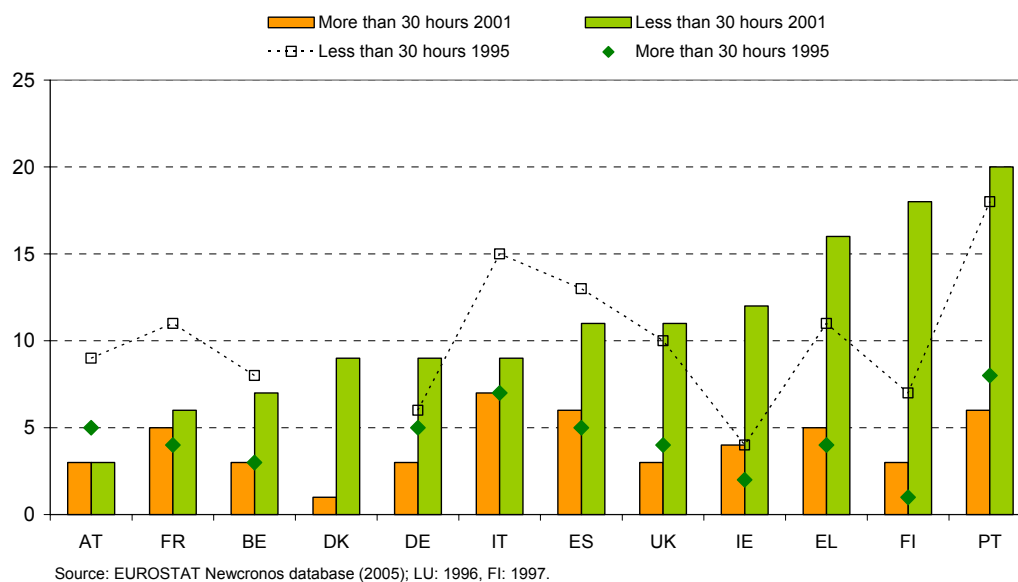
### 3.11 In work poverty by type of employment contract



Source: EUROSTAT Newcronos database (2005); LU: 1996, FI: 1997.

The picture is somewhat different for those working full-time or part-time, defining these as those working more or less than 30 hours a week. Overall, there are signs, on the one hand, of a decline in poverty rates for part-time workers in countries with medium-high poverty rates over the period (Italy, Spain, Belgium, France and Austria), and, on the other, of an increase in countries where poverty rates were low-medium (Ireland, Greece and Finland); in Portugal, high poverty rates for part-time workers persisted and increased slightly. For full-timer workers, the average poverty rate is below 5% and did not change substantially over the period.

### 3.12 In work poverty by type of employment contract



## Conclusions

The main findings can be summarised as follows.

- Those with paid jobs tend to have lowest poverty rates in all Member States, suggesting that employment is a key condition for protecting people against the risk of poverty. Poverty rates tend to be highest among the unemployed, with Ireland and the UK among the EU-15 and Malta and Estonia among the new Member States having the highest rates and with Italy and the Netherlands showing marked increases since the mid-1990s. In all the above mentioned EU-15 Member States, with the addition of Spain, poverty has also risen among the inactive; in Spain and in Ireland, this increase is evident for those in retirement as well.
- As the attachment of households to the labour market increases, the risk of poverty declines. There are major differences, however, between household with and without children. In nearly all EU-15 Member States, half or more jobless households with children fall below the poverty line, and in Ireland and Germany, around 85%. By contrast, for households with members fully employed, the poverty rate is lower than the national level and differences due to the presence of children are negligible. Changes in the relative income level of households with different work intensities have varied significantly between countries. In Austria and Germany in particular, relative income has risen for jobless households with children, and declined slightly both for households with at least one person in full-time employment, and for those with high work intensity.
- The distribution of the working poor is relatively diverse among age groups: in Southern Europe, poverty is more concentrated among older workers, in the rest of the EU-15, among younger workers, a larger proportion of whom tend to live outside the family home. As might be expected, poverty rates are relatively high among poorly educated workers, in particular in Southern Europe, among those working part-time and among those with temporary contracts of employment.

## CHAPTER 4      **JOBLESS HOUSEHOLDS**

The above analysis demonstrates the importance of being in employment for protecting people against the risk of poverty. The concern here is to examine the relative number of 'workless', or jobless, households in different Member States, how this has tended to change over time and how it is related to the level of unemployment, on the one hand, and the structure of households, on the other. This is based on data from the EU Labour Force Survey rather than the ECHP, which was the main source of data used above, primarily because of the much larger sample of the population covered by the survey and because data are available for a longer period of time and cover the new Member States as well as the EU-15 countries. Although the new Member States were not included in the above analysis, it is reasonable to suppose that similar conclusions apply to them as regards the central importance of paid work for avoiding poverty.

The structure of households described in Part I above is also of relevance in this context, since those living alone have a greater chance of not having access to income from paid work than if they live in households with other people. The apparent trends across the EU towards lone person households, therefore, is likely in itself to be accompanied by an increase in the relative number of jobless households even without any rise in unemployment or decline in labour force participation. Indeed, it is possible for an increase in this number to coincide with a fall in unemployment. More generally, there is, therefore, no necessary relationship between the overall rate of unemployment in a country and the relative number of jobless households. In consequence, the implications for both poverty rates and social policy of a high level of unemployment or an increase in the rate differ according to both household structure and the way that unemployment is distributed across households.

The focus here is not only on those of working age but also on those of 65 and over, who are more likely to live in workless households because of being in retirement than those in younger age groups, and on those under 25, a significant proportion of whom are likely to be full-time education or training. The concern is not only with the relative number of these two groups living in jobless households but also with the other side of the coin, their access to income from employment either directly through their own efforts or indirectly through living in a household with someone else in work.

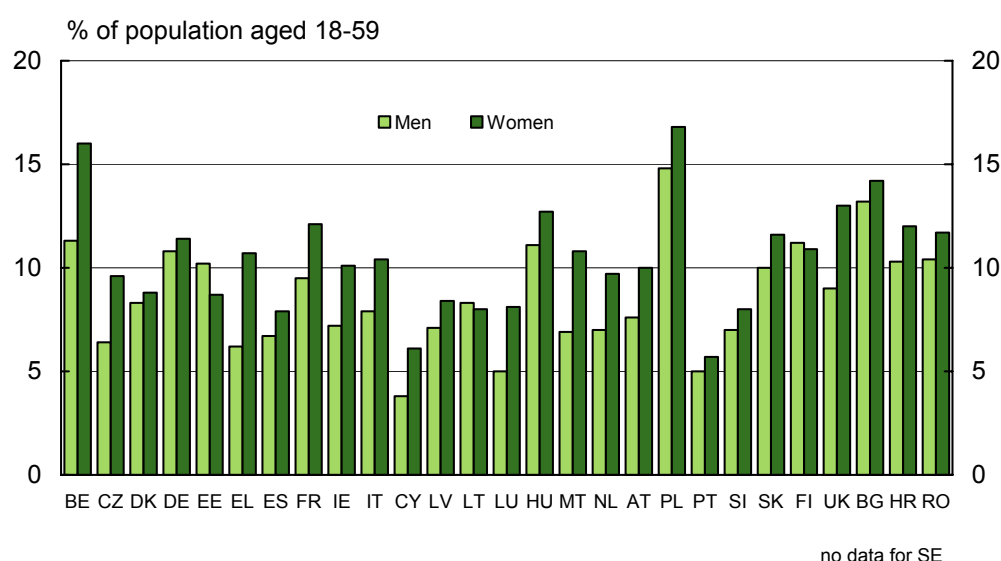
### **People of working age living in jobless households**

As intimated above, the relative number of people of working living in jobless households seems to be related as much to the structure of households as to the rate of unemployment in the country concerned. Although there is some association between the unemployment rate and the proportion aged 18–59 living in jobless households (the correlation coefficient is 0.52 in 2004), it is by no means perfect. In the UK, in particular, where the rate of unemployment is well below the EU average (under 5% in 2004), the proportion of this age group living in jobless households is above average (11% in the same year) (Graph 4.1, in

which the figures shown for the number living in jobless households excludes households consisting solely of students aged 18–24). Similarly, in Belgium, the relative number living in jobless households is the highest in the EU–15 and second only to Poland in the EU–25 (at almost 14%), whereas the unemployment rate is slightly below average (just under 8%), while in Spain and Greece, above average unemployment coincides with a relatively small number of people living in jobless households.

In the new Member States, in general, despite the rate of unemployment being relatively high, the proportion of people of working age living in jobless households in 2004 was less than the average in the EU–15, the only exceptions being Poland and Slovakia, where unemployment is particularly high, and Hungary, where low unemployment is combined with a relatively small proportion of people of working age being in employment (only 57% of those aged 15–64). This reflects the relatively small numbers living alone in these countries as compared with many EU–15 Member States.

#### 4.1 Men and women aged 18-59 living in jobless households, 2004



Just as the relative number of people living in jobless households only partly reflects the level of unemployment, so too are changes over time not necessarily in line with trends in unemployment. Reductions in unemployment, therefore, are not always accompanied by a comparable reduction in the proportion of people of working age living in such households. In the UK, therefore, where the unemployment rate fell by almost 10% in 1992 to under 5% in 2004, the relative number living in jobless households declined only slightly from just under 12% to 11% (Table 4.1). Similarly in Ireland, a steep decline in the rate of unemployment from 15½% to 4½% over the same period was accompanied by a fall in the proportion in jobless households from 15% to only 8½%.

By the same token, an increase in unemployment is not necessarily associated with a similar increase in those in jobless households. In Portugal, therefore, a rise in unemployment from 4½% to 6½% between 1992 and 2004 was accompanied by very little change in the

proportion of people living in jobless households, while in Greece, a rise in unemployment from 8% to 10½% over the same period was combined with a fall in the relative number in jobless households (from 10½% to 8½%).

These differing relationships between unemployment and the relative number of jobless households reflect differing support arrangements for the unemployed in different countries and the varying availability of social transfers. Both are more extensive in Ireland and the UK than in Greece or Portugal which accordingly means that people in the former two countries have a greater possibility of living in a jobless household – or living alone when they have no access to income from employment – than those in the latter two countries, in the sense that they can count more on income support.

### **Women in jobless households**

There are more women than men living in jobless households virtually throughout the EU. Except in Estonia and Finland, the proportion of women of working age living in such households was greater than that of men in all EU Member States as well as in the candidate countries (Graph 4.1). On average, the relative number of women in jobless households was some 2 percentage points higher than for men in the EU in 2004 and 4 percentage points higher or more in Belgium, Greece, Malta, and the UK.

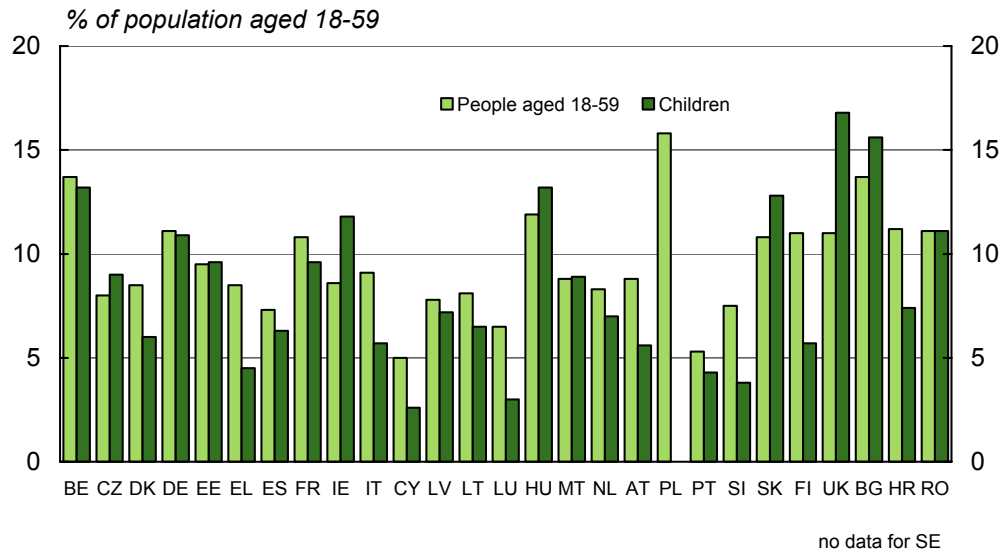
### **Children in jobless households**

Despite the higher risk of poverty among children than among adults in most EU countries, children are less likely to be living in jobless households than people of working age. In the EU-15, the only countries where this was not the case in 2004 are Ireland and the UK, in both of which the proportion of children in such households was significantly greater than adults, in the UK, almost 6 percentage points greater, meaning that some 17% of children lived in jobless households, well above the proportion in any other Member State (Graph 4.2).

In the new Member States as well as in the candidate countries, the position is less uniform. In the Czech Republic, Hungary and Slovakia, as well as in Bulgaria, the proportion of children living in jobless households was larger than that of people of working age, while in Estonia and Malta as well as Romania, it was much the same.



## 4.2 People aged 18-59 and children living in jobless households, 2004



### Access to income from employment of young people aged 16–24

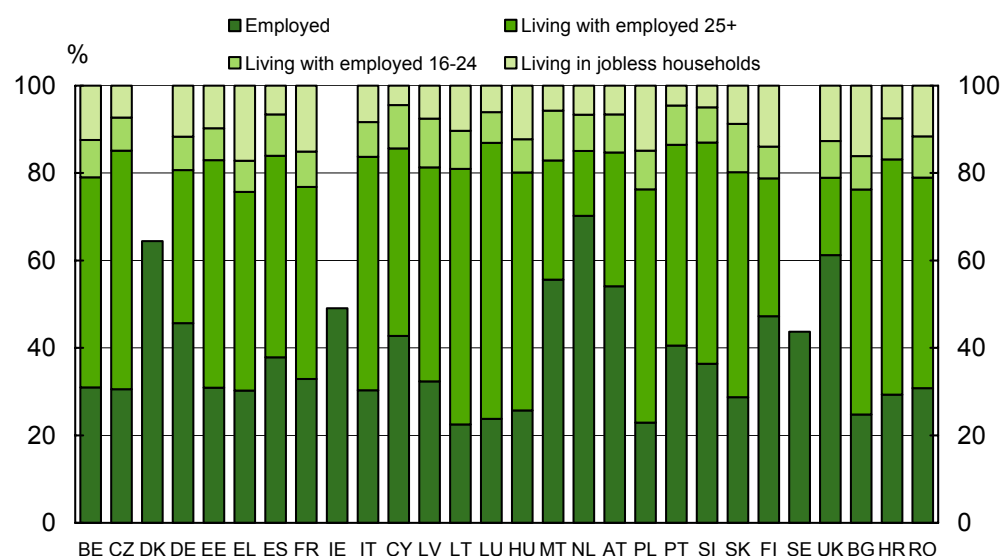
The proportion of 16–24 year-olds in work varies across the Union, in part reflecting the differing tendency for young people to continue their education and training beyond compulsory schooling, in part the differing tendency to combine education or training with employment and in part labour market conditions – or more specifically the availability of jobs or lack of them. In the Netherlands and the UK (as well as Denmark), over 60% of those in this age group were employed in 2004, a significant proportion in each case on a part-time basis, while in Germany, Austria, Finland and Malta (as well as Ireland), the proportion was over 45% (Graph 4.3). In most other – new as well as old – Member States, the proportion was around a third or less, while in Lithuania, Hungary, Poland and Slovakia, as well as in Bulgaria and Slovakia, it was only around a quarter or less.

In most new Member States, over half of young people in this age group in 2004 lived in households in which an older person was employed, in the great majority of cases, their parent(s), the only exceptions being Cyprus, Malta and Lithuania, though in the last, only marginally so. This was also the case in Italy, the only EU-15 country where this was so, as well as in Bulgaria and Croatia. In addition, a small proportion in all countries – varying between 7% and 11% – lived in households where someone in their own age group was in work.

As a consequence, a relatively small proportion of 16–24 year-olds across the EU live in jobless households (whether student households or not). This proportion was relatively high in 2004 in Belgium, Germany, France, Finland and the UK (12–15%), though also in Greece (17%). In other EU-15 countries, however, it was under 9% and in Portugal, under 5%. The proportion was also relatively low in most of the new Member States, the main exceptions being Hungary and Poland (where it was 12% and 15%, respectively). In the majority of cases,

therefore, the apparent need for State support of this group is comparatively small, though it is also relatively large in Bulgaria (16% living in jobless households).

### 4.3 People aged 16-24 by employment situation, 2004



The relative number of young people living in jobless households declined between 1995 and 2004 in all EU-15 countries for which data are available, except Germany and Greece, where it rose, and Austria, where it remained much the same (Table 4.2). It has also declined in Cyprus and Slovenia in recent years, but has tended to increase in the other new Member States as well as in Romania.

### Access to income from employment of those aged 65 and over

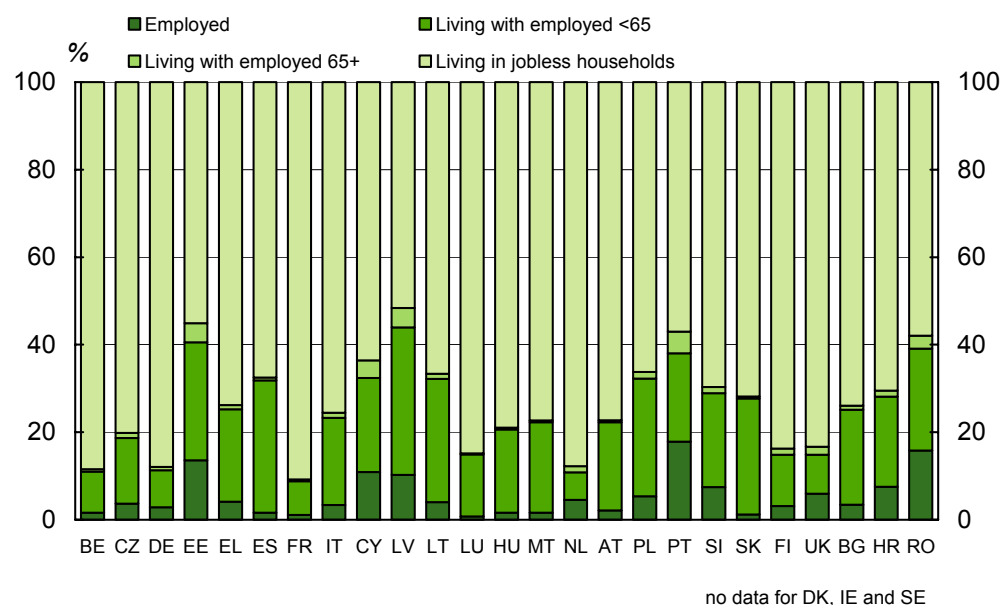
The great majority of people aged 65 and over in the EU are in retirement and few, therefore, have access to income from employment through their own efforts. Nevertheless, in Estonia, Latvia and Cyprus, over 10% of people of this age are still in employment, according to the 2004 LFS, and in Portugal, some 18%, most of them working in agriculture. This was also the case in Romania, where just under 16% are in work. In the same countries, a small but significant proportion of people in this age also live in households where someone else aged 65 or over is employed, even if they themselves are not (4-5% in all EU Member States and 3% in Romania), in most cases, their spouse (Graph 4.4).

In each of these countries, moreover, a relatively large number in this group who are not themselves employed live in households where someone under 65 is in work, in many cases their sons or daughters. In Latvia, this proportion amounts to around a third of all those of 65 or over and in the other three countries as well as Romania to over 20%. The proportion, however, is also over 20% or more in most of the other new Member States and candidate countries, the only exception being the Czech Republic, as it is in the other three southern EU-15 Member States (the proportion reaching 30% in Spain) as well as in Austria. By

contrast, in the other EU-15 countries, apart from Luxembourg and Finland, the proportion is under 10%.

In consequence, the relative number of those of 65 and over living in households in which no-one is in work varies markedly across the Union. In Belgium, Germany, France and the Netherlands, the proportion concerned is around 90% or just under and in Luxembourg, Finland and the UK, 83–85%. At the other extreme, in Estonia, Latvia and Portugal, it is under 60%, as it is in Romania. In the majority of the other new Member States, the proportion is around 70% or less, as it is Spain and Croatia, and only in Hungary, Malta and the Czech Republic is it higher than this – around 80%. The proportion is also relatively small in Greece and Italy (74–76%).

#### 4.4 People aged 65+ by employment situation, 2004



These marked variations in the extent of access to employment income have potentially significant implications for the overall incomes of those aged 65 and over as well as for their need of State support. They may, in particular, be part of the reason why the risk of poverty is comparatively small among this age group relative to the rest of the population in many of the new Member States.

Nevertheless, in most countries, there is evidence of an increase over recent years in the proportion of those aged 65 and over living in jobless households, the only exceptions being Estonia, where it has fallen markedly since 1998, Italy and the Netherlands, where it has remained much the same over the past 20 years (Table 4.3).

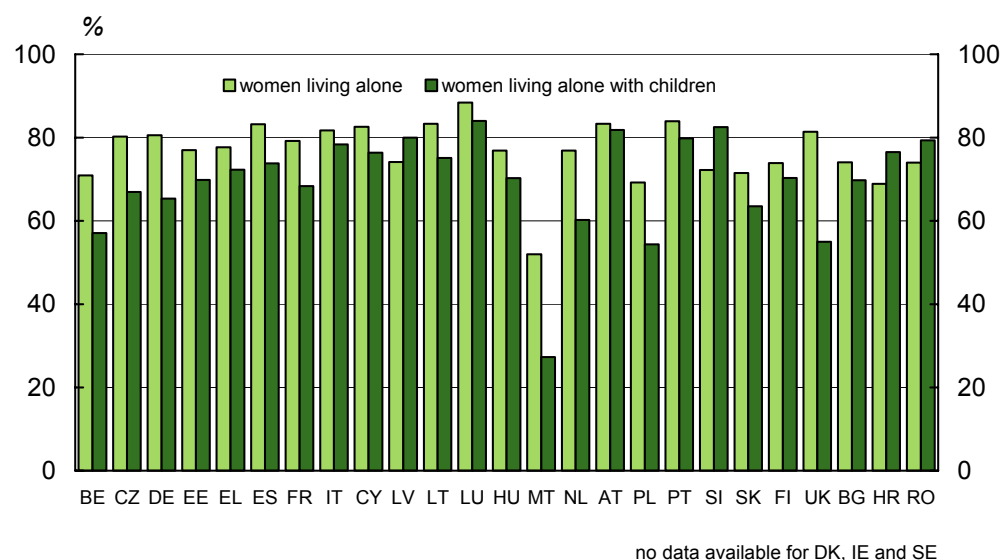
#### The employment status of lone parents

As noted in Part 1 above, a growing proportion of households in many Member States consist of people living alone with a dependent child or children. These are predominantly

women, who account for around 90% of all lone parents across the EU. In nearly all countries, the proportion of lone mothers who are in employment is lower than that of women living alone, reflecting their caring responsibilities, the only exceptions being Latvia and Slovenia, where women living alone are more likely to be employed if they have a child. In the majority of cases, however, the difference is relatively small for women aged 25–54 – less than 10 percentage points (Graph 4.5). This is particularly so in the southern EU-15 countries and in Finland as well as in the new Member States and the candidate countries, where in most cases, the employment rate of lone mothers in this age group was over 70% in 2004.

In Germany, the Netherlands and the UK, on the other hand, and to a slightly lesser extent in Belgium, the proportion of lone mothers employed is much less than women living alone – in the first, over 15 percentage points less and in the UK, over 25 percentage points less – in part reflecting a lack of child care facilities available combined with limited access to care within the extended family, in part, the income support available. In all three countries, therefore, under two-thirds of lone mothers aged 25–54 were employed in 2004 and in the UK, only 55%. The employment rate of lone mothers is also relatively low in the Czech Republic, Malta and Poland, in the last two lower than in the UK.

#### 4.5 Employment rates of women aged 25-54 living alone with or without children, 2004



In the Netherlands and the UK, in particular, however, there has been a marked upward trend in the employment of lone mothers over recent years (by 18 percentage points and 14 percentage points, respectively since 1995). The employment rate has also risen in Germany and Belgium, though only slightly, whereas it has fallen in the Czech Republic and remained much the same in Malta (Table 4.4).

## CONCLUSIONS

The relative importance of jobless households seems to be as much related to the structure of households as to the rate of unemployment and, indirectly, to the extent of social support for those of work which enables people to live in households without access to income from employment. Both Belgium and the UK, in particular, have more jobless households than would seem to be implied by their level of unemployment and southern countries less. The importance of jobless households is, on average, less in the new Member States than in the EU-15 countries despite unemployment being higher, though not in Poland and Slovakia, where unemployment is particularly high. Changes in unemployment are equally not necessarily reflected in counterpart increases or reductions in the number of jobless households. This has implications for social policy, the need for which is, by the same token, not necessarily related to the number of people out of work.

Children in most countries are less likely to live in jobless households than people generally, though the reverse is the case in the UK and Ireland and in a number of the new Member States.

Very few young people aged 16–24 live in jobless households without access to income from employment, the proportion being generally highest in northern EU-15 countries and lowest in the south of the EU and in the new Member States, though Greece is an exception, as are Hungary and Poland among the latter. Except in Greece, Germany and Austria, the proportion of young people living in jobless households has declined over the past decade in the EU-15, though it has risen over recent years in most the new Member States. The great majority of elderly people of 65 and over live in jobless households in northern EU-15 countries, whereas as in the south of the EU and in the new Member States, the proportion is much lower, implying that many more have access to income from employment and, potentially at least, less reliant on state support. In nearly all Member States right across the EU, however, the relative number of people in this age group living in jobless households has tended to increase over time.

Those, mostly women, living alone with dependent children are generally less likely to be in employment than others. This is particularly the case in Germany, the Netherlands and above all the UK, reflecting the lack of childcare support. Nevertheless, though still relatively small, the number of lone mothers in work has increased significantly in the last two countries over the past decade.

## Chapter 4 tables

Table 4.1: Proportion of people aged 18-59 living in jobless households, 1992, 1998, 2004

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO
1992	:	13	:	:	8.8	:	10.4	10.3	10.1	15.1	9.3	:	:	:	6.4	:	:	:	:	:	4.9	:	:	:	:	11.9	:	:
1998	11.1	14.4	6.2	:	11.1	8.7	9.6	10.2	11.3	:	11.2	:	14	10.4	7.3	13.5	:	8.8	7.7	:	5.1	8.3	:	9	:	12.5	:	:
2004	9.9	13.7	8	8.5	11.1	9.5	8.5	7.3	10.8	8.6	9.1	5	7.8	8.1	6.5	11.9	8.8	8.3	8.8	15.8	5.3	7.5	10.8	11	11	13.7	11.2	:

Notes:

- no data for SE

- for 1998, data of 1997 for PL and of 2000 for CY and MT

Table 4.2: People aged 16-24 by employment circumstances, 1985, 1995 and 2004

	BE	CZ	DK	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	SE	UK	BG	HR	RO
1985																												
Employed	35.6	:	68.6	57.5	:	33.4	36.0	42.3	48.6	35.3	:	:	:	59.4	:	:	42.9	:	:	55.9	:	:	:	:	62.8	:	:	:
Living with employed 25+	43.5	:	:	25.8	:	45.4	41.9	36.6	22.0	47.6	:	:	:	29.0	:	:	31.6	:	:	31.2	:	:	:	:	15.6	:	:	:
Living with employed 16-24	11.0	:	:	8.8	:	7.3	13.3	10.6	16.2	9.6	:	:	:	8.7	:	:	10.2	:	:	8.9	:	:	:	:	9.3	:	:	:
Living in jobless households	9.9	:	:	7.9	:	13.8	8.8	10.5	13.1	7.5	:	:	:	2.8	:	:	15.3	:	:	4.0	:	:	:	:	12.3	:	:	:
1995																												
Employed	29.4	44.8	68.5	53.1	38.9	29.3	26.8	28.8	41.1	27.5	41.5	:	:	42.1	36.1	57.9	58.0	62.2	:	39.5	33.6	38.9	31.5	40.7	59.8	:	:	40.4
Living with employed 25+	47.8	40.3	:	31.1	44.7	47.6	50.0	48.1	28.1	53.7	43.9	:	:	45.2	42.6	24.5	22.4	24.0	:	45.3	51.4	43.2	:	:	16.9	:	:	42.4
Living with employed 16-24	8.5	10.8	:	6.9	8.5	7.7	11.7	6.9	13.8	7.5	9.2	:	:	8.4	9.2	13.5	7.6	7.4	:	9.0	8.5	11.4	:	:	7.8	:	:	10.4
Living in jobless households	14.3	4.1	:	8.9	8.0	15.4	11.5	16.2	17.0	11.3	5.4	:	:	4.4	12.1	4.1	12.0	6.2	:	6.2	6.5	6.5	:	:	15.4	:	:	6.8
2004																												
Employed	31.0	30.6	64.4	45.7	30.9	30.3	37.9	32.9	49.1	30.3	42.8	32.4	22.5	23.8	25.7	55.6	70.2	54.1	22.9	40.5	36.4	28.7	47.3	43.7	61.2	24.8	29.3	30.8
Living with employed 25+	48.1	54.5	:	35.0	52.0	45.4	46.1	44.0	:	53.4	42.9	48.9	58.5	63.1	54.5	27.3	14.8	30.6	53.4	45.9	50.6	51.5	31.5	:	17.7	51.4	53.8	48.2
Living with employed 16-24	8.5	7.6	:	7.7	7.3	7.1	9.5	8.1	:	7.9	9.9	11.2	8.7	7.0	7.6	11.4	8.3	8.7	8.8	9.0	8.1	11.0	7.2	:	8.4	7.7	9.4	9.4
Living in jobless households	12.4	7.3	:	11.7	9.7	17.2	6.6	15.1	:	8.4	4.4	7.5	10.3	6.1	12.3	5.7	6.7	6.6	14.9	4.5	4.9	8.7	14.0	:	12.7	16.1	7.5	11.6

Notes:

- 1985: data are of 1990 for ES and PT

- 1995: data of 1998 for CZ, EE, SK and RO and data of 2000 for CY, HU, MT and SI

- no data available for DK and SE

Table 4.3: People aged 65+ by employment circumstances, 1985, 1995 and 2004

	BE	CZ	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	UK	BG	HR	RO
<b>1985</b>																										
Employed	1.6	:	3.3	9.6	2.5	2.8	9.4	4.6	:	:	:	:	3.3	:	:	2.2	:	:	12.7	:	:	:	4.8	:	:	:
Living with employed <65	13.3	:	12.1	30.3	34.3	12.6	25.5	19.8	:	:	:	:	25.0	:	:	9.5	:	:	26.1	:	:	:	11.6	:	:	:
Living with employed 65+	0.6	:	0.5	2.0	1.0	0.6	2.9	1.4	:	:	:	:	1.1	:	:	0.8	:	:	3.9	:	:	:	1.7	:	:	:
Living in jobless households	84.5	:	84.0	58.1	62.3	84.0	62.3	74.2	:	:	:	:	70.6	:	:	87.4	:	:	57.3	:	:	:	81.8	:	:	:
<b>1995</b>																										
Employed	1.5	4.6	2.5	7.8	7.2	2.1	1.5	8.6	3.4	10.3	:	:	1.7	1.7	1.7	2.9	3.9	:	14.5	7.5	:	:	5.2	:	:	37.8
Living with employed <65	12.6	20.2	10.0	24.1	20.7	30.2	9.0	21.0	18.7	15.3	:	:	21.7	18.4	23.6	7.3	20.6	:	25.0	24.4	:	:	9.7	:	:	14.8
Living with employed 65+	0.5	1.5	0.5	1.8	1.4	0.8	0.5	2.6	1.0	2.8	:	:	0.6	0.3	0.9	1.2	1.0	:	4.4	1.4	:	:	1.7	:	:	3.7
Living in jobless households	85.5	73.7	87.0	66.3	70.6	66.9	89.0	67.8	76.9	71.6	:	:	76.0	79.5	73.9	88.6	74.6	:	56.1	66.7	:	:	83.4	:	:	43.7
<b>2004</b>																										
Employed	1.6	3.7	2.9	13.6	4.1	1.6	1.1	:	3.4	10.9	10.3	4.0	0.8	1.6	1.6	4.6	2.2	5.4	17.9	7.4	1.2	3.2	6.0	3.4	7.5	15.8
Living with employed <65	9.4	14.9	8.5	26.9	21.1	30.2	7.7	:	19.9	21.5	33.7	28.1	14.1	19.0	20.6	6.3	20.1	26.9	20.2	21.5	26.5	11.7	8.9	21.7	20.6	23.3
Living with employed 65+	0.5	1.2	0.8	4.4	0.9	0.7	0.4	:	1.1	4.0	4.4	1.2	0.2	0.4	0.4	1.4	0.5	1.6	5.0	1.4	0.5	1.4	1.9	0.9	1.4	3.0
Living in jobless households	88.5	80.1	87.9	55.0	73.8	67.5	90.8	:	75.6	63.6	51.6	66.6	84.9	78.9	77.3	87.7	77.3	66.2	57.0	69.7	71.8	83.7	83.3	73.9	70.5	57.9

Notes:

- 1985: data are of 1990 for ES and PT

- 1995: data of 1998 for CZ, EE, SK and RO and data of 2000 for CY, HU, MT and SI

- no data available for DK and SE

Table 4.4: Employment rates of women aged 25-54 living alone with or without children

	BE	CZ	DE	EE	EL	ES	FR	IE	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	SI	SK	FI	UK	BG	HR	RO
<b>1985</b>																										
women living alone	66.7	:	80.1	:	66.9	73.1	85.0	73.8	69.8	:	:	:	89.0	:	:	69.0	:	:	69.8	:	:	:	75.6	:	:	:
women living alone with children	63.7	:	57.8	:	56.1	61.0	75.2	19.6	68.8	:	:	:	75.3	:	:	25.0	:	:	71.8	:	:	:	40.6	:	:	:
<b>1995</b>																										
women living alone	66.9	81.2	80.7	83.9	71.2	76.0	80.3	74.6	70.2	76.9	:	:	83.2	74.5	57.7	72.4	82.1	:	79.4	79.8	79.4	:	76.9	:	:	80.1
women living alone with children	53.4	71.1	63.3	76.0	63.3	60.0	69.7	33.5	67.3	68.2	:	:	74.6	72.4	26.6	41.9	80.4	:	80.7	68.8	71.8	:	40.9	:	:	79.1
<b>2004</b>																										
women living alone	70.9	80.3	80.5	77.0	77.7	83.2	79.2	:	81.7	82.6	74.1	83.3	88.4	76.9	52.0	76.9	83.3	69.3	83.9	72.2	71.5	73.9	81.4	74.1	68.9	74.0
women living alone with children	57.1	67.0	65.4	69.9	72.3	73.8	68.3	:	78.3	76.4	80.0	75.1	84.0	70.3	27.3	60.2	81.9	54.4	79.8	82.5	63.5	70.3	55.0	69.7	76.5	79.3

Notes:

- 1985: data are of 1990 for ES and PT

- 1995: data of 1998 for CZ, EE, SK and RO and data of 2000 for CY, HU, MT and SI

- no data available for DK and SE

## **PART III**

# **FACTORS CONTRIBUTING TO POVERTY AND INCOME INEQUALITY**



## CHAPTER 5 INCOME INEQUALITY AND POVERTY IN THE EU: A MACRO-LEVEL COMPARATIVE ANALYSIS<sup>32</sup>

### Introduction

A large and growing body of theoretical and empirical literature attempts to understand and explain the underlying factors and mechanisms that give rise to differences between countries in the degree of income inequality and, partly as a consequence of this, relative risks of income poverty (for recent reviews, see Schwabish et al., 2004, and Atkinson et al., 2005). The analysis here adds to this rising tide of literature in two respects. First, it extends the analysis to the enlarged Union. In addition to the EU-15 Member States, it covers the 10 New Member States (NMS) that joined the Union in May 2004. In some places, it also covers the four candidate countries (Bulgaria, Romania, Croatia and Turkey, called CCs in the following). The term EU-29 is used when covering all these countries.

Second, it is aimed at analysing the possible factors, which might determine international differences in poverty and inequality. In this, various 'macro' variables are considered and an attempt is made to go beyond a purely exploratory, descriptive approach to explain multivariate causalities – or, at least, simultaneous relationships.

What follows is a cross-country comparison of trends in income distribution and poverty. While attempts have been made to overcome many of the methodological problems inherent in this type of exercise in the literature and considerable progress has been made in developing harmonised methods, definitions, indicator settings and so on, comparing the relative importance of macro variables on the basis of a relatively small number of cases is always risky. A good deal of attention is therefore devoted below to various methodological issues.

It is intended, in addition to the provision of a relatively comprehensive picture of inequalities and poverty across the EU, to contribute to the ongoing debate on the European Social Model (or models?) (for recent consideration of this, see Sapir, 2005 and Boeri, 2002). Accordingly, it is hoped that the findings will inform discussions about the future shape of social policies in the EU.

### Concepts and methods

#### THEORETICAL FRAMEWORK

To explain international differences in income distribution, various theories have been developed and used explicitly or implicitly in the literature. Some commentators argue that it is *economic performance* that matters. The greater the affluence of a country, the lower the poverty rate will be. To put it in policy terms, the most important policy action

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<sup>32</sup> by István György Tóth, András Gábos, TARKI, Budapest

to reduce poverty is to boost economic growth and everything else then follows. This line of reasoning, mostly associated with liberal economists, is concerned mainly with absolute poverty and puts much less emphasis on inequalities in income and relative poverty. Furthermore, it is argued that some level of inequality can even be beneficial to economic growth or, conversely, “too much” equality may hamper economic growth.

A second strand in the literature emphasises (social) *structural determinants* of poverty and inequalities. This argument asserts that poverty is driven by structural characteristics of modern societies. Most importantly, the sectoral composition of the economy, the division of the population between economic activity and inactivity and such factors as the demographic structure of society will determine income distribution and poverty<sup>33</sup>. Sociological theories stressing the pivotal role of inherent social structural constraints and classical macroeconomic theories of dual economies also belong to this type of explanation.

A third line of reasoning emphasises the role of various *redistributive policy instruments*, most importantly the welfare state in general and various social policy systems in particular. Again, analysts of state redistribution may emphasise different aspects. Welfare state theorists argue that the final outcome as regards the distribution of income in a given country is primarily shaped by the incidence of redistributive programmes. Public choice theorists emphasise, on the other hand, that such programmes are themselves manifestations of the political preferences of the electorate. As there is considerable heterogeneity in the ability of different social groups to influence redistributive policies, the end-result will tend to be biased (or even distorted) in a certain direction. To go slightly further, as a result of the most recent developments in working out micro formulations of macro-economic and macro-social phenomena, on the one hand, and endogenous growth and public choice theories on the other hand, promising progress is being made towards understanding the growth-inequality-poverty triangle and the role of social expenditure and public budgets more generally.

This paper will not go this far. The aim here is to explore the relationship between the degree of income inequality and relative poverty, on the one hand, and measures of macroeconomic performance, structural factors representing the characteristics of the labour market and the demographic situation and social expenditure, on the other. This can be summarised in the following equation:

$$AI = f(ECON, STRUCT, EXP, RES), \quad (1)$$

which represents the degree of overall inequality (AI or, elsewhere, AP aggregate poverty) as a function of ECONomic measures of macroeconomic performance, STRUCTural variables characterising the labour market and demographic circumstances and public social EXPenditures, with all other possible influences indicated by the RESiduals term.

<sup>33</sup> A recent paper Brady (2005), for example, investigates five structural factors underlying cross-country differences in poverty: manufacturing employment, agricultural employment, the labour force participation of women, the share of the elderly in the population and the proportion of children in lone parent families.

The following section focuses on finding good proxies for these various factors, starting with identifying a satisfactory measure of inequality on the left-hand side of the equation, after considering various methodological issues. Alternative measures of inequality are, therefore, compared and an attempt is made to reduce their number to two – an indicator of overall inequality in income distribution and one of relative poverty. The concern is with the (bivariate) relationships between poverty and inequalities indicators, on the one hand, and economic, structural and social expenditure indicators, on the other. Following this, attempts are made to explain trends in poverty rates for two sub-groups of the population – children and the elderly<sup>34</sup>. The findings are then summarised and of the relative importance of the different broad factors as potential contributors to poverty and inequality is examined through the use of a multivariate analysis.

## METHODOLOGICAL NOTES

While the development of Laeken social indicators (Atkinson et al, 2002) and the use of these in implementing the Open Method of Coordination (OMC) in respect of social policies has contributed much to a better understanding of the determinants of social inclusion in the European Union, the actual collection of indicators is a relatively recent phenomenon (Atkinson et al, 2005). The 2004 enlargement, on the one hand, revealed a data vacuum and, on the other, gave rise to an opportunity for new types of comparative analysis. The time lag between the ending of the ECHP and the scheduled beginning of the EU-SILC means that there are a number of years when there are no new comparable data available to monitor developments across the enlarged EU countries at a time when the implementation of the OMC created an increased need for such statistics.

This need for data has been met, in practice, from various national sources, which differ from country to country. Since, however, some effort has been made to achieve a degree of comparability, it is possible, with a suitable degree of caution, to analyse the determinants of poverty and inequality across the EU as a whole. This contrasts with the various international comparative studies that have so far been carried out, in which European countries are included either as a subset of OECD countries (based mostly on Luxembourg Income Study datasets – see for example Atkinson, Rainwater and Smeeding, 1995, Förster and d’Ercole, 2005), as part of the distribution of income across the world as a whole (see Deininger and Squire, 1997, Cornia et al, 2005) or as part of an analysis of a specific issue like child poverty (see UNICEF, 2005).

For the analysis here, the main source of data is the Eurostat NewCronos database. The database includes structural indicators on social inclusion (the Laeken indicators) and contains time series data on economic developments, employment, public expenditure and demography.

The analysis attempts to cover as many present and would be members of the European Union as possible, including Bulgaria, Romania, Croatia and Turkey. However, since not all

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<sup>34</sup> A brief analysis of child and elderly poverty indicators was presented in Part 2.

types of data are available for all countries, in some parts of the analysis, only some of the countries are included.

Data on income inequality and poverty used in the study essentially relate to the year 2001, primarily because this is the most recent year for which the necessary data for most of the variables and countries are available. However, for some new Member States (NMSs) for which there are no data for 2001, data for the closest year before or after, has been taken. To measure the relationship between inequality and the various factors noted above, there should in principle be at least a one-year lag between the latter and the former, in the sense that inequality is taken as the outcome of these factors, or the dependent variable. Although this was not always possible for data reasons, the results ought not to be affected too much by this, given that circumstances tend not to change significantly from one year to the next.

The fact that validation of the data collected by Eurostat from some countries seems to have taken a relatively long time suggests that there may well be data problems in these cases. The two last countries for which Eurostat validated the Laeken Indicators were Hungary and Slovakia. While the author's knowledge of the different datasets for Hungary makes it possible to assess (and, after assessing to replace) the official data series, there is no alternative to assuming that Eurostat have made a sound decision as regards Slovakia<sup>35</sup>.

## Poverty and inequality rankings for the EU-29

### INCOME INEQUALITY MEASURES COMPARED

The set of indicators established at the Laeken summit in 2001, contains two widely used income inequality measures, one the Gini coefficient (Gini index), the other, the ratio of the highest (more accurately, the fourth since the highest is effectively the richest individual in the country) to the lowest income quintile (S80/S20).<sup>36</sup> To decide which to use, the ranking of countries and the variance between them need to be examined. Despite its obvious shortcomings (such as its insensitivity to changes in the top and bottom ends of the distribution and the fact that it cannot be decomposed) the Gini index, being easily interpretable, is widely used, while the S80/S20 is used much less. The Gini, being a variance-based measure, compares all values pair-wise in a distribution, S80/S20 takes the ratio of the averages of the uppermost and of the lowermost quintiles. As a result, the Gini coefficient is more sensitive to changes in the middle of the income distribution (e.g. transfers between those close to the mean or median values), while the S80/S20 is more sensitive to changes towards the two ends of

<sup>35</sup> The Hungarian Central Statistical Office provides data for the official Hungarian Laeken indicators, based on the Household Budget Survey. TARKI Social Research Centre also carries out a household survey, but on the basis of a smaller sample (2000 households). In the first section below both sources are used, but only TARKI data are used in the later analysis.

<sup>36</sup> Income inequality and poverty measures are presented here in a comparative frame mainly for methodological reasons, in order to specify the multivariate statistical models. These indicators are presented and analysed in a more detailed way in Part 1 of this Report.

the distribution. Neither index, however, is very sensitive to the real extremes (for example, the uppermost or lowest 5 or 10% of the income distribution).

Comparing the country rankings for the two indices shows a very similar picture (Figures 5.1a,b).<sup>37</sup> The majority of countries are ranked precisely or nearly the same in both cases. Exceptions, where country rankings differ by at least four places, include Finland, Italy and the UK. However, closer examination of the data for these shows changes, which are statistically insignificant. Finland, for example, would be predicted to be 7<sup>th</sup> in the Gini ranking on the basis of S80/S20. At this ranking, the Gini would be 0.27, which it, in fact, is, but Finland is ranked 12<sup>th</sup> on the basis of the (statistically insignificant) third digit of the Gini coefficient. Much the same is the case for the other differences in the ranking of countries.

It can, therefore be concluded that country rankings based on the chosen two inequality measures do not differ much at all. When examining broad country groups, however, two important conclusions emerge. On the one hand, the ranking seem to confirm the division of EU-15 countries into different social welfare regimes, as proposed by the theoretical and empirical literature (e.g. Esping-Andersen, 1990, extended by Ferrera 1996). The Scandinavian countries with social democratic regimes, therefore, show relatively narrow income inequalities, while the Anglo-Saxon countries with liberal welfare regimes show wider ones along with the Mediterranean countries<sup>38</sup>.

The new Member States, however, show a somewhat unexpected result. It is evident that they form at least as heterogeneous group as the EU-15 countries, with the Baltic States, Slovakia and Poland showing a similar level of inequality as the Anglo-Saxon and Mediterranean countries and the Czech Republic and Slovenia having one of the narrowest distributions. As for the Candidate countries, the degree of inequality in Bulgaria is among the lowest, in Romania and Croatia around the middle of the range, while in Turkey, inequality is much wider than for any of the EU-15 countries. In fact, the difference in the S80/S20 value for Turkey and that for Portugal, the country with the second highest value, is larger than the difference between Portugal and Denmark, the country with the lowest value<sup>39</sup>.

One other country deserves closer attention. As there are two data sources for Hungary (the official CSO figure based on household budget survey and the independent estimate of the TARKI Social Research Institute), the results based on these surveys can be compared. The difference between the two is dramatic. While the official index puts the

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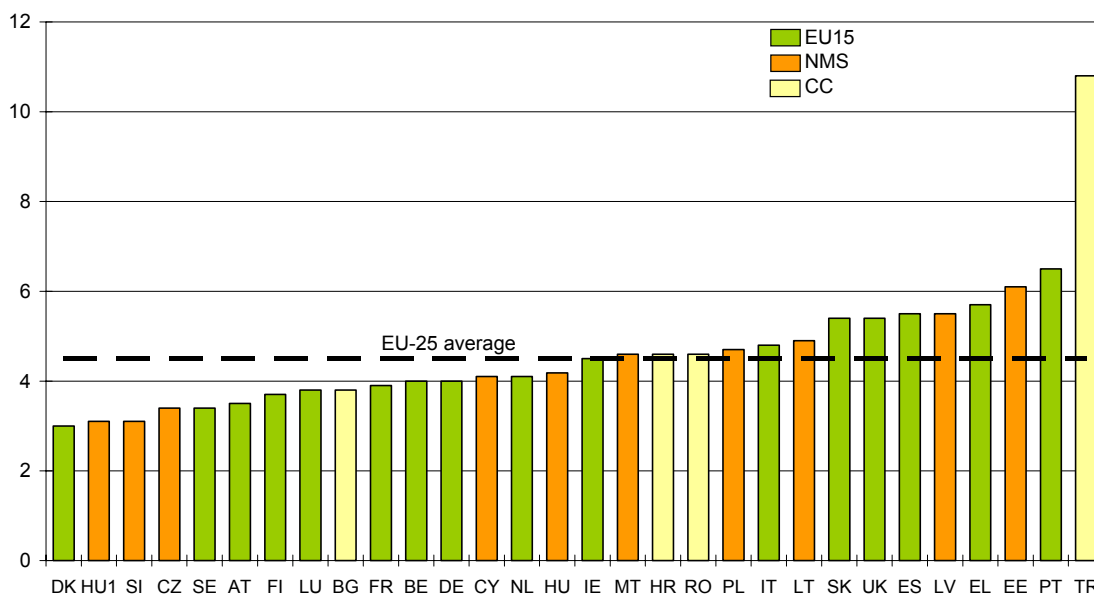
<sup>37</sup> For the reliability of income inequality and poverty measures (and of other Laeken indicators) see Part 2 of this Report.

<sup>38</sup> The Southern model of European welfare regimes was introduced by Ferrara (1996).

<sup>39</sup> It should be noted that the value for the quintile ratio reported here relates to 2001 and is significantly lower than that reported in Part 1 above, which relates to 2002 and is derived from a national source rather than from the ECHP. It is possible that income inequality increased markedly in Portugal between these two years. It is also possible that the shift in the use of data sources resulted in two series, which are not entirely comparable.

country among the most egalitarian, along with Scandinavian countries, the alternative data source places Hungary very close to the EU-25 average.

#### 5.1a S80/S20 quintile ratio – ranking of EU29



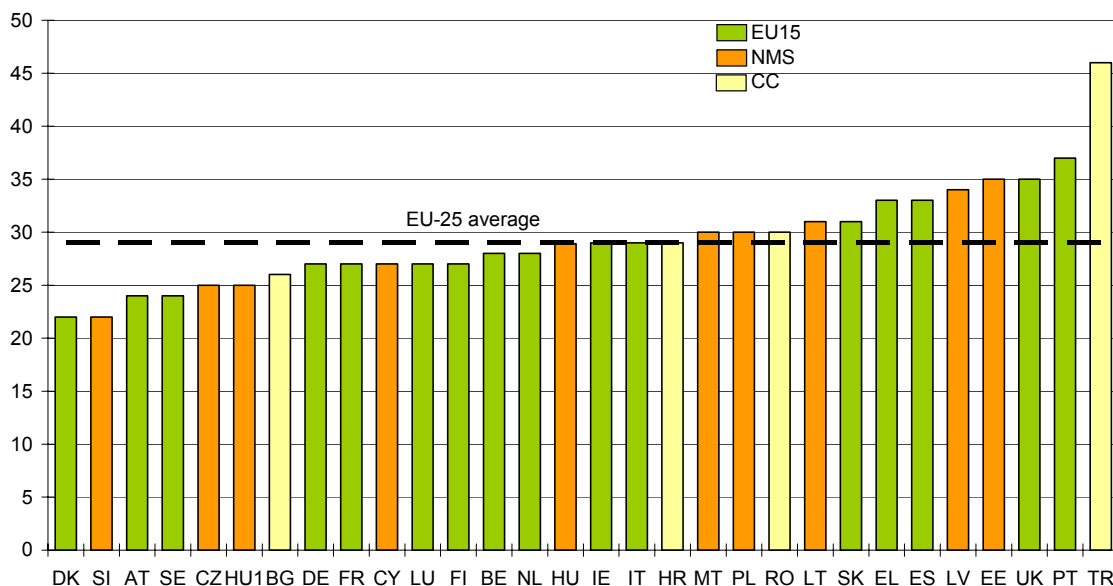
Source: NewCronos Database

Note. HU – Hungarian data from TARKI, HU1 – Hungarian data from Eurostat

All data refer for year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Cyprus, Slovakia, Croatia (2003)

The EU-25 average is the one estimated by Eurostat.

#### 5.1b Gini index – ranking of EU29



Source: NewCronos Database

Note. HU – Hungarian data from TARKI, HU1 – Hungarian data from Eurostat

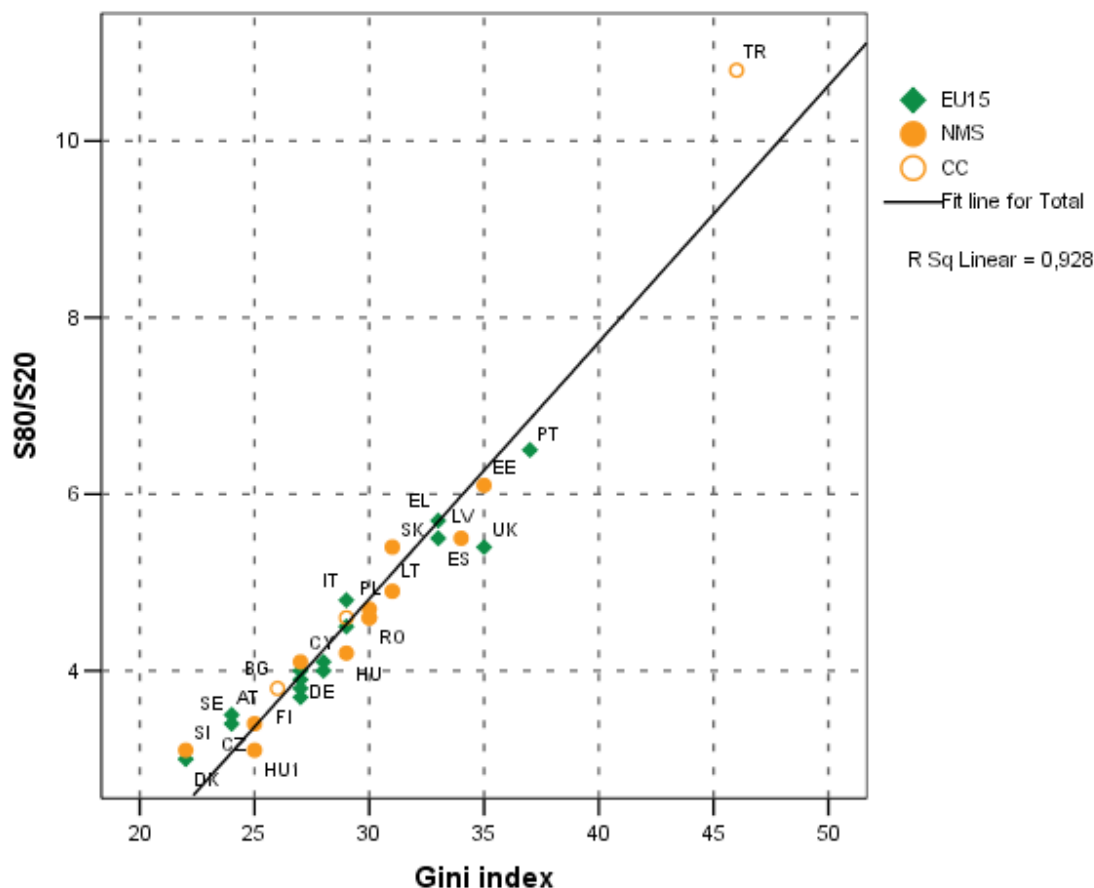
All data refer for year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Cyprus, Slovakia, Croatia (2003)

The EU-25 average is the one estimated by Eurostat.

While the main conclusions are broadly the same, methodological differences in the two inequality indices affect the country rankings. The Gini index shows greater variance compared to the S80/S20 quintile ratio. The two measures, however, are very closely

related (Figure 5.2 – the bivariate Pearson correlation coefficient is 0.96, indicating an almost perfect association).

## 5.2 Consistency between income inequality measures



Source: NewCronos Database

Note: HU – Hungarian data from TARKI, HU1 – Hungarian data from Eurostat

All data refer for year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Cyprus, Slovakia, Croatia (2003)

The Gini is used as a measure of income inequality in the following analysis for two reasons: it is more widely used and less vulnerable to uncertainties caused by small sample size.

## POVERTY MEASURES

Turning to differences in poverty measures across the EU-29 countries, the Laeken set of indicators includes poverty measures based on the relative income approach. The enlargement of the EU in 2004, together with the prospective accession of other East European countries, has highlighted the potential importance of absolute measures for both monitoring and policy purposes. Recent papers prepared for the European Commission (Förster, Tarcali and Till, 2002; Atkinson et al, 2005) suggest the use of an all-European poverty threshold and of “anchoring” relative poverty thresholds in different

countries to this. However, the starting point for such an absolute measure is still the relative income threshold – the poverty level expressed in PPS over the EU as a whole, which is then used to indicate inequalities in standards of living across the Union.

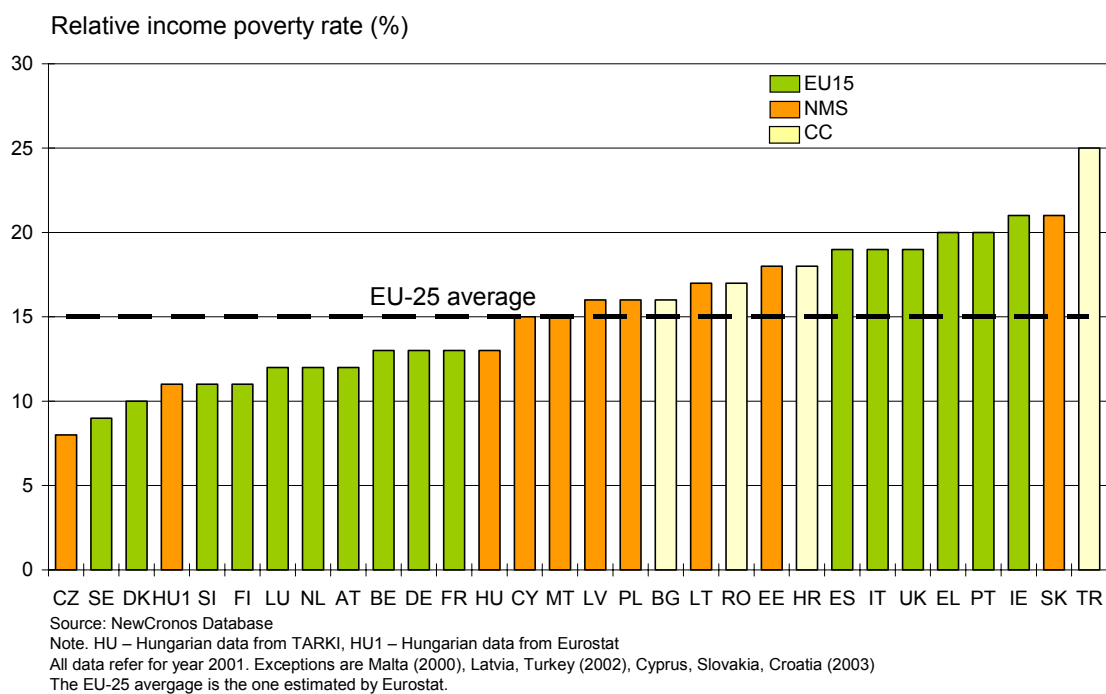
While the European Union focuses on relative poverty, other international agencies accord an important role to an absolute measure. The United Nations and the World Bank when defining Millennium Development Goals use specific US dollar values (1, 2.15 or 4.30 dollars a day) to define the poverty threshold. This difference in focus largely reflects differences in policy interest. The concern of the UN and World Bank is therefore with income levels in developing countries and ensuring that everyone has the minimum income to survive. The concern in the EU is to achieve higher levels of economic prosperity and to ensure that as many people as possible share in this rather than to reach some basic standard of living. Poverty – or more accurately the risk of poverty – is, therefore, exclusively defined in terms of income relative to some general, or median, level rather than in terms of some absolute minimum level. Whether this failure to take account of absolute poverty in addition to the relative concept is defensible in view of the income levels in the new Member States is open to question.

In the analysis below, as elsewhere in this report, relative poverty is defined as income below 60% of the median equivalised income in each country, which is the core Laeken indicator of the risk of poverty.

Despite the fact that the conceptualisation of relative poverty is, in a sense, nothing more than putting a special focus on the lower end of the overall income distribution, the ranking of countries by overall poverty rate presents a somewhat different picture than that based on income inequality measures (Figure 5.3). In particular, there is a clear division between three country groups. The EU-15 countries dominate the lower and upper groups (below and above the EU-25 average), while the new Member States are clustered in the middle group (around the average). On the other hand, there are no major shifts between rankings. The Czech Republic and Slovenia, together with Hungary if the official data are taken, are included among the Scandinavian and egalitarian continental countries, while Slovakia and Turkey are in the upper group.

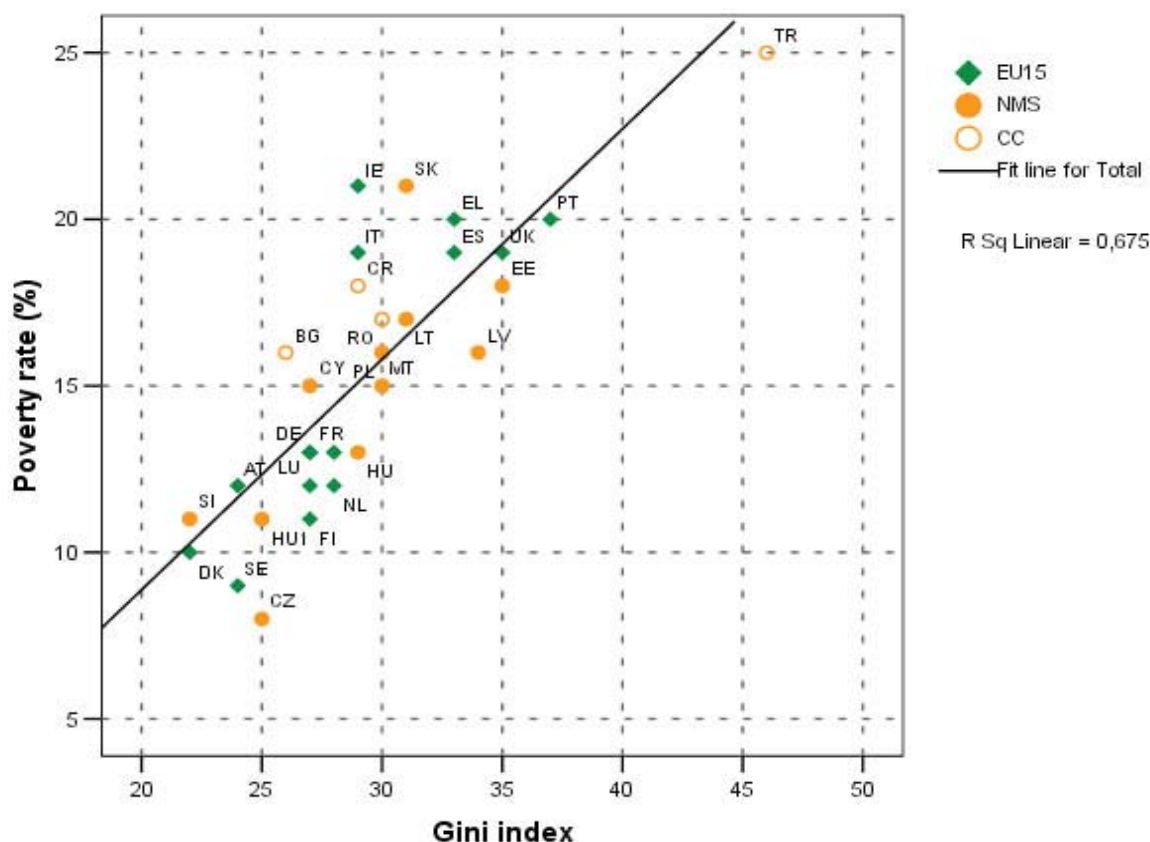


### 5.3 Overall relative income poverty – ranking of EU29



A number of features of the comparison, however, are worth noting. In particular, the risk of poverty in Ireland and Slovakia is higher than would be predicted on the basis of the

#### 5.4 Consistency between income inequality and income poverty



Source: NewCronos Database

Note: HU - Hungarian data from TARKI, HU1 - Hungarian data from Eurostat

All data refer for year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Cyprus, Slovakia, Croatia (2003)

Gini coefficient, while in Sweden and the Czech Republic, inequality seems to be higher than would be predicted from relative poverty levels. Nevertheless, relative poverty rates are strongly correlated with income inequality measures across countries, though with a closer correlation for EU-15 countries than for NMSs.

### Explaining cross-country differences in overall income inequality and poverty

#### THE ROLE OF MAIN EXPLANATORY FACTORS AND HYPOTHESES

The purpose here, as indicated at the outset, is to examine cross-country differences in income inequality indices and poverty rates, on the one hand, and those in selected macro factors, on the other. The latter are divided into three groupings. *ECONomic* factors are represented by two variables, GDP per capita in PPS expressed in relation to

the EU-25 average and the degree of openness of the country's economy.<sup>40</sup> Although there is no clear evidence on the issue, it is widely argued in the literature that globalisation – ie more openness – in general leads to an increase in inequality as well as in relative poverty.

As regards the second group of variables, the STRUCTural factors, the empirical literature provides strong evidence that for individuals' *labour market* status plays a decisive role in determining income (which is confirmed by the analysis in Part 2 above). It is interesting to examine whether or not the same link can be observed at a macro level in a cross-sectional analysis of countries. The overall employment rate is used for the overall analysis, while the employment rate for women is used to explain differences in child poverty across countries. The share of children in total population is also examined in this regard, as is the share of those aged 85 and over in respect of poverty among the elderly.

It is to be expected that the nature and scale of *social welfare* affect income inequality and relative poverty rates across countries. Social protection EXPenditure expressed in relation to GDP is used to represent this in the overall analysis. A subset of social expenditure, in particular, spending on family and child benefits and on pensions, is used for the analysis of poverty among children and the elderly. It should be noted that such expenditure may have effects beyond its primary aim, in the sense that spending on pensions, for example, may help to alleviate child poverty and that on family benefits may assist the elderly given household composition.

As noted above, fully comparable data are not available for all EU-29 countries for all the variables, though different data sources provide the relevant information for the great majority of them. The candidate countries, especially Croatia and Turkey, are the main ones affected by lack of data. Omissions are noted when appropriate.

## DETERMINANTS OF OVERALL INCOME INEQUALITY AND POVERTY

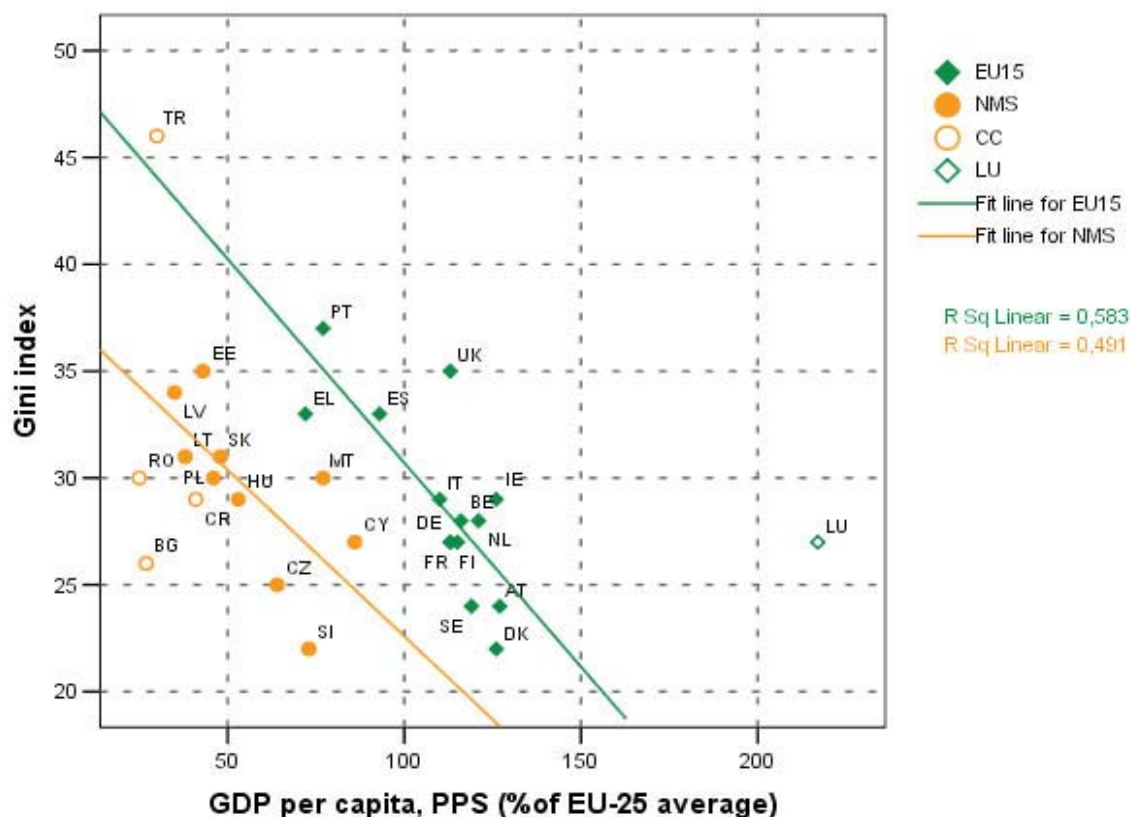
### Economic factors

Income inequality is relatively strongly and negatively related to GDP per head across the 29 countries ( $R^2=0.58$  for EU-15 Member States and  $R^2=0.49$  for NMSs); in other words, the higher the level of GDP per head the less unequal income distribution tends to be (Figure 5.5a). Indeed, the slope of the relationship is relatively similar for the two groups of country, though the level of GDP per head is, of course, lower in the new Member States.<sup>41</sup> Accordingly, the latter joined the EU with lower GDP but at all levels of inequality.

<sup>40</sup> Many indices of openness or globalisation are calculated by different institutions or groups of researchers. The one selected is that published by the World Markets Research Centre (G-Index) for year 2001, which takes into account international trade (50%), foreign direct investment (10%), private capital flows (10%), service exports (20%), Internet hosts (5%) and international telephone traffic (5%). For more details see [www.worldmarketsanalysis.com/pdf/g\\_indexreport.pdf](http://www.worldmarketsanalysis.com/pdf/g_indexreport.pdf). Scores rather than country ranking is used in the analysis.

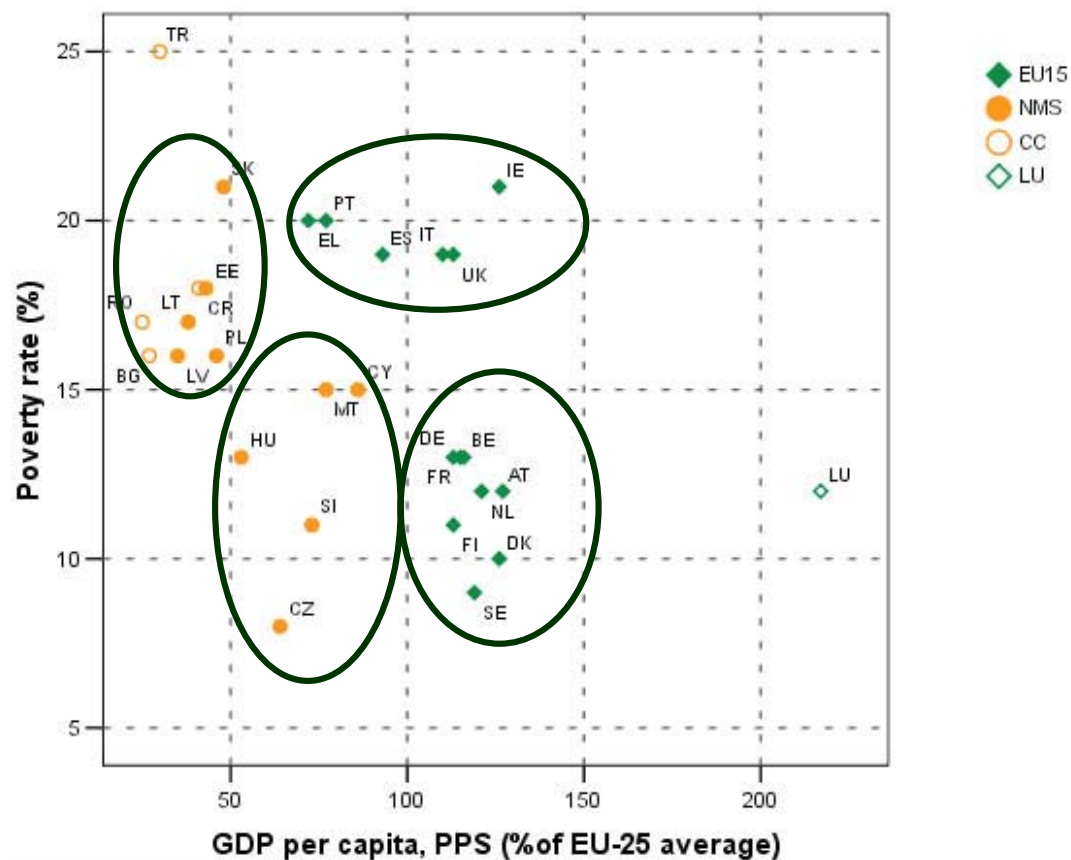
<sup>41</sup> Turkey and Luxembourg are omitted as clear outliers.

### 5.5a Relationship between GDP per capita and income inequality



While the overall risk of poverty is also negatively associated with GDP per head ( $R^2=0.35$  for EU-15 countries and  $R^2=0.22$  for NMSs), the pattern of variation across countries is somewhat different (Figure 5.5b). Four groups can be identified. The first group, containing the Scandinavian countries and most of the EU-15 countries with conservative social welfare regimes, has a relatively low overall risk of poverty and relatively high GDP per head. The second group, comprising the EU-15 Member States with liberal and Mediterranean social welfare regimes, has more variable levels of GDP per head and a relatively high risk of poverty (around 20%). The third group, containing relatively affluent New Member States (Czech Republic, Slovenia, Hungary, Malta and Cyprus) have similar levels of GDP per head but very different risks of poverty. The fourth group (Poland, Slovakia, the Baltic States and the four candidate countries) have relatively high poverty rates at low levels of GDP per head.

### 5.5b Relationship between GDP per capita and income poverty



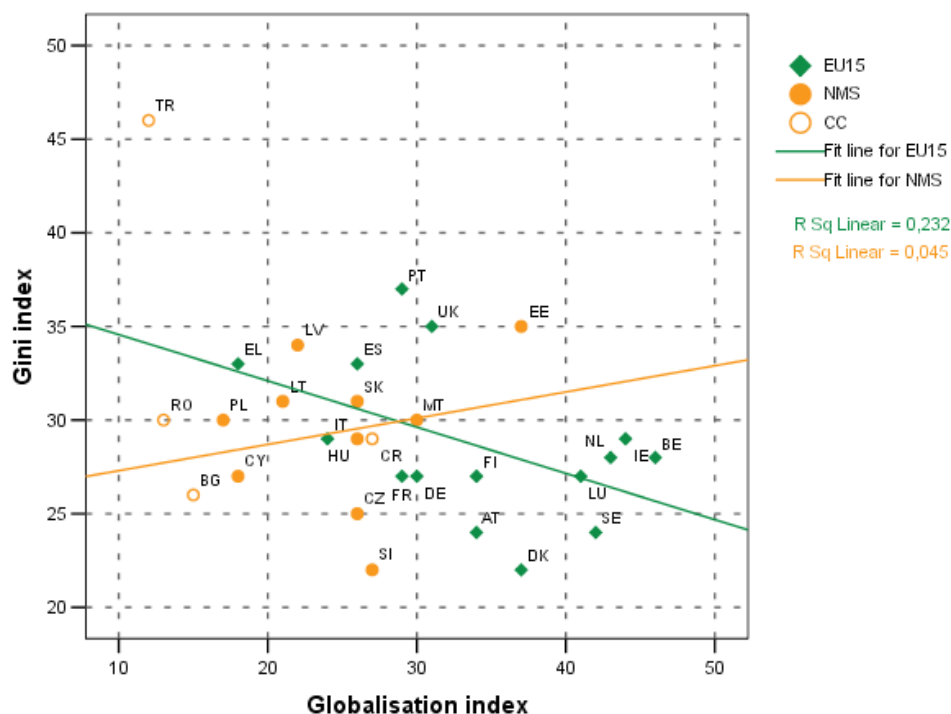
Source: NewCronos Database

Note: HU - Hungarian data from TARKI, HU1 - Hungarian data from Eurostat.

Poverty rates are from year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Cyprus, Slovakia, Croatia (2003). Data on GDP per capita are from 2000. Luxembourg is treated as an outlier.

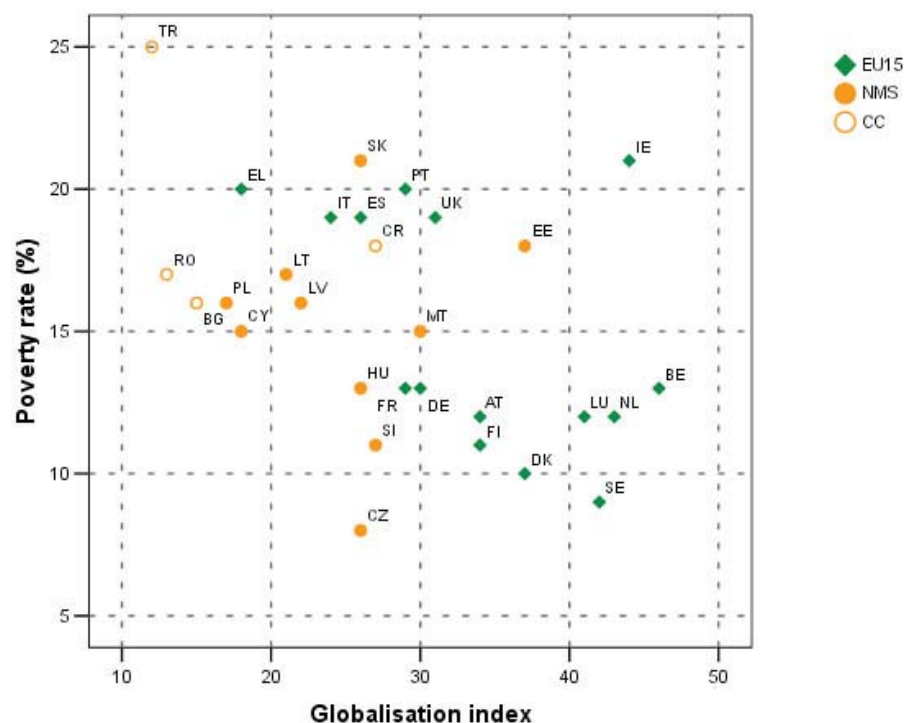
The widespread assumption that globalisation leads to an increase in poverty and inequality does not find much support in the data assembled. Neither the Gini coefficient nor the relative poverty rate seems to be closely associated with the globalisation index across European countries (Figure 5.6). Nor is there any evidence of a relationship if EU-15 countries and NMSs are examined separately.

### 5.6a Relationship between the openness of economy and income inequality



Source: NewCronos Database  
 Note: HU - Hungarian data from TARIQ, HU1 - Hungarian data from Eurostat

### 5.6b Relationship between the openness of economy and poverty



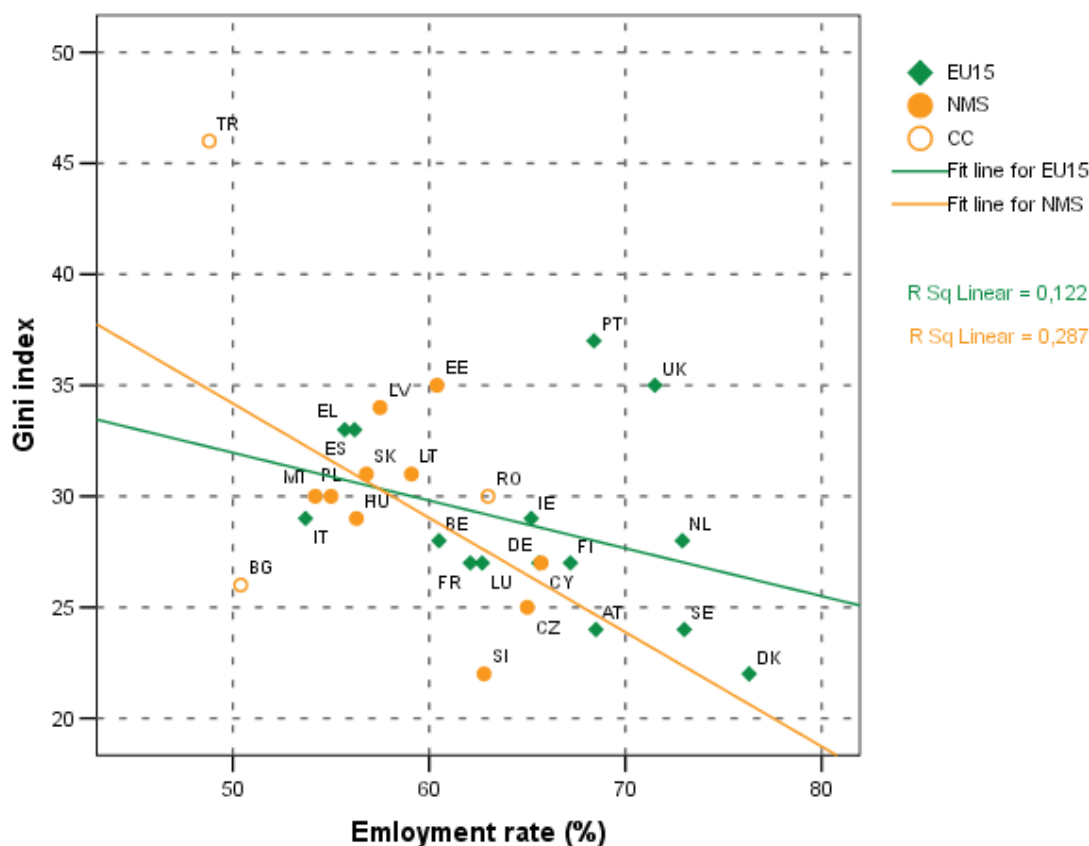
Source: NewCronos Database  
 Note: HU - Hungarian data from TARIQ, HU1 - Hungarian data from Eurostat  
 Poverty rates are from year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Cyprus, Slovakia, Croatia (2003)  
 For globalisation index see [www.worldmarketanalysis.com/pdf/q\\_indexreport.pdf](http://www.worldmarketanalysis.com/pdf/q_indexreport.pdf)

### Structural variables: employment rates

The relationship between employment and poverty is accorded much importance in the EU. It is emphasised by the Kok report as well as by the newly launched Commission employment guidelines that a significant reduction in poverty is expected from an increase of employment rates across the EU.

The results show that a higher level of employment tends to be associated with a lower degree of income inequality across countries, even if the relationship is relatively weak (Figure 5.7a). On the other hand, the relationship between employment and relative poverty appears stronger (Pearson correlation coefficient  $-0.53$  for all the countries,  $R^2=0.27$  for EU-15 Member States and  $R^2=0.24$  for NMSs).

**5.7a Relationship between employment and income inequality**



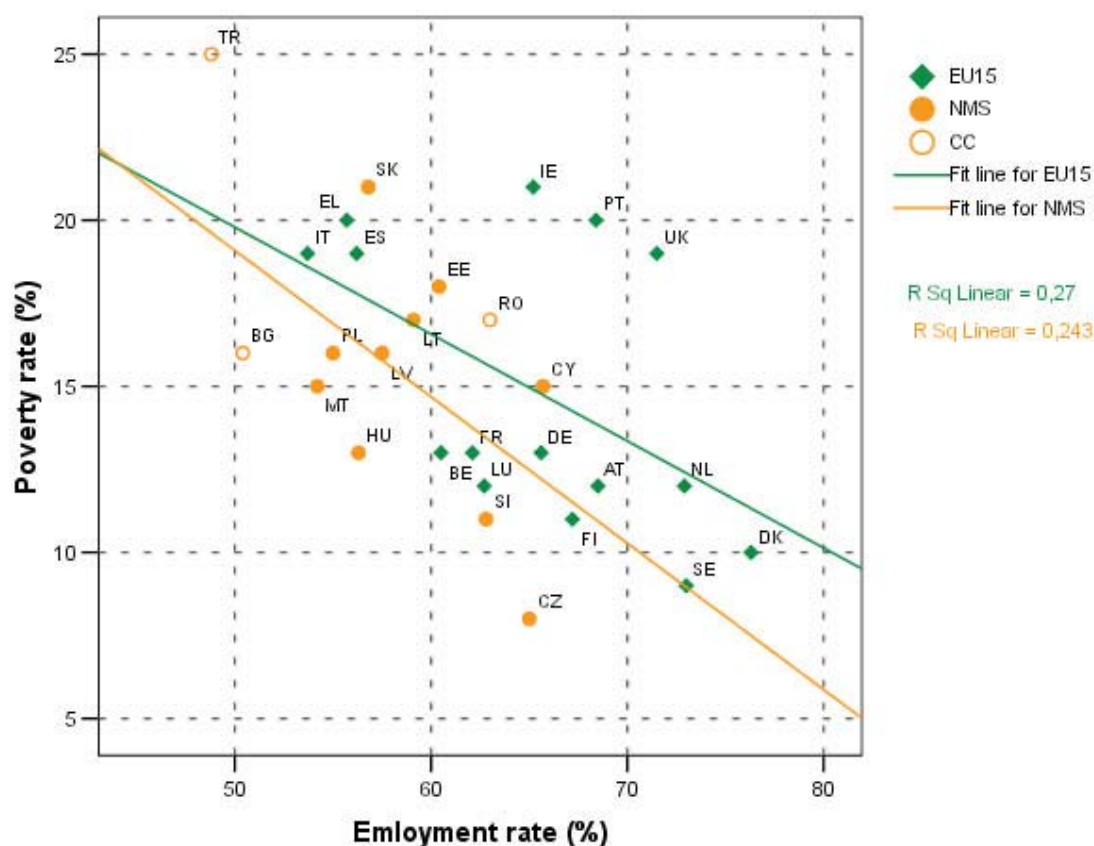
The picture is somewhat similar to that between GDP per head and the poverty rate (Figure 5.7b). The four groups of countries can be distinguished again, though there are some differences. In particular, Portugal is closer to the liberal regime countries, while the Netherlands and Austria fit better into the group of high employment–low poverty with the Scandinavian countries. No similar patterns can be observed for the NMSs and

candidate countries. The slopes of the two correlations for the EU-15 countries and NMSs are much the same, indicating a similar relationship between the two variables.

This relatively weak relationship across countries between the employment rate and relative poverty does not mean that increases in employment would have a relatively weak effect on the rate of poverty, only that there are other factors at work in determining the relative number of people with poverty levels of income than the level of employment.

To understand the nature of the relationship between employment rates and poverty rates/inequalities would require a detailed study of intertemporal changes in employment on the one hand and poverty/inequality on the other. This step could bring further insights into the evaluation of various labour market policies in terms of their effects on social conditions. However, at this stage, the lack of fully comparable longitudinal data for the whole EU-29 prevents such an analysis from being carried out.

### 5.7b Relationship between employment and income poverty



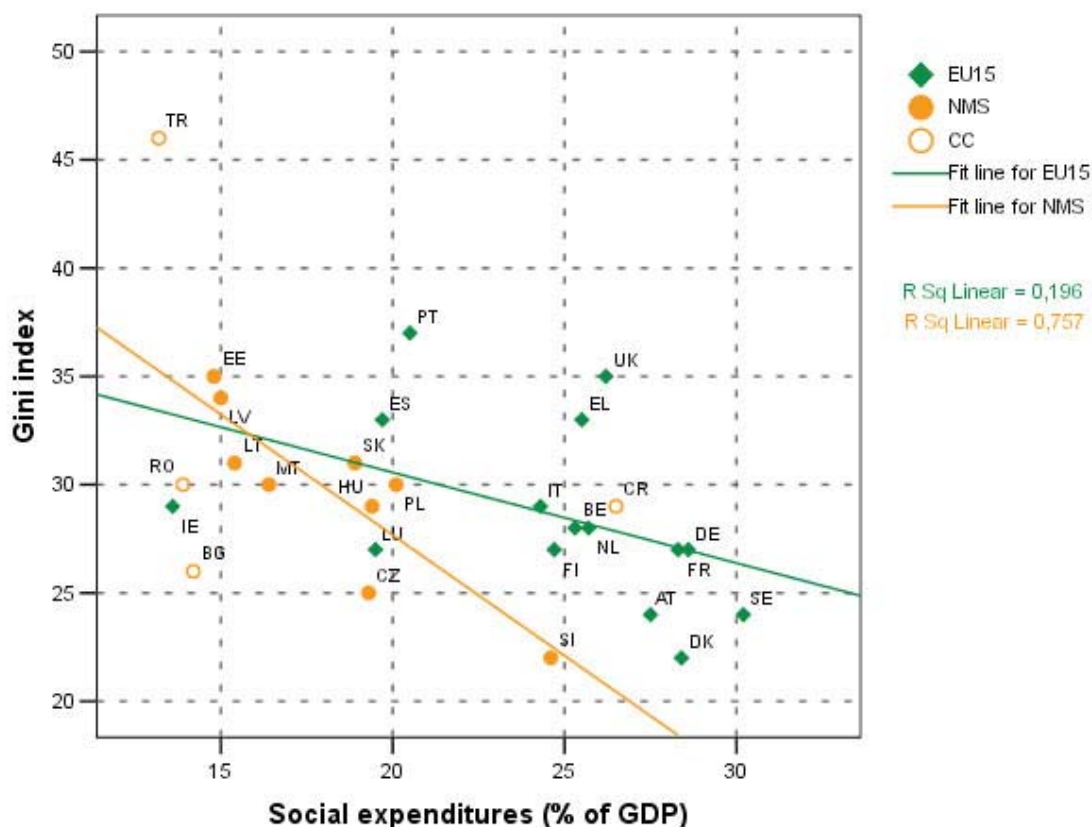


**Institutional variables: social protection expenditure**

Welfare programmes change the distribution of income, regardless of whether or not they have an explicit objective to redistribute income between people or households. It can be expected on the basis of the comparative literature, (see Atkinson, Rainwater and Smeeding, 1995, Förster and Pearson, 2002, Förster and d'Ercole, 2005) that the larger the amount spent on social protection the more equal the distribution of income is likely to be and, therefore, the lower the rate of relative poverty. The results here are in line with this hypothesis. The degree of inequality, as well as the risk of poverty, is negatively correlated with the scale of social protection expenditure in relation to GDP (Figure 5.8).

Whether countries are part of the EU-15 or are new Member States does not seem to influence cross-country differences in the case of inequality, since the nature of the relationship (ie the shape of the regression lines) is similar for the two groups (Figure 5.8a). However, there is a difference between the two groups in the relationship between social expenditure and the poverty rate. In the EU-15 Member States, the distinction between welfare regimes is again evident. Countries with the social-democratic and conservative systems form a single group, with relatively high social expenditure combined with below average poverty rates, though there is evidence within the group of a negative relationship between the poverty rate and the level of social spending – ie the higher the latter, the lower the former.

### 5.8a Relationship between social protection expenditure and income inequality



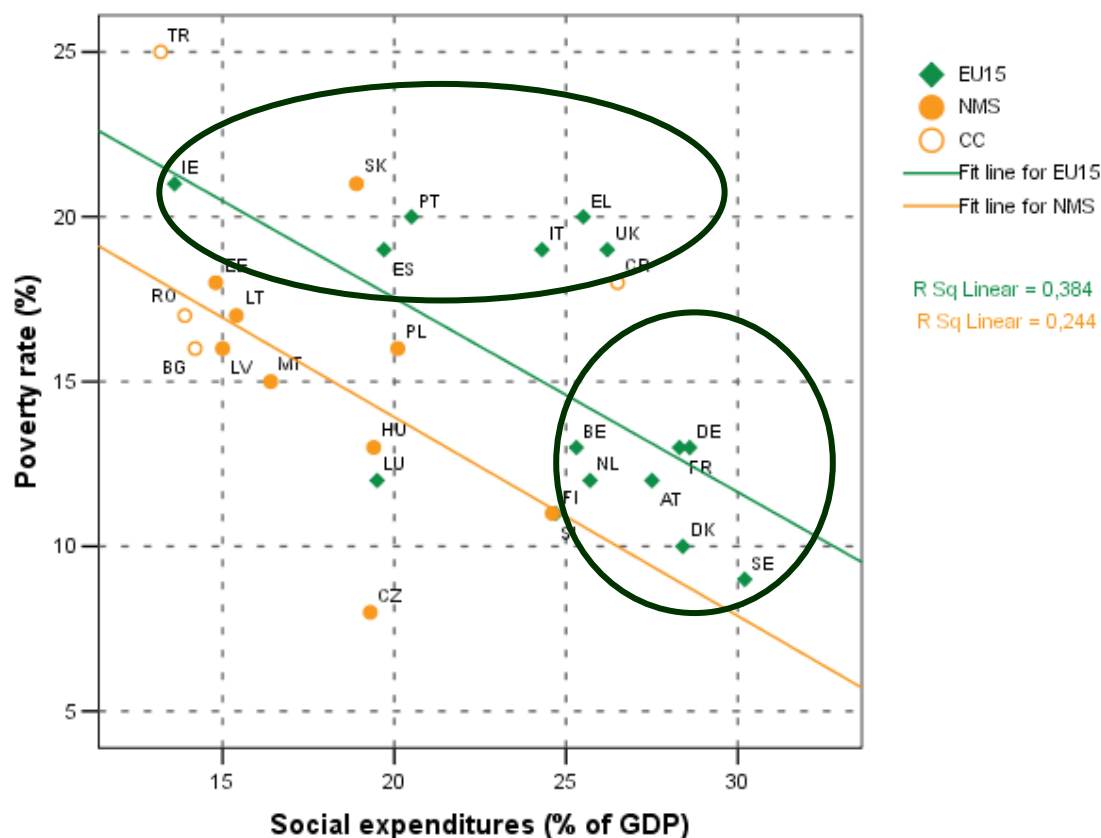
Source: NewCronos Database

Note: HU – Hungarian data from TARKI, HU 1 – Hungarian data from Eurostat

Gini indices are from year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Slovakia, Croatia (2003). Data on social expenditures are from 2000. Cyprus is missing due to lack of data.

In the countries with liberal and Mediterranean welfare systems, however, this inverse negative relationship is no longer evident. These countries have similar poverty rates but very different levels of social expenditure. All of these countries, except Ireland, have higher poverty rates than would be expected given their level of social expenditure on the basis of the average relationship across the EU-15 between the two (ie they are above the regression line in the chart (Figure 5.8b). This suggests that social protection in these countries is less effective in alleviating poverty than in the Scandinavian countries – a finding, which is in line with analysis of the re-distributive effects of social transfers (see, for example, Dennis and Guio, 2003; Sutherland, 2005).

### 5.8b Relationship between social protection expenditure and income poverty



### Factors underlying poverty rates of children and the elderly

#### CHILD POVERTY AND MACRO FACTORS

To try to explain variations in child poverty across countries, the following relationship is assumed

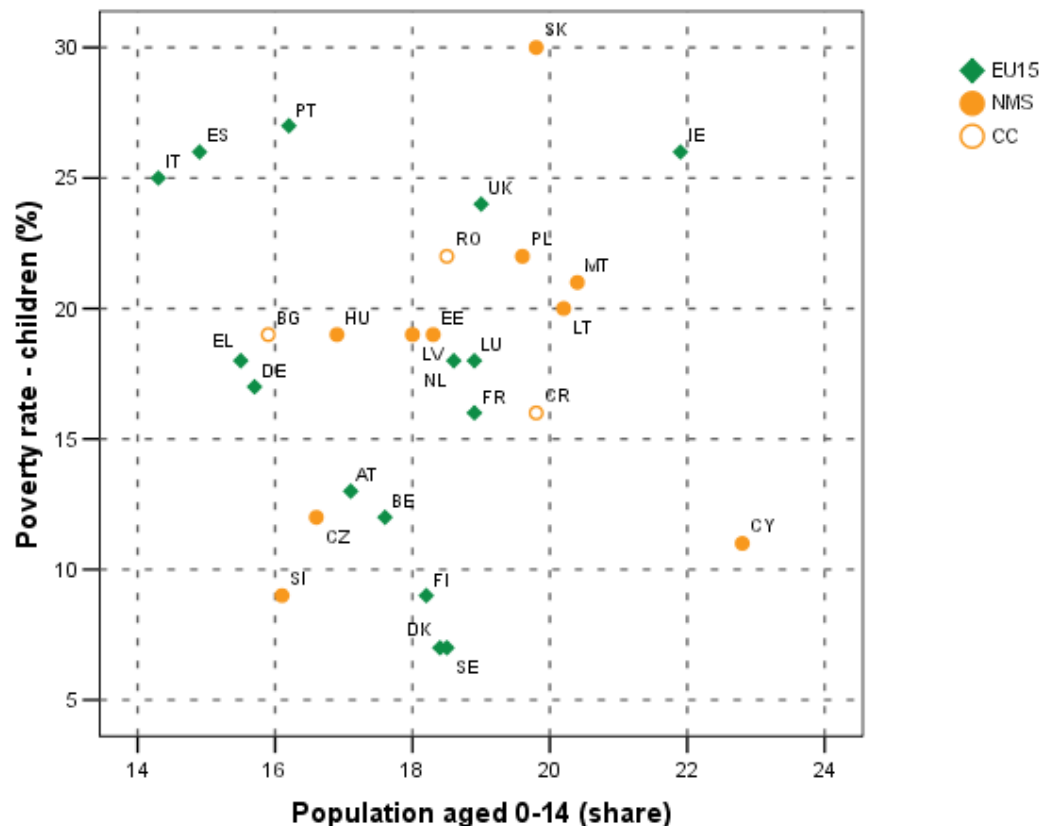
$$\text{ChP} = f(\text{ECON}, \text{STRUCT}, \text{EXP}, \text{RES}), \quad (2)$$

where ECON is as above (GDP per head), STRUCT relates to two specific variables – employment rates of women and the share of children in total population – and EXP refers to expenditure on family benefits in relation to GDP.

Rate of poverty among children do not seem to be related to their share in total population (Figure 5.9a). However, poverty rates of children are closely related to the level of GDP per head as well as the scale of public spending on family benefits and the employment of women. All of these seem to have the effect of reducing the risk of

poverty among children (ie the coefficients have a negative sign in the equation) both in the EU-15 countries and the new Member States.

### 5.9a Relationship between relative poverty of children and 0-14 aged population share



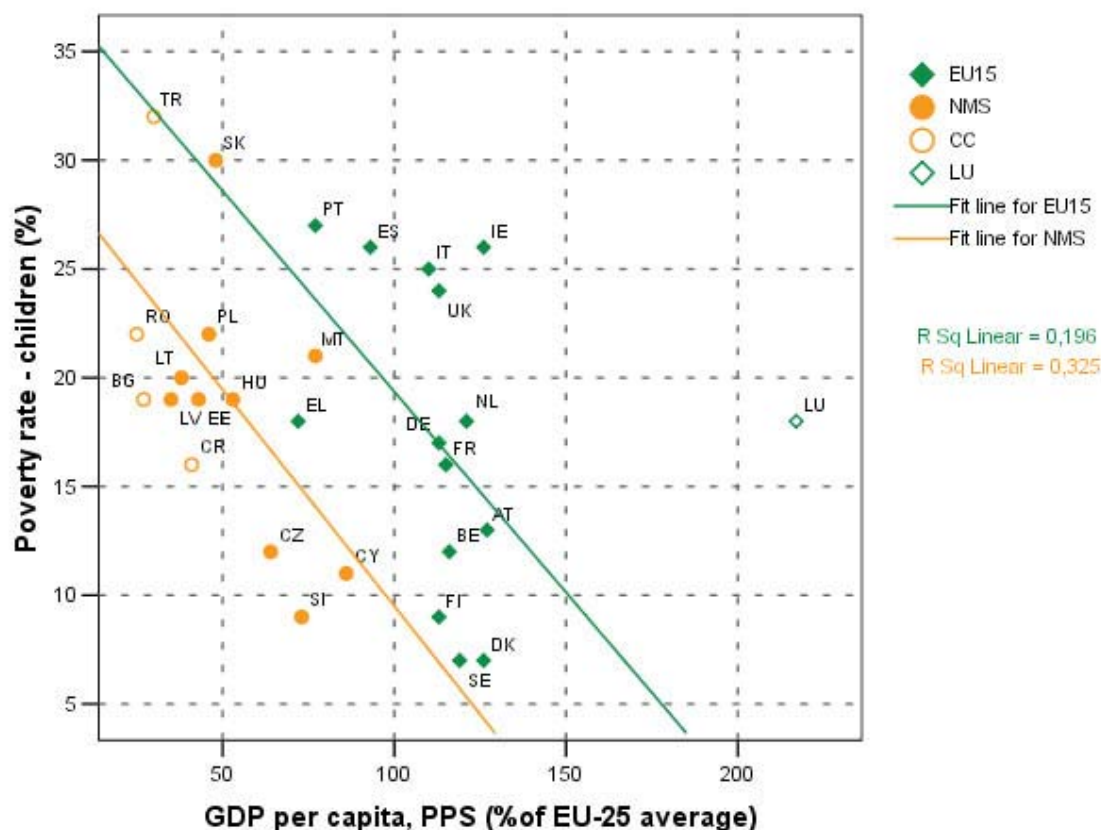
Source: NewCronos Database

Note: HU - Hungarian data from TARKI, HU1 - Hungarian data from Eurostat

Poverty rates of children are from year 2001. Exceptions are Malta (2000), Latvia (2002), Cyprus, Slovakia, Croatia (2003). Data on population's age structure are from 2000. Turkey is missing due to lack of data.

As regards economic performance, a high level of GDP per head relative to the EU-25 average appears to help combat poverty among children, especially in the new Member States. The relationship between the two variables is very similar in the sense that the regression lines for the two groups of country have almost the same slope (Figure 5.9b).

### 5.9b Relationship between relative poverty of children and GDP per capita



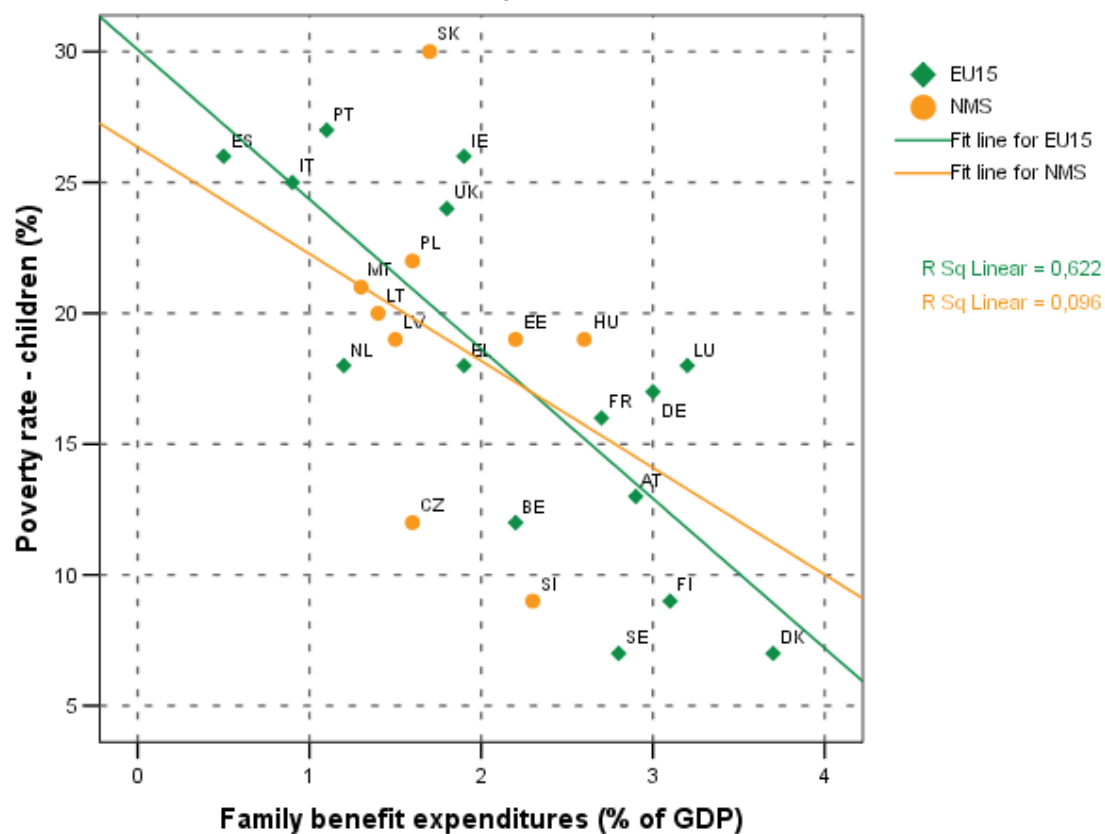
Source: NewCronos Database

Note: HU - Hungarian data from TARKI, HU1 - Hungarian data from Eurostat

Poverty rates of children are from year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Cyprus, Slovakia, Croatia (2003). Data on GDP per capita are from 2000. Luxembourg is treated as an outlier.

While an inverse relationship between expenditure on family benefits and the risk of poverty among children is evident, interesting differences between countries can be observed (Figure 5.9c). Poverty rates vary considerably at similar levels of expenditure. For example, in Slovakia spending on family benefits relative to GDP is much the same as in the Czech Republic (1.6–7%), but the risk of poverty of children in almost three times higher. Similarly, in Sweden and Germany, both of which have relatively high levels of spending on benefits (around 3% of GDP), there is an equally wide difference in the risk of poverty between the two countries. The Swedish welfare system, therefore, seems more effective in alleviating poverty among children – as among the population as a whole – but, of course, there are other factors at work as well. The same holds for the family benefit system in Belgium and the Netherlands, as well as in two of the new Member States, Slovenia and the Czech Republic.

### 5.9c Relationship between relative poverty of children and family benefit expenditures

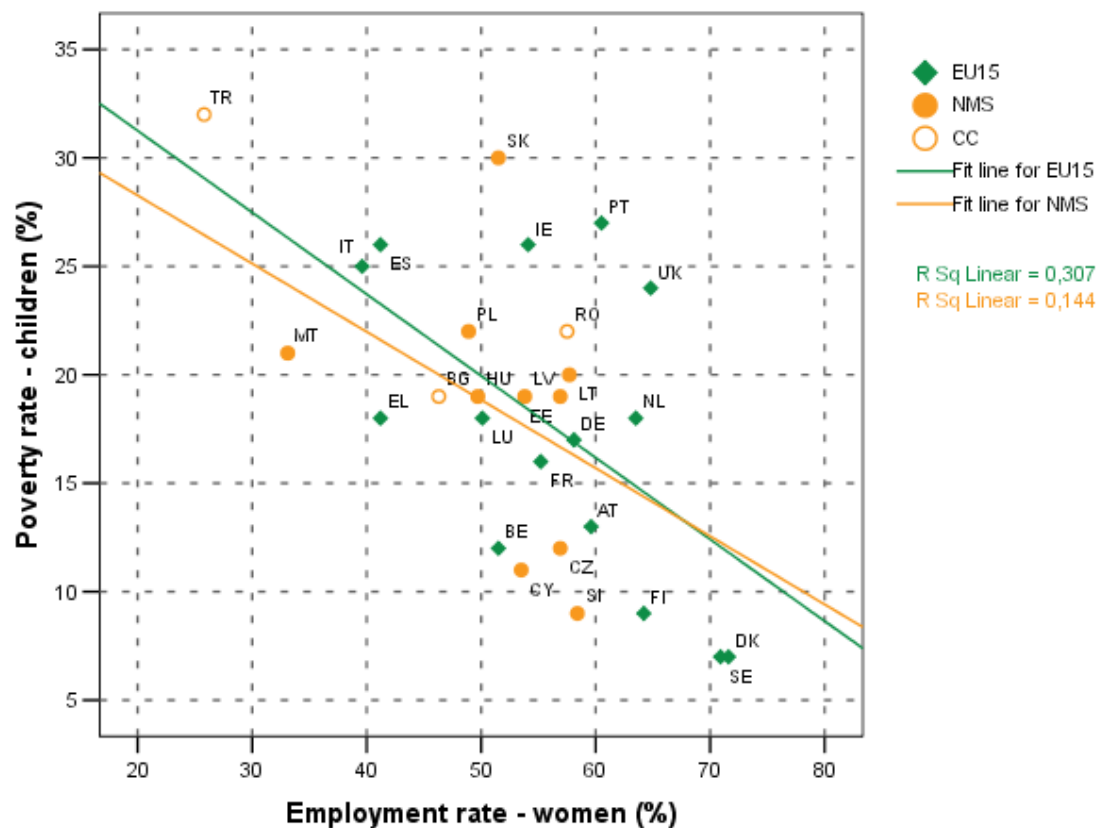


Source: NewCronos Database

Note: HU - Hungarian data from TARIK, HU1 - Hungarian data from Eurostat

Poverty rates of children are from year 2001. Exceptions are Malta (2000), Latvia (2002), Slovakia (2003). Data on family benefits expenditures are from 2000. Cyprus and candidate countries are missing due to lack of data.

### 5.9d Relationship between relative poverty of children and female employment rate



Source: NewCronos Database

Note: HU - Hungarian data from TARKI, HU1 - Hungarian data from Eurostat

Poverty rates of children are from year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Cyprus, Slovakia (2003). Data on employment rates of women are from 2000. Croatia is missing due to lack of data.

### Poverty among the elderly

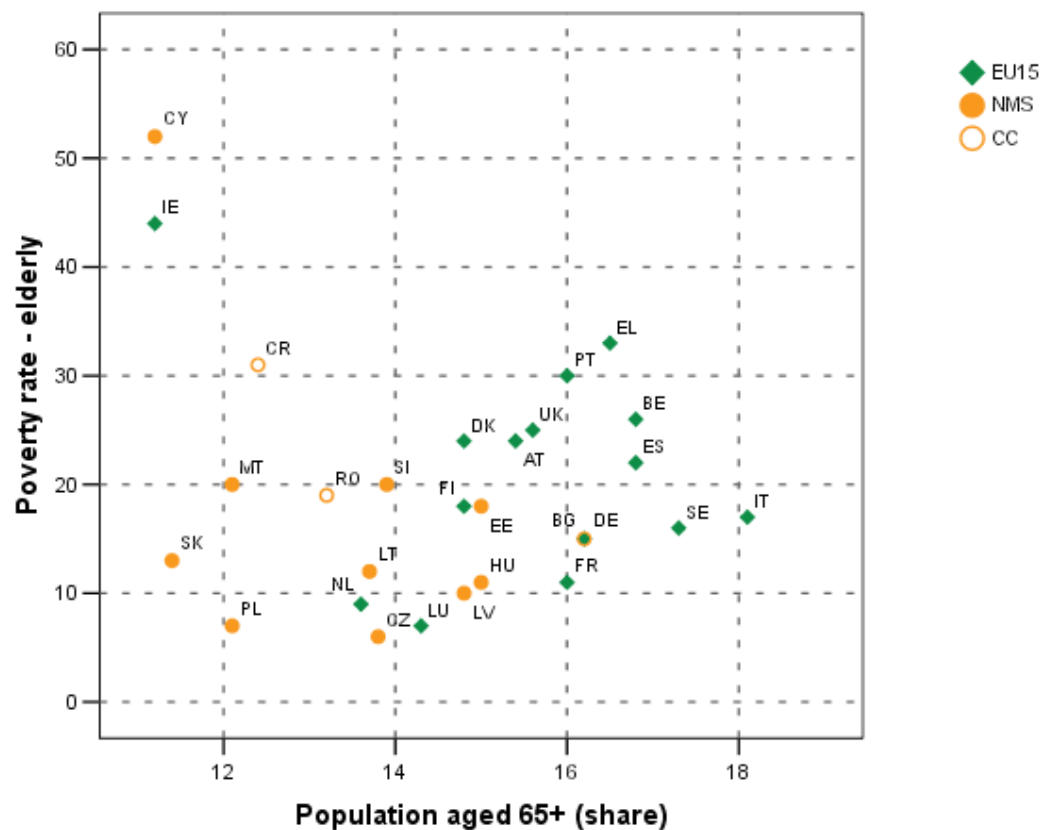
*The risk of poverty among the elderly is related to the following factors:*

$$\text{ELDPOV} = f(\text{ECON}, \text{STRUCT}, \text{EXP}, \text{RES}), \quad (3)$$

where ECON is above (GDP per head), STRUCT relates to the share of those aged 65 and over in total population and EXP refers to expenditure on old-age pensions in relation to GDP.

Again, the demographic variable does not seem to be an important factor underlying cross-country differences in and the rate of poverty among the elderly. The relative number of people aged 65 and over, therefore, does not appear to affect the risk of them having a poverty level of income (Figure 5.10a).

### 5.10a Relationship between relative poverty rate of elderly and 65+ aged population share



Source: NewCronos Database

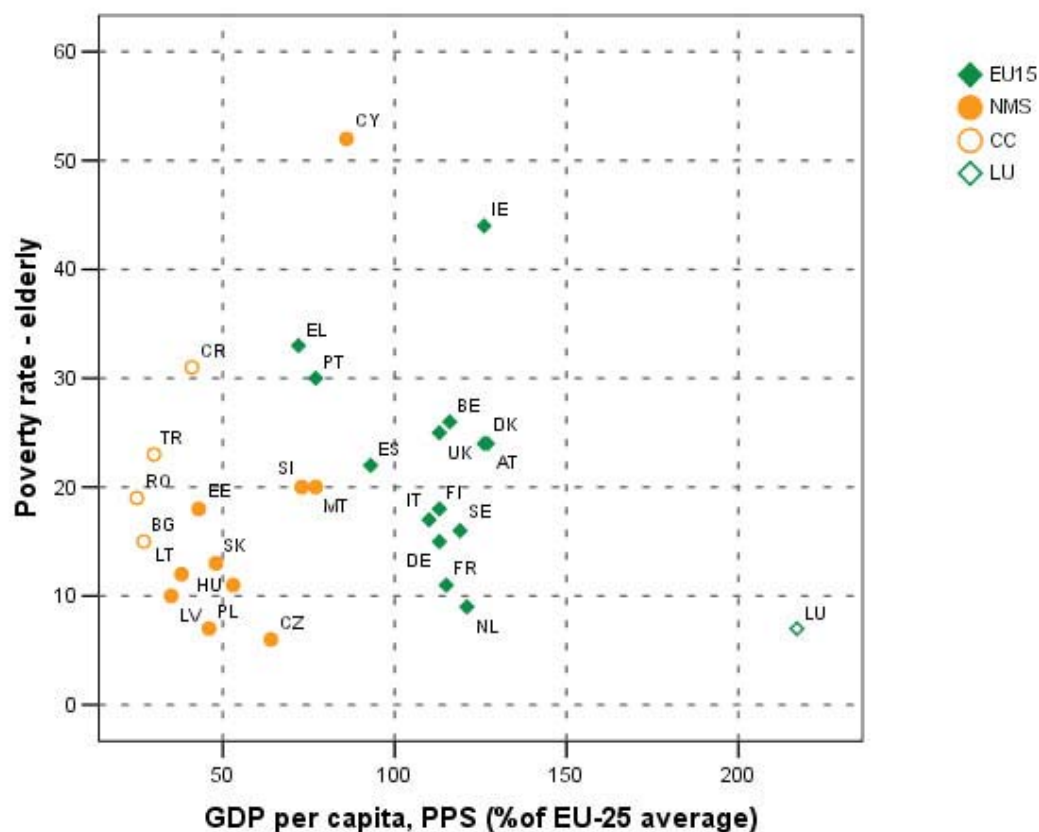
Note: HU – Hungarian data from TARKI, HU1 – Hungarian data from Eurostat

Poverty rates of elderly are from year 2001. Exceptions are Malta (2000), Latvia (2002), Cyprus, Slovakia, Croatia (2003). Data on population's age structure are from 2000. Turkey is missing due to lack of data.

Unlike in the case of children, however, the level of GDP per head does not seem to affect poverty rates among the elderly, especially if Cyprus and Ireland (with very high elderly poverty rates) and Luxembourg (with very high GDP per head) are excluded (Figure 5.10b).



### 5.10b Relationship between relative poverty rate of elderly and GDP per capita



Source: NewCronos Database

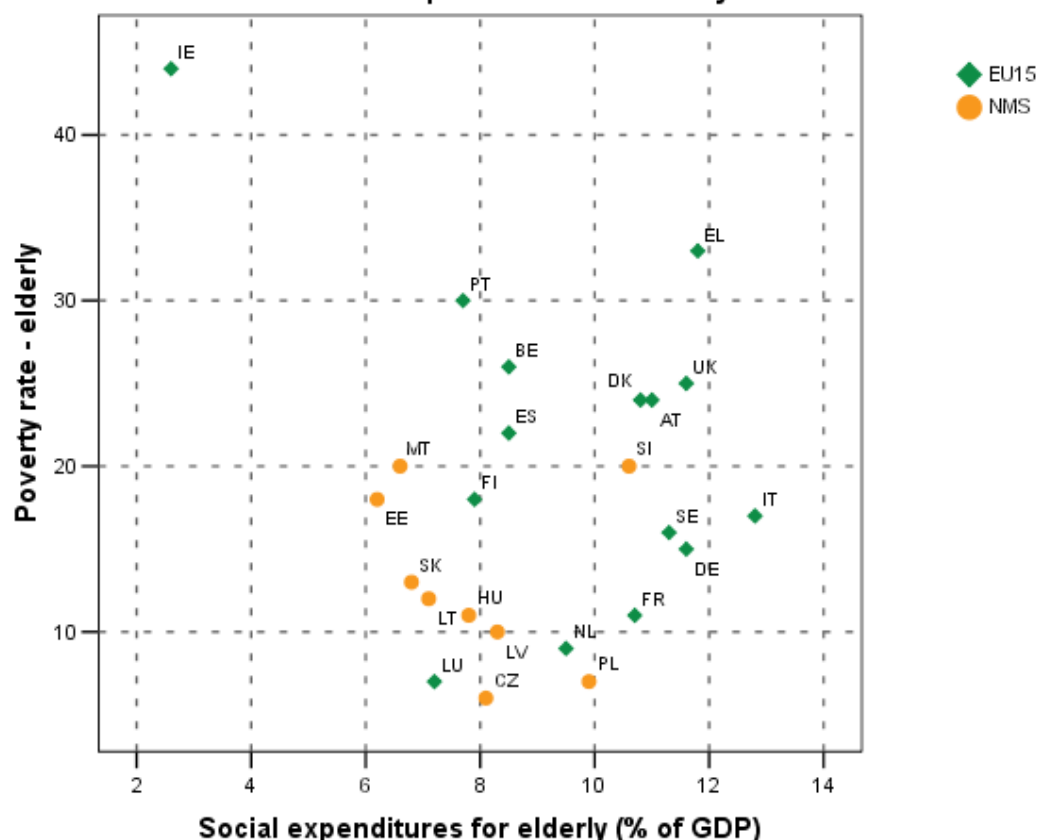
Note: HU - Hungarian data from TARKI, HU1 - Hungarian data from Eurostat

Poverty rates of elderly are from year 2001. Exceptions are Malta (2000), Latvia, Turkey (2002), Cyprus, Slovakia, Croatia (2003). Data on GDP per capita are from 2000. Luxembourg is treated as an outlier.

Perhaps surprisingly, again unlike for children, it is also the case that social expenditure on old-age pensions does not seem to affect their risk of poverty. There is no statistically significant relationship, therefore, between expenditure on old-age pensions and the proportion of the elderly with poverty levels of income. This is as valid for EU-15 countries and NMSs considered separately as for all 29 countries taken together.

The implication is that the features of pension systems in both groups of country merit detailed study from this perspective. This includes examining the distribution of pensions within the different systems as well as the overall level of expenditure. It also includes taking account of other social expenditure on the elderly as well as pensions, such as the provision of long-term care, in addition to other factors not related to the social protection system as such, such as the structure of households and the existence of other sources of income apart from public pensions.

### 5.10c Relationship between relative poverty rate of elderly and social expenditures for elderly



Source: NewCronos Database

Note: HU – Hungarian data from TARKI, HU1 – Hungarian data from Eurostat

Poverty rates of elderly are from year 2001. Exceptions are Malta (2000), Latvia (2002), Slovakia (2003). Data on social expenditures for elderly are from 2000. Cyprus and candidate countries are missing due to lack of data.

## Results of multivariate analysis

### INEQUALITY AND POVERTY IN THE ENLARGED EU: CLUSTERS OF WEALTH, POVERTY AND SOCIAL EXPENDITURE

As a summary to the above analysis, Table 5.1 provides an overview of the main findings. It indicates that, in broad terms, countries can be grouped in terms of two dimensions. The first is GDP per head, which reflects the level of economic development. Three country groups can be distinguished, a middle one in which GDP per head in PPS terms lies between 60% and 100% of the EU-25 average, consisting of the Czech Republic, Greece, Slovenia, Portugal, Malta, Cyprus, Spain, an upper one, consisting of all the other EU-15 countries, in which the level is above the EU-15 average, and a lower one, comprising all the other new Member States and the candidate countries. While the three southern EU-15 countries listed belong to the middle group in terms of GDP per head, they are included along with other EU-15 Member States below in order to retain the distinction between old and new parts of the Union, which is informative in itself.

The other dimension is the degree of inequality. Although the Gini coefficient was used above, the two alternative measures show much the same ranking of countries and since the ratio of the top to the bottom quintile enables the countries to be split into three well-defined groups, this is used here. Countries are, therefore, termed “UNEQUAL” if this ratio is 5.0 or higher, “MODerately EQUAL” if it is between 4.0 and 4.9 and “EQUAL” if it is below 3.9.

This gives the following country groupings:

- EU-15 Member States with a relatively equal income distribution: Austria, Denmark, France, Finland, Luxembourg and Sweden
- EU-15 Member States with moderate income inequality: Belgium, Germany, Ireland, Italy and the Netherlands
- EU-15 Member States with a relatively high degree of inequality: Greece, Portugal, Spain and the UK.
- New Member States with relatively equal income distributions: the Czech Republic and Slovenia.
- New Member States with moderate income inequality: Cyprus, Hungary, Malta, Poland and Lithuania.
- New Member States with a relatively high degree of inequality: Latvia, Estonia and Slovakia.

There are inevitably some borderline cases, such as Lithuania, which could be shifted to the group below. The candidate countries are divided between the groups, Bulgaria being included in the most equal group, Romania and Croatia in the moderately equal one and Turkey in the unequal one.

A number of features emerge from a comparison of new and old Member States. As compared with the latter, therefore, new Member States are characterised in general by:

- much lower GDP per head, even in PPS terms;
- significantly lower rates of relative poverty among the elderly.

There are, in general no significant differences between old and new Member States in terms of:

- the degree of overall inequality in income distribution, regardless of the measure used (the Gini coefficient or S80/S20);

- the rate of relative poverty among the population as a whole; the risk of poverty among children.

Among the candidate countries, Turkey has much the highest degree of inequality and the highest risk of poverty both among the total population and among children of all the 29 countries.

Overall expenditure and social protection is higher in relation to GDP in the EU-15 countries than in the new Member States and higher in the latter than in Bulgaria and Turkey.

In addition higher levels of GDP per head tend to be associated with less inequality of income in both old and new Member States. Equally, higher GDP per head and lower inequality are combined with a lower overall risk of poverty among both the total population and children. In both old and new Member States, there is a negative relationship between inequality and social expenditure – the higher the latter, the lower the former.

### **THE RELATIVE IMPORTANCE OF FACTORS UNDERLYING INEQUALITY AND RELATIVE POVERTY**

The analysis above was limited to examining the relationship between relative poverty or inequality and possible contributory factors considered one at a time. Here, the combined effect of these factors is examined, specifically focusing on GDP per head, the openness of the economy, expenditure on social expenditure and the employment rate. The influence of whether a country is a new or old Member State is also taken into account. The focus is, first, on the total population and, secondly, on children and the elderly.

### **Overall inequality and relative poverty**

The (OLS) models used here to analyse differences in income inequality and poverty across countries in the enlarged EU include the variables described in previous sections. The same models are applied to the Gini index, the S80/S20 quintile ratio and the relative poverty rate.

All models include four explanatory variables: GDP per head in PPS as a percentage of the EU-25 average, an index of economic openness (defined above) which varies from 0 to 100, social protection expenditure as a percentage of GDP to represent policy effects and the overall employment rate to represent structural effects. In addition, whether the country is a new Member States or not is taken into account by the inclusion of a dummy variable (with a value of 1 if it is and 0 if it is not). Cyprus is excluded from the analysis since there are no data on social expenditure, as are the four candidate countries.

Some caution is required when interpreting the results of the regression analysis (presented in Table 5.2). This is partly because of the small number of observations, partly because, though the indicators of inequality and poverty are defined in the same way, they are not necessarily fully comparable in all cases. Differences in survey design,

the quality of data collection and the extent of non-response may have a significant effect. The presence of new Member States in the analysis accentuates these problems, due in particular, to the lack of harmonisation in data collection. These problems will only be lessened once the first wave of the new EU-SILC is published.

It might be expected that many of the explanatory variables are interrelated, which would make it difficult to distinguish the specific effect of individual factors (ie because of the problem of multicollinearity). However, all statistical tests fail to support this expectation.

Because of the above-mentioned considerations, the interpretation of the results below is based on significance levels and standardised regression coefficients instead of unstandardised ones.<sup>42</sup>

The main conclusions of the regression analysis in respect of the two indicators of inequality and relative poverty for total population can be summarised as follows:

- The models fit reasonably well, but the R-square values indicate that there are important variables omitted in all the equations. All coefficients, except that for the employment rate, are statistically significant even at a 1% level.
- The multiple regression analysis confirms the conclusion reached above that the Gini coefficient and the S80/S20 quintile ratio give the same picture as regards income inequality. The two models give very similar results, in respect of both model fit and the values of standardised coefficients.
- Whether a country is a new or old Member State seems to be the most important factor underlying cross-country differences in income inequality and relative poverty. Other factors being equal, a country being an NMS instead of part of the EU-15 is likely, on average, to mean a lower degree of income inequality and a lower rate of relative poverty.
- GDP per head in PPS is also an important factor explaining differences in inequality and poverty between the countries, a higher level being associated with lower values of the latter two indicators.
- The other economic factor, the openness of the economy, is not statistically significant in any of the models, which is in line with the result of the bivariate analysis above. Increased globalisation, therefore, seems to have no systematic effect on inequality or the risk of poverty, at least at this level of analysis (it remains open if

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<sup>42</sup> Standardised regression coefficients, in addition to showing the direction and the scale of effects, also enable the relative scale of effects to be compared independently of the unit of measurement of the variables concerned. The higher the value of a coefficient, the larger the estimated effect of the variable in question on the dependent variable.

such an effect would be detected if changes over time were considered instead of comparing countries in a given year).).

- The structural variable included, the employment rate, also does not appear to have a statistically significant effect on income inequality or relative poverty, though the effect is slightly stronger in relation to the latter.<sup>43</sup>
- Social expenditure has a significantly negative effect on income inequality and poverty, the higher its level the lower the latter tend to be.

### Age-specific poverty

The (OLS) regression model used to explain cross-country differences in the risk of poverty among children is the same as described earlier (Equation 2 above), though the overall poverty rate was included in addition to the other factors. Accordingly, this model attempts to capture the factors, which underlie the deviation of the child poverty rate from the overall rate. Results of the estimation are presented in Table 5.3.

The model fits the data relatively well (as indicated by the R-square values). As might be expected, the overall poverty rate is the most important explanatory variable influencing the relative poverty rate of children, implying that the lower the overall poverty rate, the lower the rate among children. The model also indicates that the deviation of the poverty rate for children from the overall poverty rate is inversely related to differences in expenditure on family benefits. In other words, the higher the expenditure, the lower the risk of poverty among children tends to be. On the other hand, it is perhaps surprising that, if all other variable in the model are held constant, GDP per head is positively rather than negatively related to the rate of poverty.

The structural factors included, however, the employment rate of women and the share of children in total population, do not seem, in themselves, to affect cross-country differences in poverty.

The positive relationship between GDP per head and child poverty may be unexpected. It should be emphasised, however, that this result arises from multivariate analysis in which the overall poverty rate and expenditure on family benefits are also included. The effect of GDP per head which is being measured, therefore, is over and above the effect of these two factors – in other words, given expenditure on family benefits (and the average effect of this on child poverty) and given the overall poverty rate, the risk of poverty among children is greater in countries with relatively high levels of GDP per head. This association may arise for a number of reasons, for example, as a result of a given level of social expenditure on the family having less of an effect on child poverty relative to

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<sup>43</sup> The coefficient of the employment rate  $v$  in the poverty model was significant at the 10% level but not at the 5% level, the test of significant used here.

overall poverty in a more prosperous country than a less prosperous one.<sup>44</sup> Whatever the reason, it demonstrates that there is no simple relationship between the level of prosperity in a country and the incidence of child poverty.

The fact of a country being a new Member State has a positive effect on the risk of poverty among children – ie it tends to increase the risk – but not one that is statistically significant (at least at the 5% level, though it is at the 10% level).

Family benefits, therefore, seem to be the only factor of those considered which is significant in explaining differences across countries in the deviation of the rate of relative child poverty from the rate for the population as a whole.

In the case of relative poverty among the elderly, the model used is described in Equation 3 above. Results are shown in Table 4.

The model fit is much less good than for child poverty. The variables included explain about half of the variation in the risk of old-age poverty across EU-countries. Whether a country is a new or old Member State is the only variable which has a statistically effect (at the 5% level). In this case, the negative coefficient indicates that being an NMS rather than an EU-15 country tends to reduce the risk of poverty among those aged 65 or more. By contrast, the level of GDP per head, the share of the elderly in total population, the average age of exit from the labour force and the level of expenditure on pensions seem not to affect country differences in the rate of relative poverty of this age group relative to the overall rate.

### **Inequalities, economic well-being and values**

It was concluded above that six different groups of countries can be distinguished in terms of relative levels of prosperity and poverty. These groups are formed by a combination of political variables (old and new Member States) and variables summarising social welfare arrangements. What is also interesting to analyse, however, is the perception of income inequality and how people in these societies feel about the extent of exclusion and inequality. A wide range of variables could potentially be analysed here. However, the analysis is confined to measures of satisfaction with income, perception of exclusion and generalised trust.

Satisfaction with income might be reasonably assumed to bear a fairly strong relationship to the level of economic well-being in a given country. It might also be reasonably assumed that it is not only the level of economic well-being but how it is distributed that affects perceptions of income and income satisfaction. Should this be the case, the various GDP-inequality groupings might correspond to different levels of income

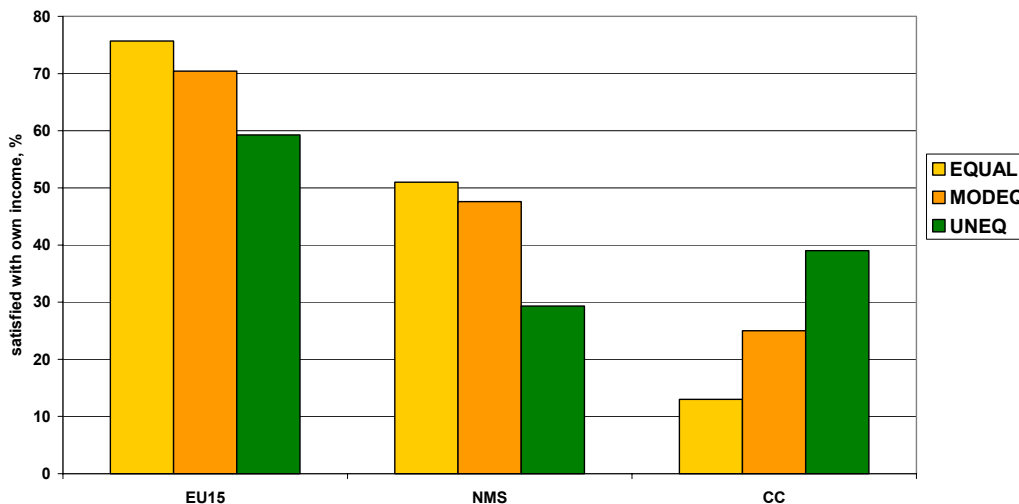
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<sup>44</sup> Alternatively specified models were also run. For example, when the overall poverty rate was excluded, the model fitted far less well, with the coefficient for expenditure on family benefits being the only one differing significantly from zero. The coefficient for GDP per head in this case was negative but not statistically significant.

satisfaction. Survey data from the European Foundation for Improvement in Living and Working Conditions in Dublin (2004a, 2004b) suggest that this indeed might be the case.

In Figure 5.11, the proportion of those answering that they are satisfied with their income is shown for the various country groupings. It seems that income satisfaction rises with GDP per head, and, at the same time, the more equal the distribution of income, the more widespread the satisfaction with income. Among the candidate countries, however, the reverse seems to hold. The share of those satisfied in Bulgaria is just over 10%, while in Romania, it is 25% and in Turkey, almost 40%. In addition, the relative satisfaction of the richest and the poorest seems to correspond with the dispersion in income satisfaction. While six out of ten of the richest people in Bulgaria are satisfied with their income, only two of the poorest report being satisfied. (European Foundation, 2004a:52) The 'satisfaction gap' measured this way is much narrower in countries where overall satisfaction is higher (i.e. in the more prosperous countries in general, see Figure 5.12).

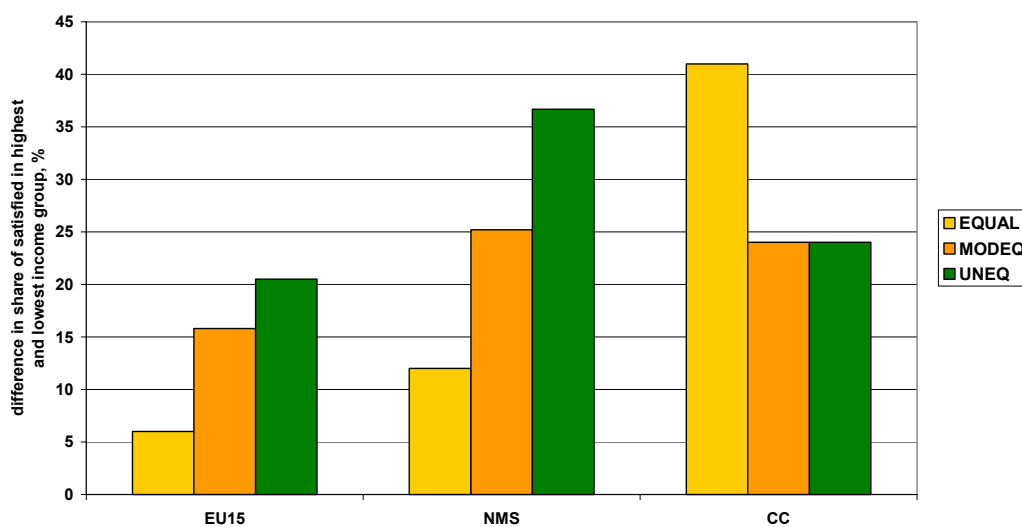
5.11. Percent satisfied



Source: European Foundation 2004a, pp 24-25



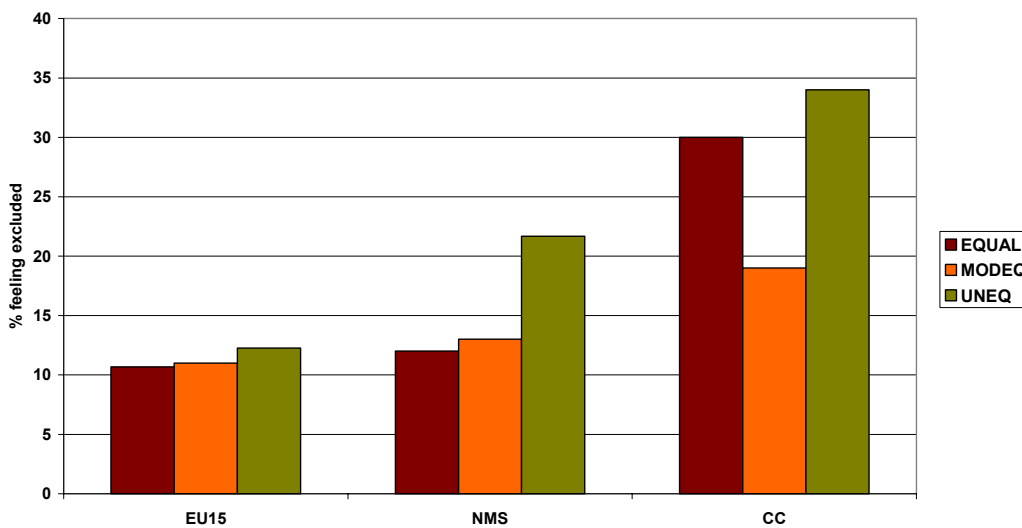
## 5.12. Variance of satisfaction



Source: European Foundation 2004a, 53. p.

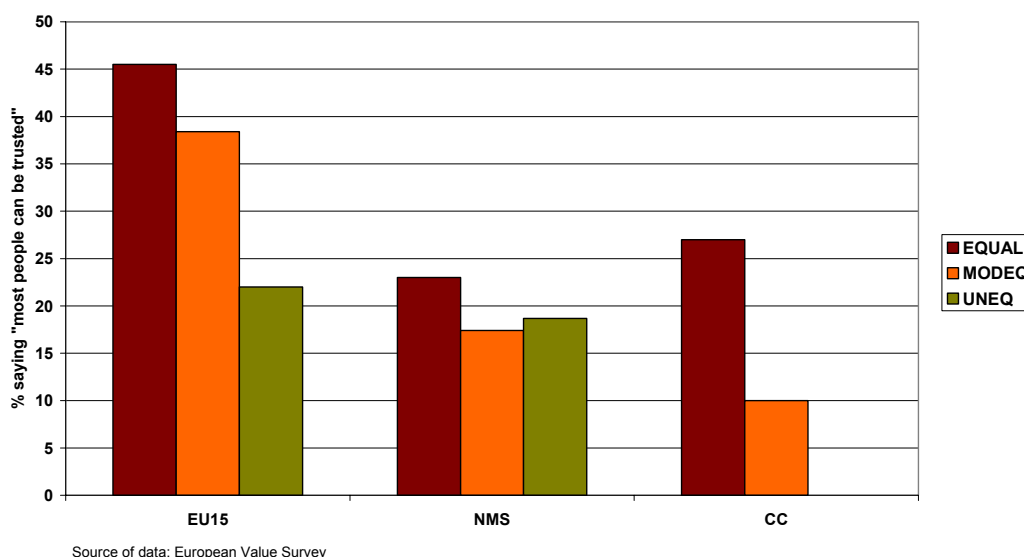
The same survey indicates that the relative number who perceive themselves to be excluded is fairly low (slightly over 10%) throughout the EU, except in the more unequal countries (Figure 5.13). In both Bulgaria and Turkey, the feeling of exclusion is significantly higher (around 30% or more of the total surveyed).

## 5.13. Perceived exclusion



Source: European Foundation 2004b, pp 24

## 5.14. Generalized trust



Finally, it is also instructive to note that the level of generalised trust (often perceived as a good measure of social capital) is also higher in the more developed countries that have a more equal distribution of income. The strength of social capital is much lower in the new Member States in general (Figure 5.14). We can therefore conclude that there is a group of countries where not only the level of GDP per head is higher and the degree of inequality lower but also the level of social capital is stronger (mostly Scandinavian and Continental welfare states). Conversely, there is also a group of countries where GDP per head is relatively low, the degree of inequality higher and, the level of social capital much weaker. Whether or not the direction of causation is from GDP per head to social capital or the reverse, remains to be analysed.

## CONCLUSIONS

The above analysis indicates that a range of factors seem to affect the prevailing rate of relative poverty in a country, in the sense of the proportion of the population, or of particular sections of the population, with income below 60% of the national average (as measured by the median). These include economic factors, in the form of the level of GDP per head, which is a measure of a country's overall prosperity, structural factors, in the form of the proportion of working-age population in employment (ie the employment rate), especially as regards women, and social policy factors, in the form of the level of expenditure on social benefits. All of these seem to have the effect of reducing the incidence of relative poverty, in the sense that the higher the level of GDP per head, employment and social expenditure, the less the incidence tends to be. On the other hand, demographic factors, in the form of the relative number of children or older people in the population, do not seem to affect the incidence of poverty among these.

However, there is a need for caution when drawing policy conclusions from the above findings. In particular, it is important to emphasise that these results arise from cross-

sectional analysis of countries which, though similar in many respects, have many other features which are different, such as their economic characteristics (apart from GDP per head), their institutional systems, including their social welfare arrangements, their social and cultural heritage and so on, all of which can affect the rate of relative poverty. Indeed, the analysis itself indicates that the factors, such as these, which are not taken into account have at least as much influence on the relative numbers with low incomes as those which are considered. It cannot be concluded, therefore, that, for example, an increase in GDP per head or employment in a given country would have the same effect on the poverty rate as elsewhere, let alone the effect indicated by the above analysis. Nor does the existence of a relationship necessarily imply a particular direction of causation, so that a high level of GDP per head might conceivably be as much a result of a low rate of relative poverty as contributing to this, though it is hard to argue that a high level of social expenditure is a result rather than a cause of a low poverty rate.

Nevertheless, the findings do have policy implications. They indicate, in particular, that high GDP per head generally helps to alleviate poverty, though a low rate of poverty does not automatically follow from this, in the sense that other factors are important. They also indicate that social expenditure plays a major role in reducing the incidence of low incomes, which is not unexpected, but, at the same time, they suggest that the way outlays are spent is also important. This is particularly the case as regards the relief of old-age poverty, where the amount spent by governments on pensions does not seem to affect the relative number of pensioners with income below the poverty line, which implies that the distribution of pensions between those in retirement may be at least as important. It also raises a general question about the nature of pension systems in different countries and the principles on which they are built, which may not necessarily give priority to ensuring that no-one in retirement falls below the poverty line.

## Chapter 5 tables

**Table 5.1 Summary table: characteristics of various affluence-inequality regimes within the EU15 and Candidate countries (unweighted average)**

CATEGORY	COUNTRIES	GDP PER CAPITA PPS	GINI-COEFFICIENT	S80/S20	OVERALL AT RISK OF POVERTY RATE	AT RISK OF POVERTY RATE - CHILDREN	AT RISK OF POVERTY RATE - ELDERLY	SOCIAL PROTECTION EXPENDITURES/GDP (%)
UNEQ-NMS	LV, EE, SK	42	33	5,7	18	23	14	16
MODEQ-NMS	CY, MT, HU, PL, LT	60	29	4,5	15	19	20	18
EQUAL-NMS	CZ, SI	68	24	3,3	10	11	13	22
UNEQ-EU15	GR, PT, SP, UK	89	35	5,8	20	24	28	23
MODEQ-EU15	IT, DE, BE, NL, IE	117	28	4,3	16	20	22	24
EQUAL-EU15	FR, FI, SW, DK, AT, LU	136	25	3,6	11	12	17	26
TR		30	46	10,8	25	32	23	13
RO,CR	RO, CR	33	30	4,6	18	19	25	20
BG	BG	27	26	3,8	16	19	15	14

Table 5.2 Linear regression models for cross-country differences in income inequality and poverty, EU-24\*

	Gini index		S80/S20		Income poverty	
	Regr. coeff. (st. error)	Standardised coeff.	Regr. coeff. (st. error)	Standardised coeff.	Regr. coeff. (st. error)	Standardised coeff.
GDP per capita, PPS	-0,071 (0,026)	-0,722	-0,019 (0,006)	-0,795	-0,058 (0,024)	-0,600
Globalisation index	-0,067 (0,114)	-0,135	-0,016 (0,026)	-0,132	-0,074 (0,107)	-0,152
Social expenditures (% of GDP)	-0,595 (0,169)	-0,731	-0,132 (0,038)	-0,683	-0,556 (0,154)	-0,698
Employment rate	-0,039 (0,132)	-0,063	-0,016 (0,029)	-0,110	-0,154 (0,123)	-0,254
EU-member status (0-OMS, 1-NMS)	-8,135 (2,114)	-0,983	-1,999 (0,473)	-1,016	-8,737 (1,971)	-1,077
Constant	64,560 (8,603)		13,397 (1,925)		56,568 (8,021)	
Nr. of observations	24		24		24	
R-square	0,63		0,67		0,66	

\*Cyprus is omitted from the analysis, since there are no information on family benefits expenditures.

Notes. Regression coefficients are significant at 1 percent, respective 5 percent level.

**Table 5.3 Linear regression models for cross-country differences in child poverty, EU-24\***

	Regression coeff. (st. error)	Standardised coeff.
Overall poverty rate	1,356 (0,226)	0,835
Share of population aged 0–14	–0,027 (0,391)	–0,008
GDP per capita, PPS	<u>0,069</u> (0,031)	0,442
Family benefit expenditures (% of GDP)	<u>–2,540</u> (1,020)	–0,320
Female employment rate	0,022 (0,087)	0,032
EU-member status	4,865 (2,562)	0,369
Constant	–5,940 (7,947)	–
Number of observations	24	
R-square	0,87	

*\*Cyprus is omitted from the analysis, since there are no information on family benefits expenditures.*

**Table 5.4 Linear regression models for cross-country differences in old-age poverty, EU-24\***

	<b>Regression coeff. (st. error)</b>	<b>Standardised coeff.</b>
Overall poverty rate	0,561 (0,494)	0,244
Share of population aged 65+	-0,710 (1,307)	-0,142
GDP per capita, PPS	-0,097 (0,085)	-0,436
Old-age expenditures (% of GDP)	-1,058 (0,954)	-0,270
Average age at exit from Im	0,091 (0,978)	0,020
EU-member status	<u>-17,715</u> (8,344)	-0,950
Constant	57,831 (79,296)	-
Number of observations	24	
R-square	0,52	

*\*Cyprus is omitted from the analysis, since there are no information on family benefits expenditures.*

## CHAPTER 6 THE EFFECT OF TAXES AND BENEFITS ON HOUSEHOLD INCOME<sup>45</sup>

### Introduction

One of the main ways in which governments can influence social inclusion, and income poverty and income distribution in particular, is through the system of cash benefits and personal taxes. That there is a relationship between the scale of spending on benefits and the outcomes in terms of poverty and inequality is demonstrated in Chapter 5. However it is also shown that the scale of spending is not the only relevant factor – some countries seem to achieve more with moderate levels of spending than others. So in this chapter, the role of both the benefit and tax system is explored in more detail, by examining their direct impact on household incomes at the micro rather than the macro level.

As well as overall spending, the scale of aggregate benefits in relation to gross household income varies across countries. It ranges from 15–16% in the Netherlands and the UK to 26–27% in France and Austria (Figure 6.1). Income taxes, including employee and self-employed social contributions, as noted above, vary more in relation to gross income (ie average tax burdens), ranging from 39% in Denmark and 33% in Sweden to 17% in Ireland and 18% in Spain and Portugal.

#### The taxes included in the analysis

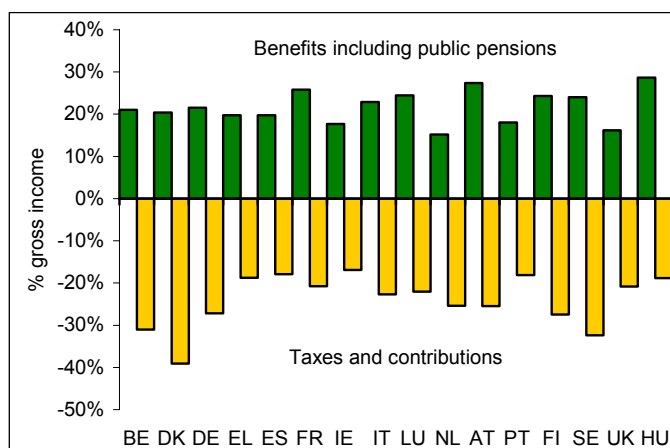
Throughout the analysis, “taxes” include income taxes and employee and self-employed social contributions together with other taxes customarily included in the concept of disposable household income, such as Council tax in the UK and Church taxes in Finland. Locally-administered income taxes are included along with national taxes. In Figure 6.1 “benefits” include all the main cash benefits and public pensions received by households. These definitions are discussed in more detail below. The analysis is based largely on the EUROMOD micro-simulation model, which is explained briefly in Annex 2. This covers the 15 countries of the “old” EU.

Of course, the importance of taxes and benefits varies across the income distribution and does so to varying extents in different countries (see Figures 6.2 and 6.3 which show the effects on the bottom and top quintiles – i.e. the bottom and top 20% – of the distribution of household disposable incomes). For the lowest income groups, social benefits are not only more important than for those further up the income scale, as would be expected, but are also more variable across countries. For example, among the 20% of households with the lowest incomes in each country, benefits make up between 85% of income (in Ireland) and 44% of income in Greece.

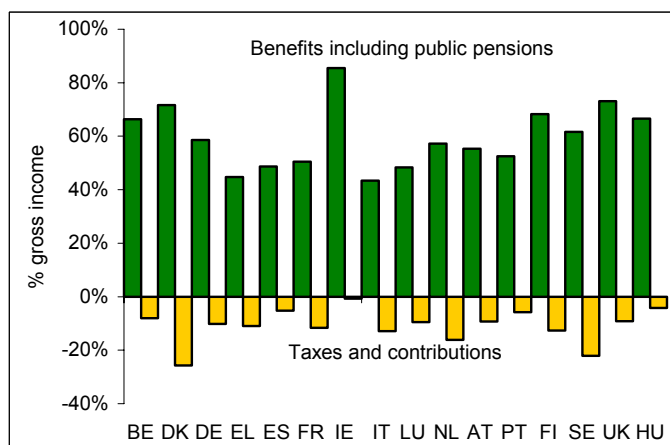
<sup>45</sup> by Holly Sutherland and Horacio Levy, Institute for Social and Economic Research, University of Essex



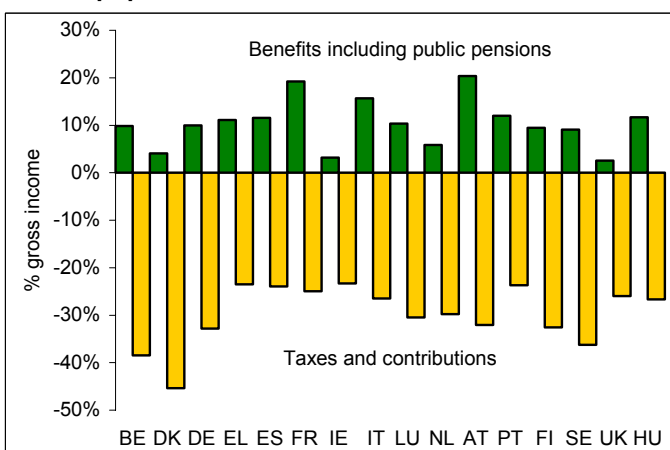
### 6.1: Taxes and benefits as a proportion of gross incomes 2001: all households



### 6.2: Taxes and benefits as a proportion of gross incomes 2001: bottom quintile



### 6.3: Taxes and benefits as a proportion of gross incomes 2001: top quintile



Source: EUROMOD

The tax levied on this group is relatively small but not non-existent. In Denmark and Sweden, tax amounts to over 20% of the gross income of the poorest 20% in each of these countries. At the other end of the scale, as would be expected, taxes are more important for the 20% of households with the highest incomes. In this case, however, the variation across countries in the size of the tax burden is similar to that for the population as a whole – ranging from 40–45% in Denmark and Sweden to around 25% in Ireland and Portugal. Even for this group, a significant share of income is made up of benefits in a number of countries – just over 20% in Austria and just under 10% in France. At the other extreme, they account for only 2–3% of gross income of the top 20% of income recipients in the UK and Ireland.

There are a number of issues underlying this general picture that need to be considered before any judgement can be made about the relative effects and effectiveness of national tax and benefit systems in reducing inequality and poverty, and in promoting social inclusion. These include:

- The scope of the taxes and benefits included: some countries rely more heavily

than others on types of tax and benefit not included in this analysis

- The distribution of original incomes
- The treatment of pension incomes
- The position of children and the elderly, groups which in many countries are particularly vulnerable to the risk of poverty and exclusion
- The distinction between benefits and tax concessions and the interaction of taxes and benefits
- Individuals, household composition and household income “packages”.

These are considered in turn below and the chapter concludes with a discussion of how the changes in taxes and benefits which have occurred over the period since 2001 might have affected poverty and income distribution.

### Scope

First of all, it should be made clear that the scope of the analysis is limited in a way that inevitably affects comparability across countries. While income taxes and social contributions paid by employees and the self-employed are included, other taxes paid by households (especially indirect taxes on expenditure), or on behalf of those living in households (especially employer social contributions) or which fall at least to some extent on households (all other taxes) are excluded. Since some countries rely more heavily than others on these forms of tax in relation to those included in the analysis and since the taxes in question inevitably differ in their incidence between households with different levels of income (if in a way which in many cases is difficult to identify), the results of the analysis do not necessarily reflect the full effect of taxes on income distribution across countries. .

Similarly, although all cash benefits are included, no account is taken of non-cash (or “in-kind”) benefits which equally affect household income – or more precisely the purchasing power and living standards which a given level of income represents – and which vary markedly in their importance between countries. As noted in Part 1 of the report and examined in more detail in Part 4, not including them tends to understate the effect of social benefits on households and can give a misleading impression of the relative scale of social support received by those on low incomes in different countries. Their exclusion also highlights the limitations of cash income as a measure of relative living standards which can in practice be raised significantly in some countries by the availability of free or low-costs services and facilities which elsewhere can absorb a sizable share of income.

Moreover, the availability or otherwise of benefits in kind, especially in the form of care facilities and support services, can have a pronounced effect on life styles and the way that people use their time. Access to free or subsidised childcare, in particular, widens the

choice open to people of how to use their time and increases their ability both to choose between the pursuit of a working career and other activities and to determine how much time to spend working.

The scope of the analysis presented here is determined to a large extent by the availability of data and the current capabilities of the EUROMOD model. Although it may be possible in the future to extend the model to incorporate some of the forms of taxes and benefits that are now excluded, there are major conceptual and practical issues to be overcome. These relate, in particular, to the incidence of indirect taxes across different types of household and the effective distribution of benefits in kind between them, about which only a limited amount is known at present.

At the same time, irrespective of its limitations, one key advantage of the existing scope of the model is that it is in line with the measures of household disposable income used in the construction of social indicators.

### **Original income**

Given that large parts of the systems of both cash benefits and taxes on income are dependent either on the level of income itself or on labour force status (and hence, indirectly, on access to income) the operation and effects of the tax-benefit system are highly dependent on the distribution of original income, which can vary markedly between countries. In order to achieve a given inequality or poverty target, more redistribution is needed in countries where the distribution of original income (ie income from employment, property, financial assets and so on is more unequal, and the income of lower income groups before transfers smaller, than in those where original income is less unevenly distributed.

### **The treatment of pension incomes**

Public pensions are defined as part of benefits in the analysis here. In many EU-15 countries, public pensions make up a large part of these benefits. In other countries a significant part of pension income comes from private sources, albeit mostly regulated and subsidised in some way by the State. Private pensions are included as part of original income and there is an obvious case for separating these from other income. It is difficult, however, both conceptually and in practice in many cases given the data available, to distinguish between income from private pensions and that from other sources, savings in particular. Moreover, if private pensions that effectively substitute for public pensions were to be included in benefits, then to be consistent the contributions to private pension schemes, which are responsible for building them up, should also be included in taxes along with social contributions. This adds a further layer of difficulty since relatively little information is available on such contributions. It also raises a conceptual issue in terms of how far payments which are essentially discretionary or voluntary should be deducted when defining net or disposable income for present purposes,

To avoid these difficulties, it is possible to measure the effect of social benefits excluding public pensions (see Box for their definition).

### **The definition of public pensions**

In this analysis public pensions are defined as transfers received by those aged 65 and over which are either retirement pensions as such or benefits paid instead of these (invalidity benefits, survivors' benefits and so on) but excluding social assistance top-ups, which are therefore included in social benefits. There is also a case for excluding these as well from social benefits insofar as they are they are an effective substitute in some countries for pensions (in Ireland and the UK, especially, as noted later in the text). Their inclusion, therefore, tends to increase social benefits in these countries relative to others where public pensions are high enough to ensure that minimum levels of income are achieved without the need for means-tested top-ups. Early retirement pensions are also not counted as pensions and are included in social benefits, on the grounds that they are substitutes for unemployment benefits in some countries (see Immervoll et al., 2005.)

Another way of isolating the role of pensions is, from a lifecycle perspective, to examine the effects of taxes and benefits by household type, in the sense of distinguishing households containing children (defined here as those aged under 18) and households containing elderly people (aged 65 or more) from others.<sup>46</sup>

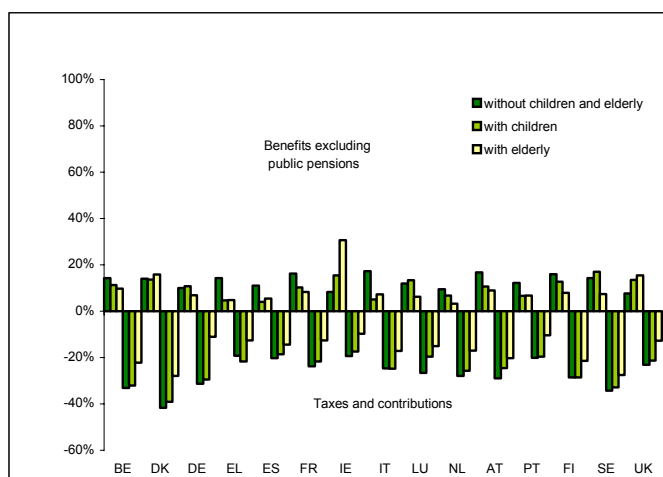
### **The effect of benefits and public pensions on income**

Once public pensions are excluded, the level of benefits is reduced in France and Austria relative to that in the three Nordic countries, in particular, though most especially relative to that in Ireland, where benefits account for a larger share of gross income than anywhere in the EU-15 (Figure 6.4). The biggest reduction, however, occurs in Italy where pensions make up a larger part of overall social transfers than elsewhere.

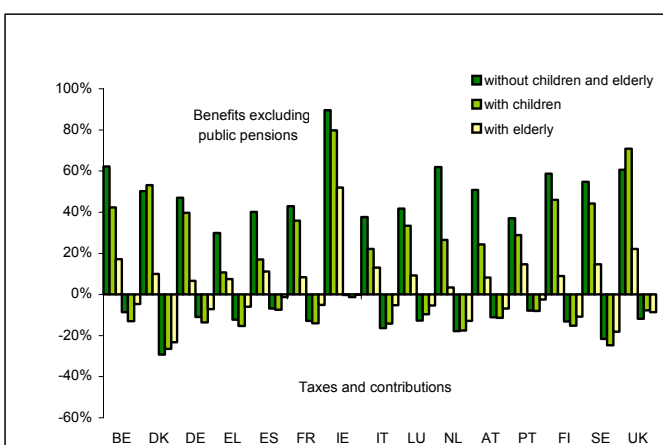
In Ireland, the share of income which comes from benefits is particularly large for the elderly, as it also is, to a lesser extent in the UK and Denmark. This is especially the case for those in the bottom 20% of income recipients, who in Ireland receive almost half their income from social transfers (Figure 6.5). A major reason for this is the relatively low level of public pensions which means that those not in receipt of a significant private pension have to fall back on means-tested benefits. This is also the case, though to a smaller extent, in the UK, where means-testing is used as in Ireland to a much greater extent than in other countries.

<sup>46</sup> These groups overlap where households contain both children and the elderly.

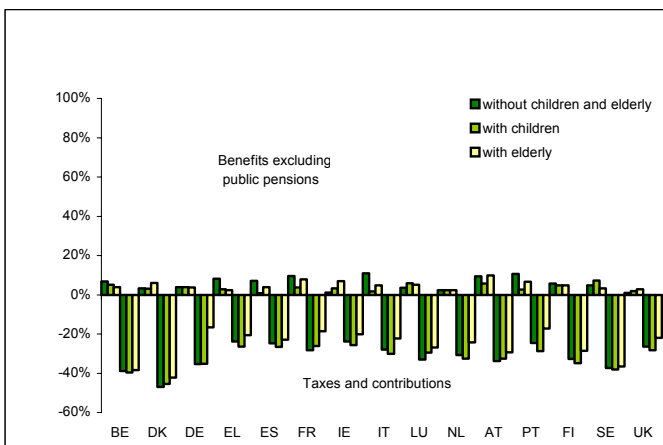
#### 6.4 Taxes and benefits (excluding public pensions) as a proportion of gross income, 2001



#### 6.5 Taxes and benefits (excluding public pensions) as a proportion of gross income, bottom quintile



#### 6.6 Taxes and benefits (excluding public pensions) as a proportion of gross income, top quintile



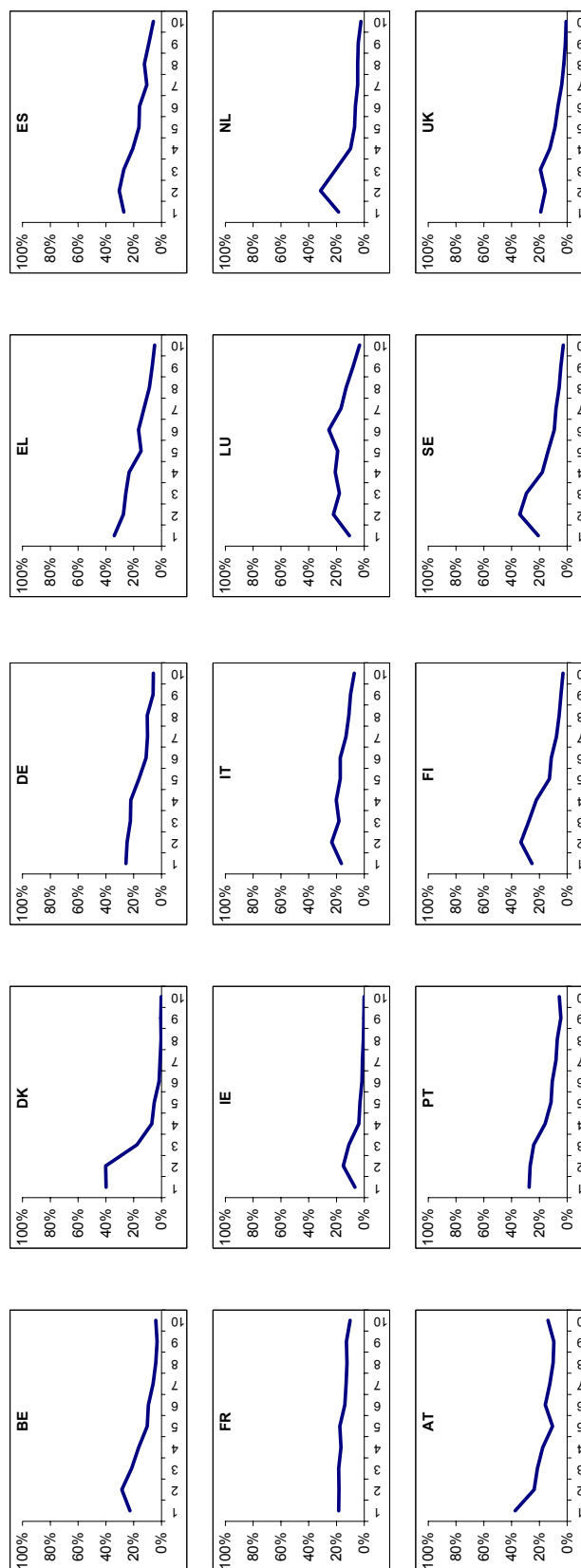
Source: EUROMOD

Such a policy is not confined to the elderly but applies generally, which might in part explain why social benefits, excluding pensions, represent a larger share of income of households as a whole at the bottom end of the income scale in these two countries, including those with children, than in other countries. It is also the case that in Ireland and the UK the share of original income – i.e. before taxes and benefits – on disposable income at the bottom quintile is lower than in most other countries in Europe.

A corollary of means-testing – and hence the targeting of benefits on those most in need – combined with the relatively wide dispersion of original income is that high-income households in Ireland and the UK, especially non-elderly households, receive little income in the form of benefits as compared with other countries, especially Austria and France, where benefits, even without pensions, make up almost 10% of the gross income of this group (Figure 6.6). As might be expected, in all EU-15 Member States, public pensions (as defined above) represent a larger proportion of gross income for households towards the bottom end of the income scale than for those further up. The extent to which this is the case, however, and the variation in

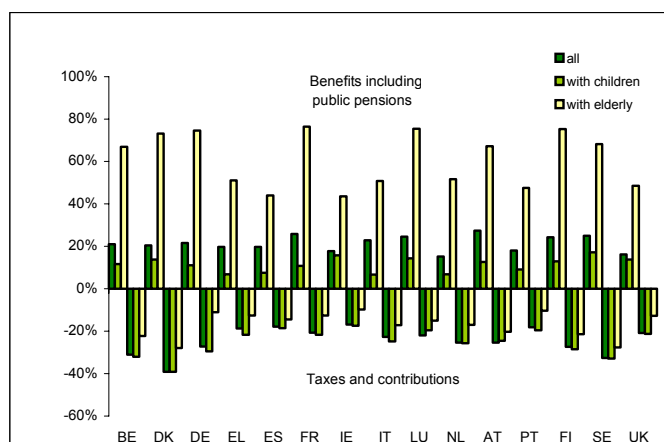
the importance of public pensions as a source of income differs markedly across countries (Figure 6.7). In Denmark, therefore, the bottom 20% of households receive around 40% of their gross income from public pensions, whereas those with income above the median receive very little of their income from this source. A similar difference in the distribution of pensions across income levels, if less extreme, is also evident for Finland and Sweden, as well as Ireland and the UK (in both of which the importance of pensions to low income households would be increased substantially if means-tested benefits were to be included, as noted above).

6.7 Public pension income as a proportion of gross income 2001, by decile of equivalised household disposable income



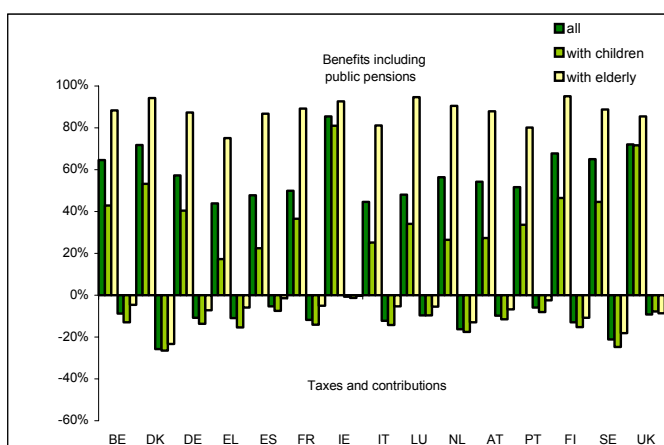
Source: EUROMOD

### 6.8 Taxes and benefits (including pensions) as a proportion of gross incomes 2001 by household type



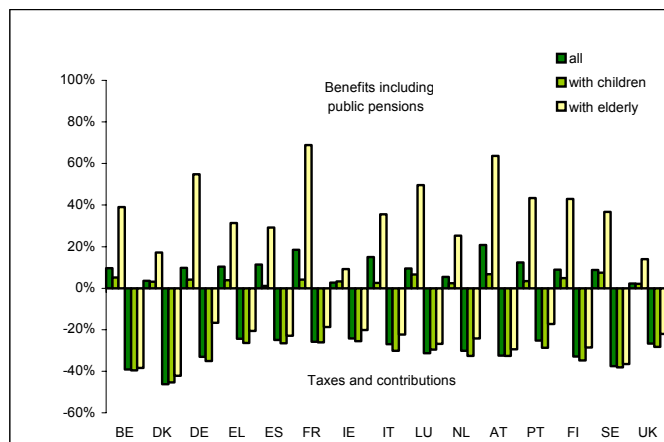
By contrast, in France and Italy, as well as Luxembourg, there is much less of a difference in the contribution of public pensions to household income at the top and bottom ends of the scale and those above the median receive only slightly less of their income from pensions than those below. These differences, of course, reflect counterpart differences in the nature of the pension system itself.

### 6.9 Taxes and benefits (including pensions) as a proportion of gross incomes 2001 by household type, bottom quintile



And Figures 6.8 to 6.10 show the effect on income of taxes and benefits by household type when pensions are included in benefits. As would be expected, public pensions are an extremely important source of income to households containing people of 65 and over in all Member States – social benefits including pensions accounting for over 60% of gross income in over half the EU-15 countries and almost 80% in Denmark, Germany, France, Luxembourg and Finland.

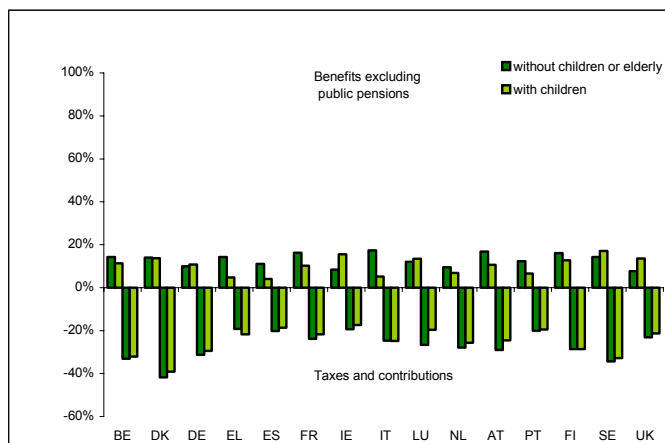
### 6.10 Taxes and benefits (including pensions) as a proportion of gross incomes 2001 by household type, bottom quintile



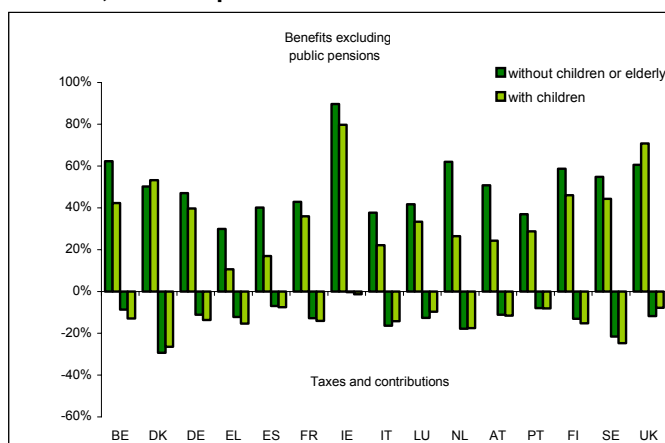
For low-income households, they are even more important, making up virtually all of the income of elderly households in the bottom quintile in most of the countries (Figure 6.9, which should be compared with Figure 6.5 in which pensions are excluded). Public pensions are, as would be expected, a much less important source of income of households at the

Source: EUROMOD

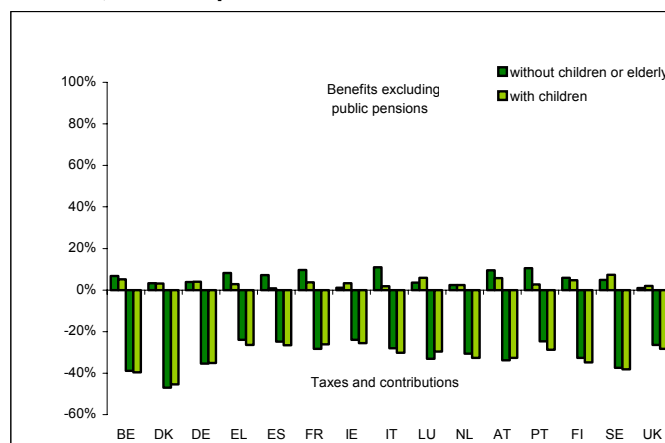
### 6.11 Taxes and benefits (excluding pensions) as a proportion of gross incomes 2001 by presence of children



### 6.12 Taxes and benefits (excluding pensions) as a proportion of gross incomes 2001 by presence of children, bottom quintile



### 6.13 Taxes and benefits (excluding pensions) as a proportion of gross incomes 2001 by presence of children, bottom quintile



Source: EUROMOD

upper end of the income scale, but, nevertheless, account for over 60% of income of elderly households in the top quintile in France and Austria and almost 60% in Germany. In Ireland and the UK, where private pensions are much more important, they make up less than 20% of the income of such households.

The inclusion or non-inclusion of public pensions in benefits makes comparatively little difference to the amounts of social transfer received by households with children, reflecting the fact that relatively few households contain both people of 65 and over and children, though there are more in the southern Member States than elsewhere, especially at the lower end of the income scale. Households with children in the bottom 20% of the income distribution receive significantly more in benefits than those further up the scale in most countries, and again especially in Ireland and the UK, though not in Greece, Spain, Italy and the Netherlands.

Nevertheless, in all countries, such households seem to receive less in benefits than all households taken together. This result, however, arises partly from the fact that the 'all households' figures include the (generally) low amounts of benefit, other than pensions,



received by the elderly. But, perhaps surprisingly, the result is not changed radically if the comparison is adjusted for this. Comparing households with children with those without children where no-one is 65 or over shows, perhaps surprisingly, that, with the exception of only a few countries, benefits make up a higher proportion of gross incomes of childless households than those with children (Figures 6.11 to 6.13). This seems to be the case right across the income distribution but it is especially true of low-income households, for which only Denmark and the UK are exceptions.

At first sight, this result conflicts with the fact that the scale of child-targeted support seems substantial in a number of countries, as demonstrated below<sup>47</sup>. There are three possible explanations for this apparent contradiction. First, although families with children generally receive family transfers in some form, the effect of these on income is outweighed, on average, by the tendency for them to receive less in other benefits (in particular, those relating to disability, unemployment and housing). This in itself partly reflects their higher levels of income than those with no children: parents are usually of prime wage-earning age and on average have higher gross incomes than those with no children<sup>48</sup>. So, given the generally progressive nature of tax-benefit systems (in the sense that benefits make up a larger proportion of the incomes of people on low income), it is to be expected that higher income households would receive a lower proportion of their income as benefits. Thirdly, some of the extra resources targeted on children may be received as tax concessions rather than benefits (the distinction is considered in more detail below).

However, taxes and contributions, whether within the bottom quintile or across all income groups, impose a similar burden on the gross income of households with children as on those without (Figures 6.11 and 6.12). So the most likely explanation for the combination of lower benefits and similar tax levels for households with children is that they tend to have higher original income on average. (This can apply within a quintile as well as across the distribution as a whole.)

That benefits account for a larger share of income in households with lower income levels than in those with higher levels is evident from Figure 6.14 above which shows the proportion of gross income in each decile, in terms of equivalised disposable income, due to benefits, (in this case, excluding pensions). The extent to which benefits vary between households with different levels of income differs markedly between countries. The equalising effects of benefits – in these cross-sectional terms – is greatest in Ireland and the UK, largely reflecting the importance of means-testing, and least in Greece, Spain, Italy and Austria.

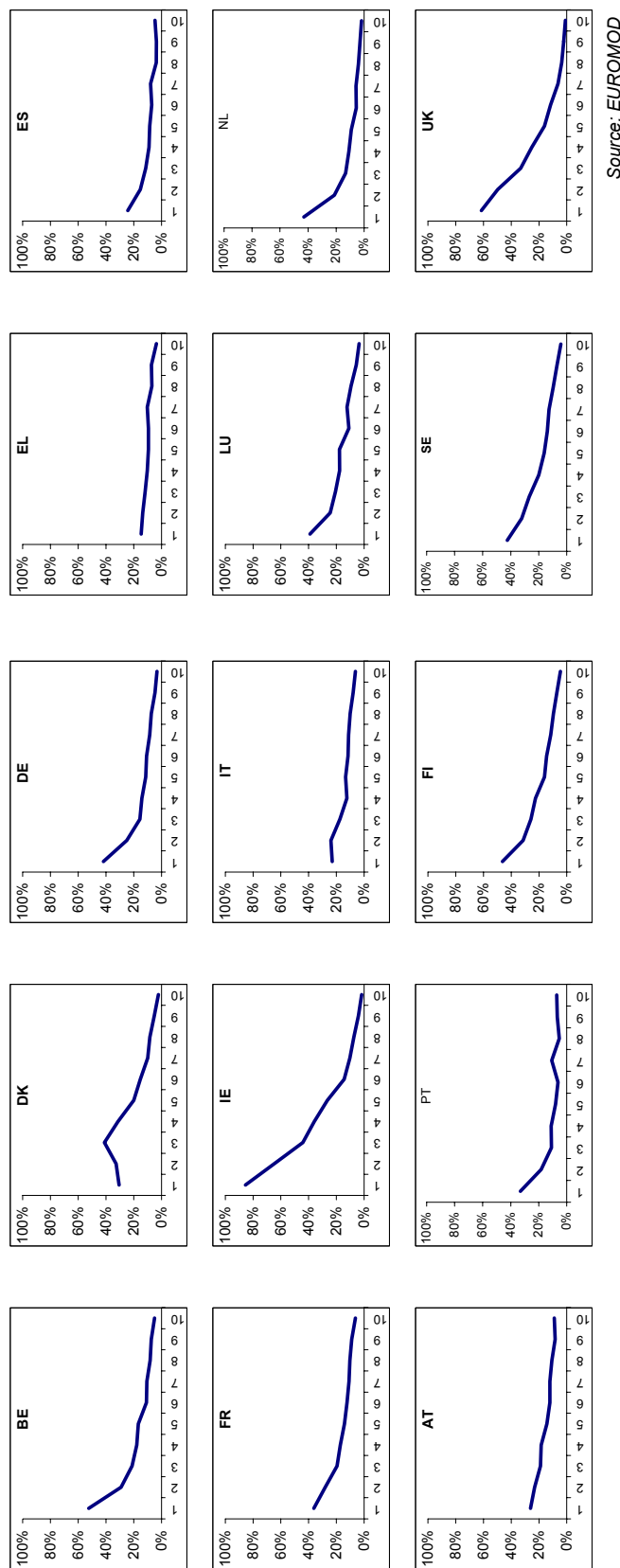
The inclusion of public pensions does not alter this general tendency but rather accentuates the inverse relationship between the contribution of benefits and income levels (Figure 6.15).

<sup>47</sup> See also Corak et al, 2005,

<sup>48</sup> This, it should be emphasised, is entirely consistent with households with children tending to have lower equivalised income than households without in the majority of EU-15 countries (see Part 2 above).

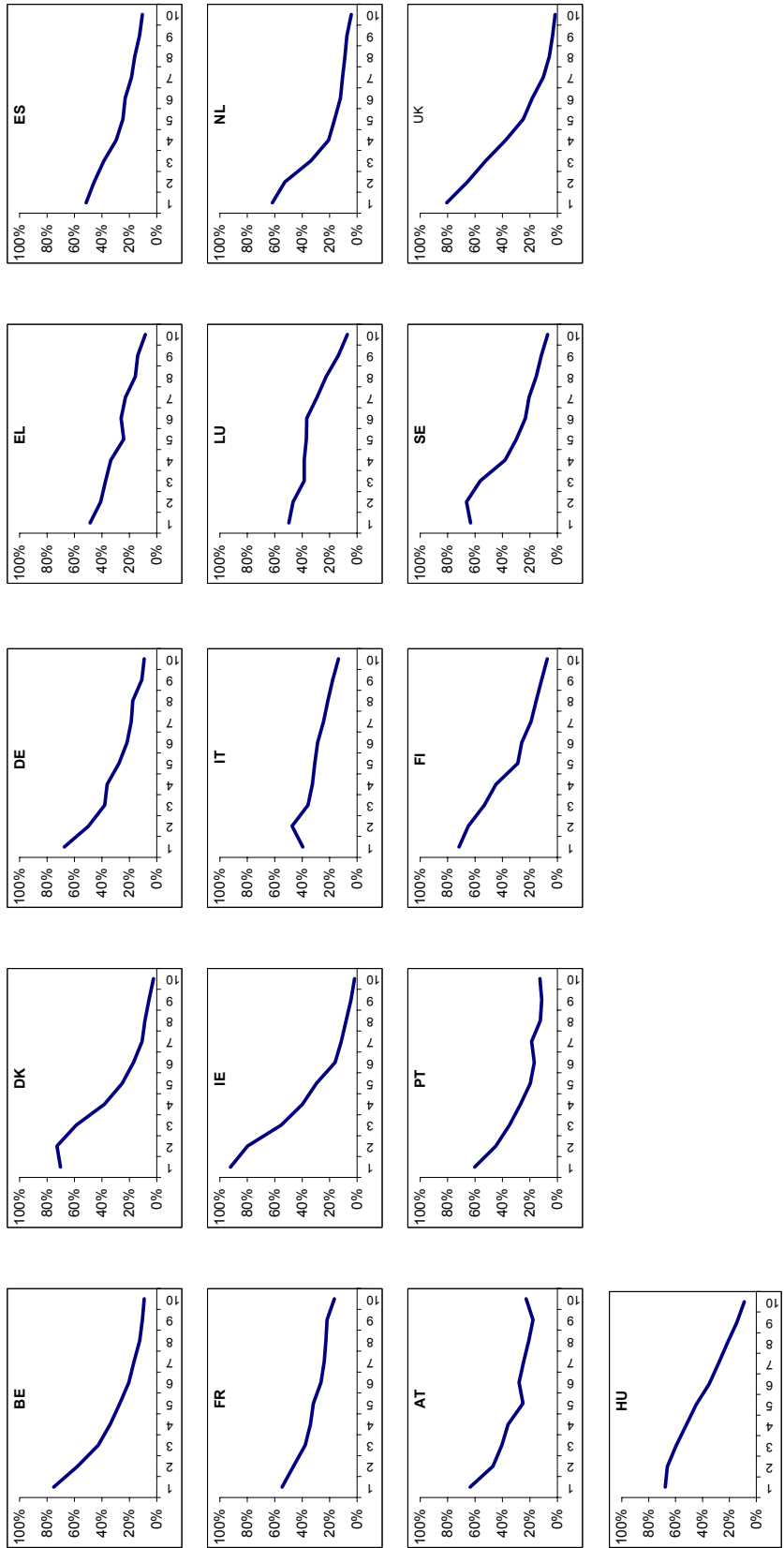
Taxes and contributions also vary with income, in this case positively so reinforcing the redistributive effect of benefits. Again the extent of this differs across countries, having least redistributive potential in Greece and most in Belgium, Germany and Austria (Figure 6.16).

### 6.14 Benefits (not including pensions) as a proportion of gross income 2001, by decile of equivalised household disposable income



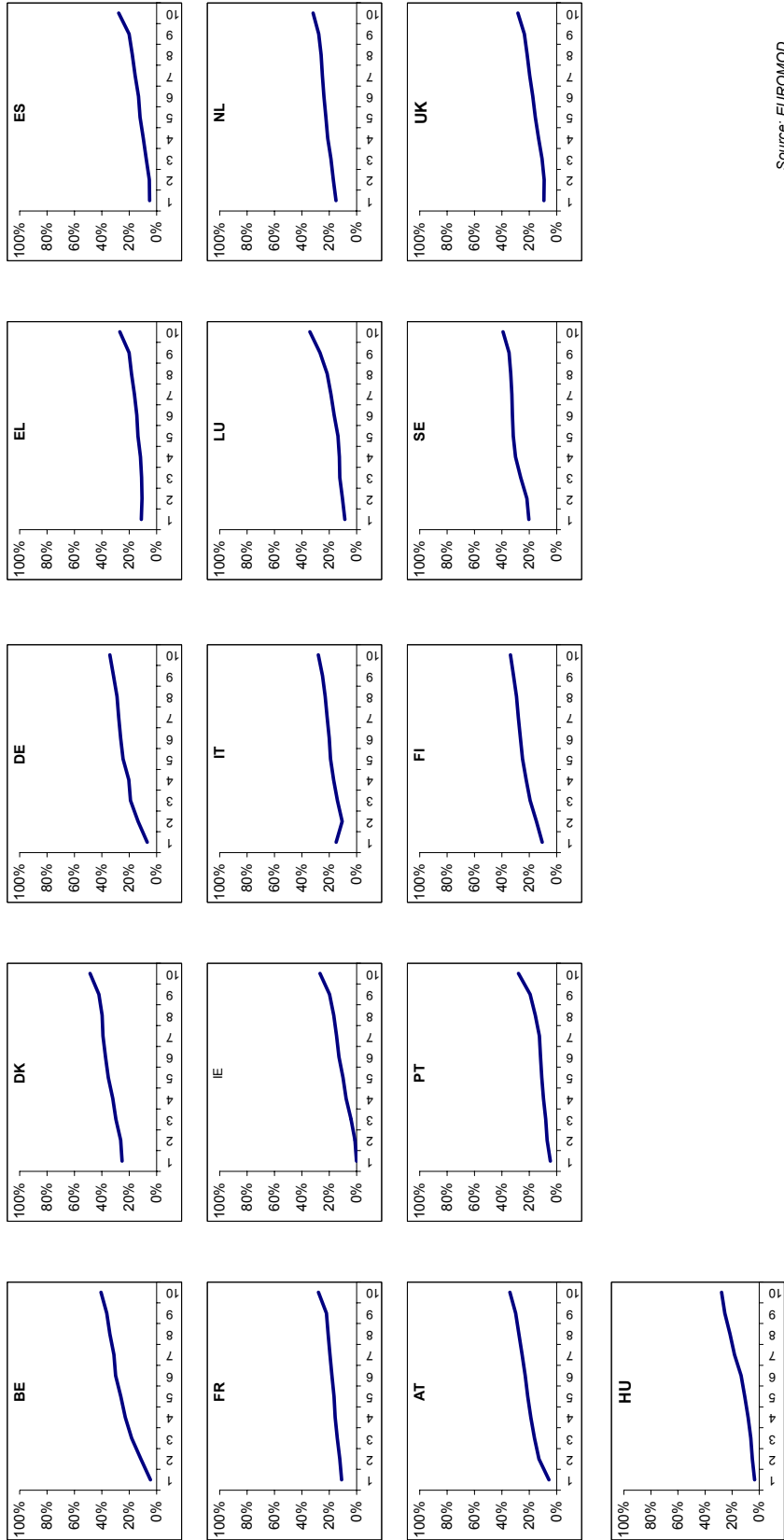
Source: EUROMOD

6.15 Benefits and public pensions as a proportion of gross income 2001, by decile of equivalised household disposable income



Source: EUROMOD

6.16 Income taxes and contributions as a percentage of gross income 2001, by decile of equivalised household disposable income



Source: EUROMOD

## Taxes and benefits: overlap and interaction

Taxes and benefits overlap and interact in a number of ways. Any assessment of the impact of social transfers on income needs to take explicit account of the effect of tax concessions which can be equivalent to that of cash benefits. A refundable child tax credit, therefore, can affect household income in precisely the same way as a universal child benefit. Moreover, it can be difficult, in practice, to distinguish consistently between the measures which are defined as benefits and those which are considered to be tax concessions. An example is the rebate of council tax in the UK which applies to low income households. In the present analysis, the rebate, known as council tax benefit, is treated as a benefit and the council tax itself is included in gross terms with other taxes. This has the effect of making the lowest income households appear to pay taxes, though in many cases they receive the same amount back as benefit. An alternative would have been to include the net amount raised from council tax as part of total taxes rather than the gross amount, in which case, the tax paid by the lowest income households would appear as zero. This, would therefore, have reduced both benefits and taxes relating to such households (i.e. the size of the bars in the charts would have been smaller).

This, of course, would not have altered the results presented here in terms of the net amount transferred to low income households in the UK. But it does illustrate the importance of taking simultaneous account of the effect of both taxes and benefits on income rather than considering each independently. It is then a matter of second-order importance whether rebates of taxes are treated in gross or in net terms. Nevertheless, some effort has been made to ensure that what are defined as benefits, on the one hand, and taxes, on the other, conform to national practice.

Secondly, some benefits are themselves taxable and/or have contributions levied on them. Again, if net rather than gross benefits had been included in the data presented above, the level of both benefits and taxes would have been lower (see Box for a further discussion).

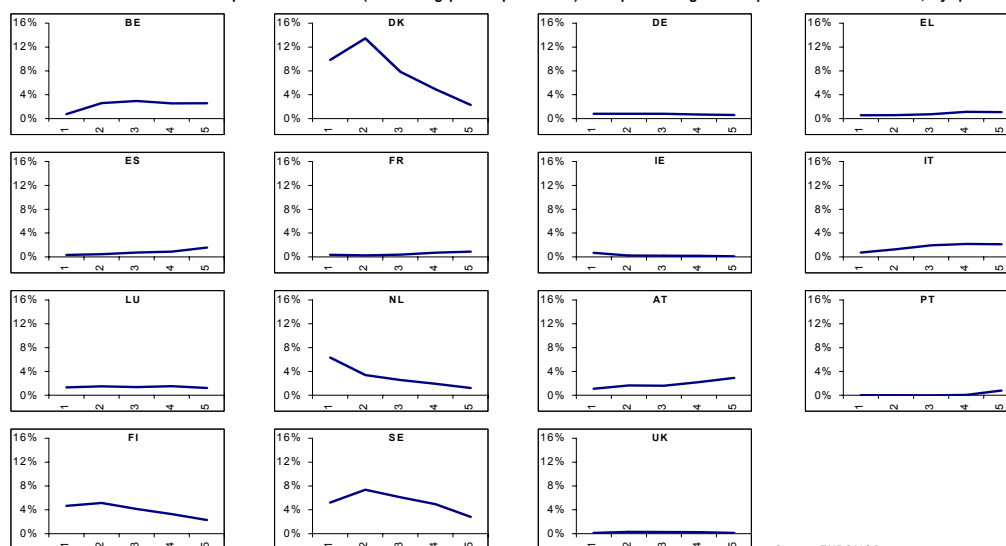
## Net benefits

The extent to which taxes and contributions levied on benefits reduce their effective value can be seen by comparing the effect on disposable income of gross benefits, on the one hand, and net benefits, on the other. The effect is substantial in Denmark and Sweden, sizeable in Finland and the Netherlands and non-negligible in Belgium, Italy and Luxembourg (see below). It is very small, however, in the remaining countries where benefits are generally not subject to tax or benefit recipients have incomes below the tax threshold. This emphasises the importance of taking account of the net rather than gross effects of benefits when making comparisons across countries. Moreover, in countries where benefits are taxed to any extent, the effect of such taxes on income at different points of the distribution is not uniform. In some countries, the incidence of taxes falls mainly on the lowest income households (Netherlands) or middle income ones (Denmark, Sweden), in others, it falls on all households except those with the lowest incomes bottom (Belgium) or is relatively uniform across all income levels (Finland).

These estimates are not derived simply by applying the average tax rate of the household to gross benefits. Instead, a simulation is made of the effect of excluding benefits and pensions from the tax base, thereby taking account of any tendency for effective taxes rates themselves to vary with income or other personal characteristics. In particular, this method of calculation takes account of the fact that in many countries tax liability depends on individual income (and that nowhere does it depend on the whole household income).

Measures of disposable income before the addition of social benefits – generally measured in gross terms – are commonly used to assess the effectiveness of social benefits in reducing the risk of poverty. For such an exercise to be meaningful, however, any taxes on the benefits concerned need to be explicitly taken into account, as should be evident from the chart below.

Income taxes and contributions paid on benefits (excluding public pensions) as a percentage of disposable income 2001, by quintile



Source: EUROMOD

Notes: Gross benefits are calculated by adding up benefits received in the EUROMOD database. Net benefits are measured by re-calculating disposable incomes after the elimination of benefits and comparing with disposable incomes with benefits. The difference between gross and net is the taxes and contributions paid.

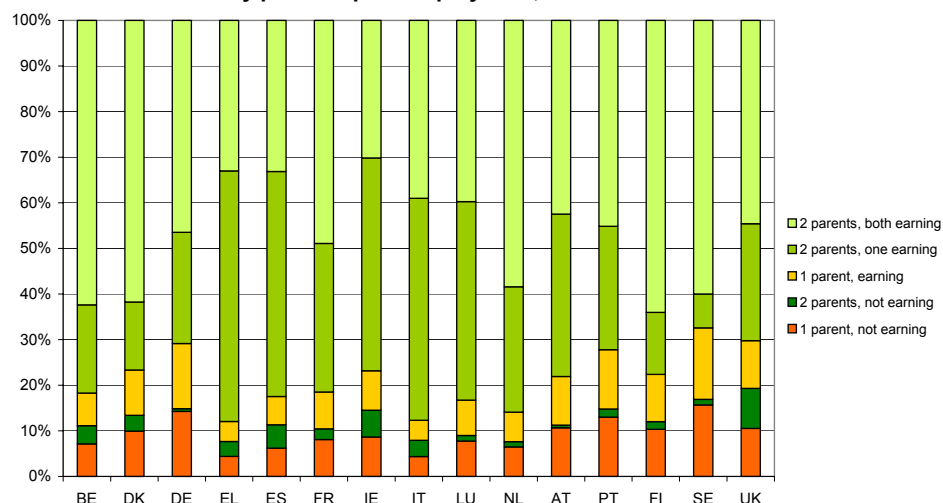
## Cross-country differences in household composition and support for children

The fact that households with children across the EU tend to receive less in benefits and pay the same in tax as other households does not necessarily mean that social support for children through the tax-benefit system is of no importance. Indeed, in a number of countries, such support is substantial. This is of some relevance given the sharp fall in fertility rates which has occurred across the EU over recent years and the evident increase in costs of having children in terms not only of the financial burden imposed but also of the potential limitations on the life-styles of parents, from both a professional and social perspective. The scale of support, therefore, is a potential factor influencing not just the choice of whether or not to have children, and accordingly fertility rates, but equally, as indicated earlier, choices about the use of time and how individual interests and responsibilities are balanced.

The support which those with children, or contemplating having children, receive from the State depends on their household circumstances and their access to support from family and communities as well as other factors, such as the terms and conditions on which they are employed. This, however, is not a simple one-way relationship. Household circumstances and the availability of family support will themselves tend to be influenced by what the State provides.

In practice, the composition of households with children, like that of households generally (as shown in Part 1 above), varies significantly across the EU, as does the extent to which their parents are in paid employment. In the three Nordic countries and Belgium the norm is for both parents to be in full time work, which is the case for around two-thirds of children, whereas in Greece, Spain and Ireland, this is the case for only around a third of children. Moreover, while in most Member States, less than 5% of children have parents who are not working at all, in Ireland, this figure rises to 15% and in the UK to 20% (with some 12% of children living with a lone parent who is not in employment) (Figure 6.17).

**6.17 Shares of children by parental paid employment, 2001**

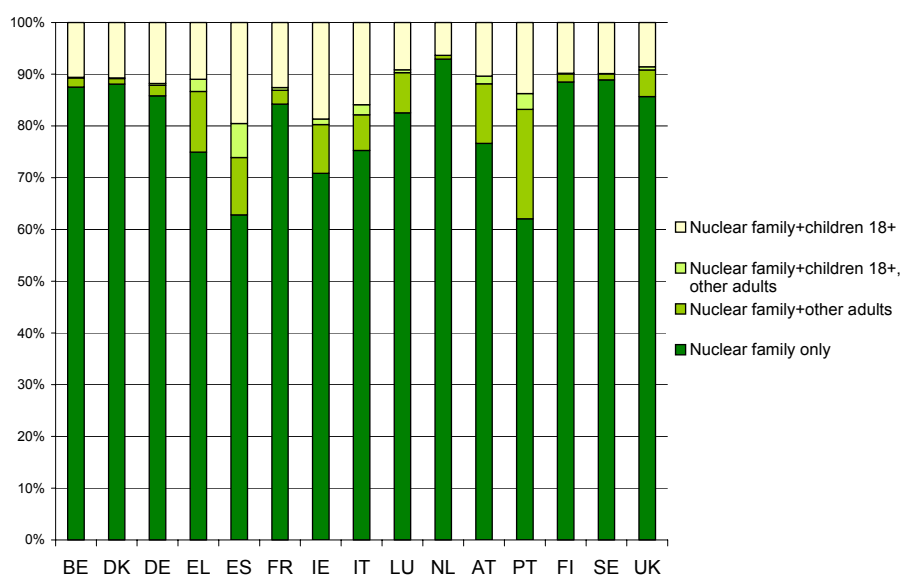


Source: EUROMOD



The countries in which there are relatively few households in which both parents work are also invariably those in which there are more multi-family households (i.e. households where parents and dependent children are co-resident with other adults, and possibly other children). In all four southern Member States plus Ireland, therefore, 25% or more of children live in such households – almost 40% in Spain and Portugal (Figure 6.18). By contrast, around 90% of children in the three Nordic Member States as well as Belgium and the Netherlands live in households with only their parents and brothers and sisters aged under 18. In Germany, France and the UK, moreover, the proportion is around 85%. In these countries, therefore, not only do parents of children both typically work but in the great majority of cases, there are no other adults in the household to provide support.

**6.18 The proportion of children sharing their household with adults in addition to their parents, 2001**



In the countries in which household size tends to be larger, the make-up of households in which there are other people living also varies. In Spain and Ireland, some 20% of children live in households where there are also brothers and sisters aged 18 and over, twice the proportion in most other countries – the main exceptions being Portugal, France and Germany. In Spain, moreover, almost 20% of children have other adults apart from their parents living in the household, and in Portugal, 24%. The figure is also around 10% or more in Greece, Italy, Ireland and Austria, whereas in other countries, it is under 5%.

It is evident from these differences in household composition that the scope for sharing incomes to supplement social benefits or substitute for them, as well as the potential access to support in caring for children, varies across countries. However, it is also the case that the others living in the household, especially young people, may be either net contributors to household income or net consumers of household resources. Similarly, other adults might either be a source of additional income or be themselves the recipients of within-household support, perhaps because they are elderly. The effect on the household income of children due to older brother and sisters remaining in the parental

home is examined below. First, however, the relative scale of State support for children in different EU-15 countries is assessed.

## State support for children

The effect of tax-benefit systems across the EU-15 on the disposable income of households in which children live can be estimated by using EUROMOD. Specifically, the model is used to simulate the disposable income of households with children if these were not present and any benefits and tax concessions which they give rise to did not exist.

This is different from the straight-forward, and what seems the obvious, approach of simply counting up the value of child and family benefits, which has a number of drawbacks. First, the statistics available on expenditure on benefits generally include only social transfers and exclude concessions for children and families that operate through the tax system (which are important to take account of, as noted above).

Secondly, benefits which are not recorded as being specifically for children or families may, nevertheless, be important in providing support for them and, indeed, entitlement to them may be affected by the presence of children in the household. It is also worth distinguishing between benefits that are not affected by the presence of children – such as pensions or adult disability benefits – and those which are not labelled as “child” benefits but which contain complements (extra payments or other special features) contingent on the presence of children. Social assistance and housing benefits are typical examples.

Thirdly, in many systems, alternative benefits would to some extent substitute for child-contingent benefits if children were not present in the household. Different housing benefit schemes might exist for parents and non-parents and social assistance benefits might fill the gap left by family benefits. Indeed, since some child-related components are taxable, their absence might even result in a reduction in tax liability. In general, therefore, adding up all child-specific benefits would not take account of interactions in the system (between different benefits or between benefits and their taxation) which affect the amount received in practice.

The approach adopted here is to estimate the “child contingent” elements of household income by using EUROMOD to simulate the reduction in benefits net of taxes that would occur if the presence of children were disregarded. The size of this reduction gives an estimate of the effect of children on disposable household income.

The results of this estimation exercise show considerable variation in the effective support provided for children across EU-15 Member States (see Figure 6.19, which shows the average value of the amounts of benefit and tax concession received per child

estimated in this way, expressed as a proportion of per capita disposable income<sup>49</sup>). They also indicate large variations in the way that tax system either reduces the effective value of benefits by taxing some of the income away or adds to them through concessions and allowances, the net effect depending on the balance between the two.

Effective state spending per child on net cash transfers is estimated to be highest in Luxembourg, where it amounts to 23% of per capita disposable income, followed by Austria and Belgium, where it is 18%. The net amount of support is very similar in 6 other Member States, Ireland, UK, France, Germany, Denmark and Finland, at around 15% of disposable income, while in Sweden, it is somewhat less and in the five remaining countries much less. In the Netherlands, net support amounts to 8% of disposable income, in Italy and Portugal, to around 7% and in Greece and Spain, to under 5%.

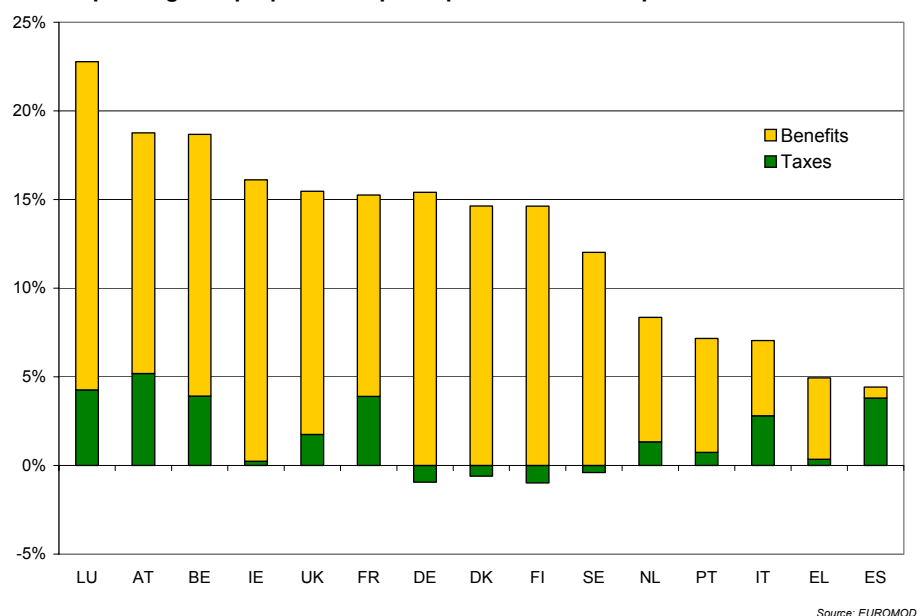
The importance of including tax concessions and the tax levied on benefits in these comparisons is evident. Tax concessions for children add some 4–5% to disposable income per head in Belgium, Luxembourg, France, Austria and Spain, while they are also significant in the UK and Italy. At the same time, the net effect of taxes is to reduce the value of benefits in Germany and the three Nordic countries.

It should be emphasised that these estimates of State support for children, though they include the effect of taxes paid on benefits and tax concessions on disposable income, leave out of account non-cash benefits, in the form, in particular, of the provision of free or low-cost childcare. This is a means of assistance to parents that is potentially as important as financial transfers in influencing the level of 'true' household disposable income, if the costs of childcare are considered an essential item of household expenditure, necessary for both parents to be in paid employment. Childcare support varies markedly between countries; indeed more so than cash benefits. Such provision is particularly significant in the three Nordic countries but is very limited in the southern Member States (as indicated in Chapter 7 below).

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<sup>49</sup> Total national household disposable income divided by the national population.

**6.19 Spending on child contingent net benefits and tax concessions in EU15 in 2001:  
per child spending as a proportion of per-capita household disposable income**



## SUPPORT FOR CHILDREN AT RISK OF POVERTY

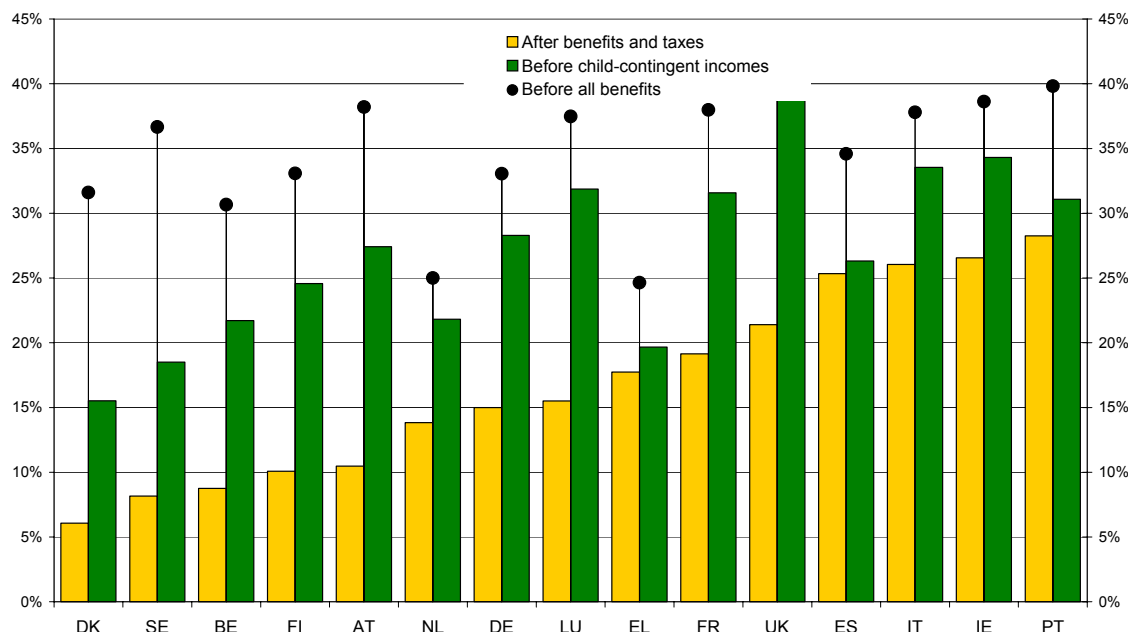
The analysis can be extended a step further by examining the effect of State support for children on their risk of poverty. The same approach as above, therefore, is used to estimate the number of children who are in households with equivalised income that would fall below the poverty threshold if, first, child-contingent state (cash) support and, secondly, all (gross cash) benefits did not exist. In each case, the poverty threshold is kept the same in monetary terms. The results are presented in Figure 6.20, in which countries are ranked according to the child poverty rate based on household disposable income – the lightly shaded bar.<sup>50</sup> The child poverty rate based on incomes not including child-contingent benefits and tax concessions is indicated by the height of the darkly shaded bar. The circle-topped lines show the child poverty rate before all gross benefits, including public pensions.

The estimates indicate that poverty among children would be much higher in the absence of child contingent support in most countries. Their effect in absolute terms is most dramatic in the UK, Luxembourg and Austria. Without child contingent benefits and tax concessions, therefore, the proportion of children with income below the poverty line in the UK would be 18 percentage points higher – 39%, rather than around 21%. In proportionate terms, the effect of child-contingent measures is largest in Sweden, Belgium, Denmark, Finland and Austria (in each of which they reduce the proportion of children at risk of poverty by 55–60%). By contrast, the effect of such measures is

<sup>50</sup> It should be noted that the proportion of children below the poverty line according to EUROMOD is slightly different in a number of countries from that shown in Part 1 above, partly because of children being defined as those under 18 instead of under 16 and partly because of the difference in the data sources used. The difference, however, is mostly small and does not affect the estimates of the effect of benefits and taxes on incomes presented here. For a reconciliation of EUROMOD poverty statistics using simulated incomes with those from other sources see Leitz and Sutherland (2005).

smallest in Greece and Portugal (where they reduce the proportion by 9–10%) and, most especially, in Spain (where the reduction is only 4%).

#### 6.20 The child poverty rate in EU15 in 2001, with and without child-contingent incomes and without all benefits (including public pensions)



Source: EUROMOD

The estimates of income before all benefits suggests that proportion of children below the poverty line is strongly affected by social benefits which are neither specifically targeted at children nor dependent on the presence of children in the household. This effect is also much larger in some countries than others (as illustrated by the height of the circle-topped lines relative to the darkly shaded bars in Figure 6.20). As might be expected, the effect relative to that of child-contingent measures is largest in the Nordic countries because of social support for working parents, and it is also relatively large in Belgium and Austria.

In Sweden, for example, the proportion of children with poverty levels of income before all benefits is not much different than in France. While both countries provide substantial child-contingent support, the difference in final outcomes – a risk of poverty rate among children of 8% in Sweden as compared with 19% in France – is in large measure due to benefits that are not child-contingent. The effect of benefits (including pensions) not specifically targeted at children is also relatively important in the Southern countries, but in this case because of the greater importance of benefits received by grandparents and other adults living in the household rather than received by parents.

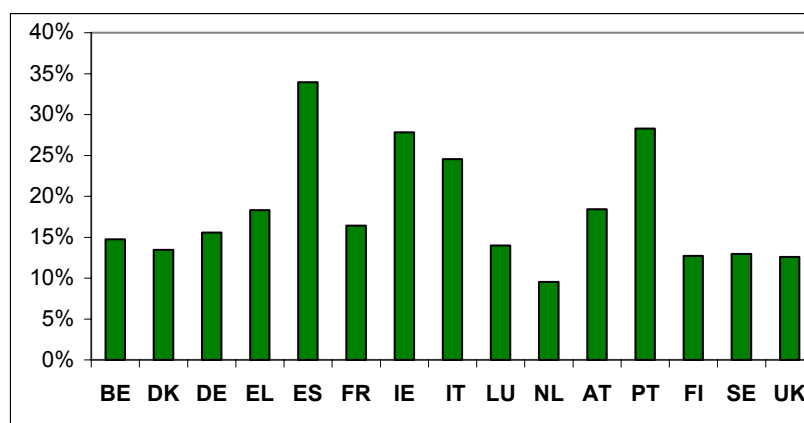
### The effect of older children on household income

As indicated above, the extent to which older children of 18 or over live at home – and related to this, the age at which they leave the family home – varies across the Union (see

also Chapter 2 above). The concern here is with the effect which their presence – or non-presence – in the parental home has on the income position of their younger brothers and sisters and, more specifically, on their chance of having an income below the poverty line.

The proportion of households with dependent children which also contain an older brother or sister (aged 18 or over) varies, as noted above, from under 10% in the Netherlands to 34% in Spain (Figure 6.21). Some of the young people concerned are net contributors to household income through, in particular, the paid work they do; others represent a drain on household income. Some who remain dependent on their parents still attract child or family benefits or tax concessions, because, for example, they are in full-time education, others may receive disability, unemployment or other benefits in their own right.

**6.21 Proportion of households with children containing adult siblings, 2001**



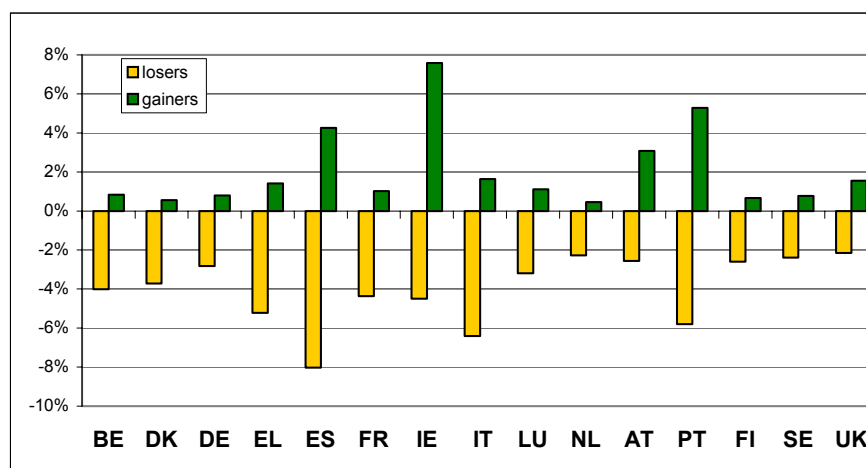
Source: EUROMOD

The effect of the presence of older children in households is estimated here by using Euromod to calculate what equivalised household disposable income would be if the young people concerned were not living in the household. The net effect of excluding older children in this way is difficult to predict from *a priori* reasoning. On the one hand, household disposable income is likely to change (mainly to fall) as older children's income is disregarded and taxes and benefits are readjusted. On the other hand, the equivalence scale used to adjust household income for differences in household size will fall as the number of household members diminishes.

In practice, the exercise indicates that in all countries, except Ireland and Austria, household income in equivalent terms would be higher without the presence of adult siblings (Figure 6.22, which shows the proportions gaining and losing due to the presence of adult brothers and sisters). The implication is that, on average, older children add more to household expenditure (as reflected in the effect of their presence on the household equivalence scale) than they contribute to income. The effect is particularly large in Italy, France and the Netherlands. While in most countries the net effect is a reduction in effective household income, in each case there are gainers as well as losers.

These calculations, of course, depend on the assessment of the additional costs imposed on households by the presence of older children inherent in the equivalence scale used (in this case a weight of 0.5 being attributed to them, relative to 1.0 for the first adult). The use of a different equivalence scale would change the balance between the income older children bring into the household and the assumed costs they impose and might also affect the relative results across countries.

#### 6.22 Children gaining and losing from the presence of an adult sibling, 2001



Source: EUROMOD

Nevertheless, it is of interest to explore further the distributional impact of their presence in households. Figure 6.23 shows the incidence by income decile (for all households) of the average “net cost” of the presence of adult children. In some countries, the cost of their presence appears unrelated to household income at all. In Ireland, the cost falls mainly on households at the upper end of the income scale which ought to be better able to support the children concerned. In Italy, on the other, the costs falls largely on low income households, while in Spain and Portugal, it falls much more on households at the top and bottom of the income scale than on those in the middle.

The effect on the risk of poverty among children is explored in Figure 6.24. Excluding older siblings from the calculation of household disposable income increases the risk of poverty to children in Ireland and Portugal and to a small extent in the UK. In other words, older siblings contribute to household income by more than they add to costs. In Italy, by contrast, their exclusion would reduce the risk of poverty among children because the income they contribute is less than the associated costs. Their presence, therefore, imposes a net cost on low income households and makes it more likely that their younger siblings will have to share in income below the poverty threshold.

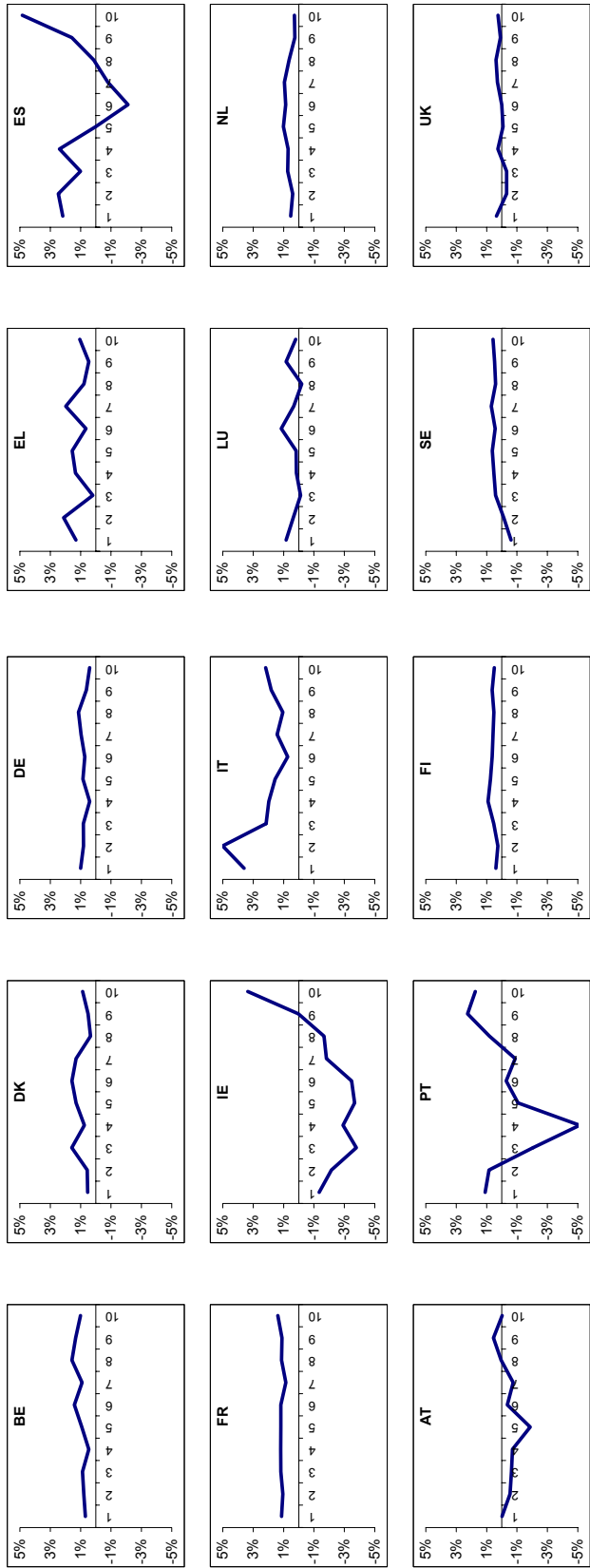
While the net effect on child poverty rates is relatively small, for those children who do live with older brothers and sisters, the effects are, not surprisingly, magnified (Figure 6.25). For example, in Ireland, not only is the poverty rate for children in households containing young siblings 6 percentage points lower than for those without, but if they

did not live in the households and contribute income, the child poverty rate would be increased from 22% to 37% in the households concerned. The effect is almost exactly the reverse in Italy.

Within these net effects on the child poverty rate there are some children who would fall into poverty without the presence of their adult sibling, and others who would rise above the poverty line. Focussing on children living with older brothers and sisters (as in Figure 6.25), it is evident that in some countries as many children are lifted out of or pushed into poverty by the presence of an adult brother or sister as remain in poverty irrespective of whether their brothers or sisters live in the household or not. (The negative parts of the bars in Figure 6.26 indicate the children who would stop counting as poor if their older siblings left home). In Luxembourg, Germany and Spain (as well as Italy and Ireland) the effect of older siblings on household income is noticeable, even if the positive and negative effects tend to cancel out at the aggregate level. This points to the need to explore in more detail the effect of young people moving away from the parental home on both their financial well-being and that the family they leave behind.

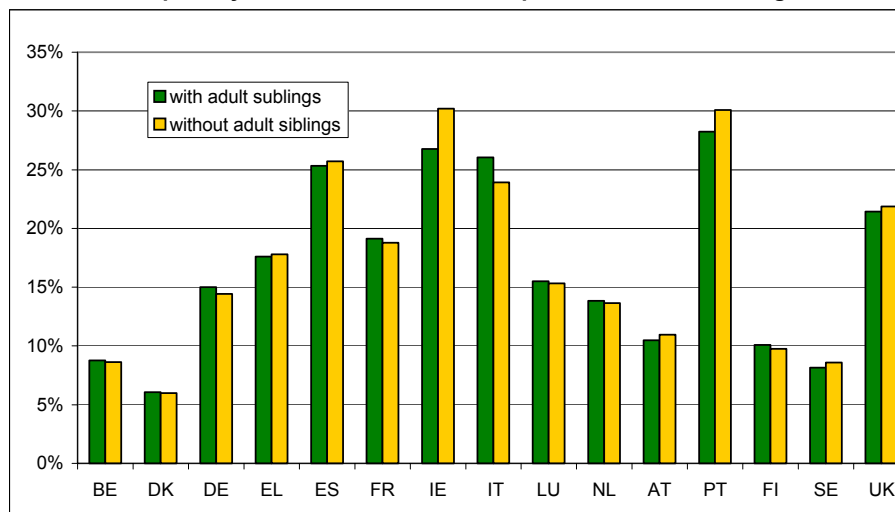


6.23 The average “cost” to households of the presence of adult siblings, as a percentage of disposable income, by decile

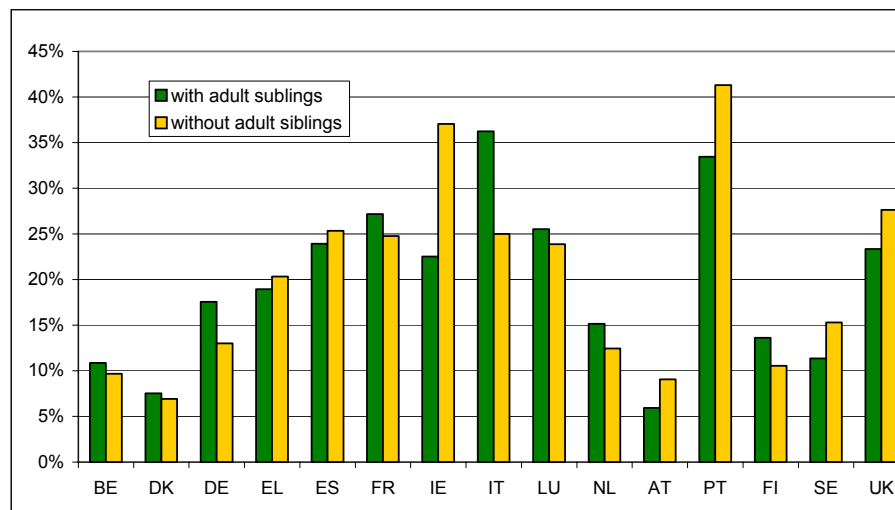


Source: EUROMOD

### 6.24 The child poverty rate with and without the presence of adult siblings: all children

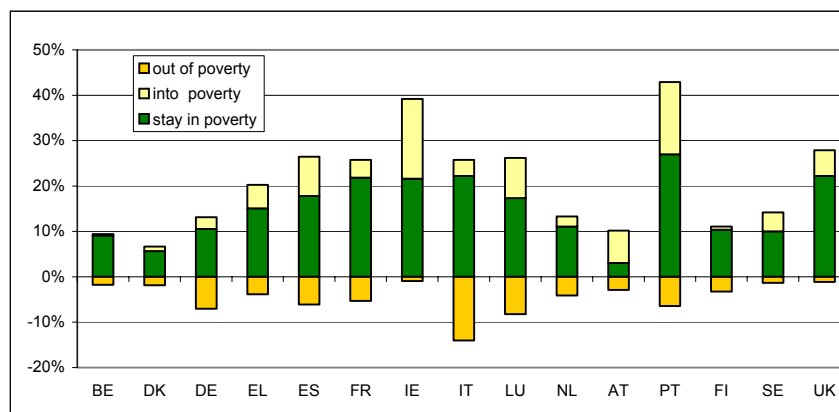


### 6.25 The child poverty rate with and without the presence of adult siblings: children with adult siblings



Source: EUROMOD

### 6.26 Transitions into and out of poverty for children with adult siblings if they were to leave the household



Source: EUROMOD

## Changes since 2001

The analysis presented in this chapter is based on simulated incomes using 2001 policies. Since 2001, governments have made changes of various kinds to taxes and benefits. Other changes – to employment, real earnings and other sources of income, household composition and so on – will have had an impact on the underlying distribution of income and hence on the effects of taxes and benefits on this and on relative rates of poverty. An indication of the direction of these effects – whether the changes have served to increase or reduce income inequality and the risk of poverty – if not their precise scale, in different Member States is given in Chapter 8 below. This makes clear that the effects are not all in one direction in any country, and therefore that it is difficult to draw firm conclusions about the likely change in rates of poverty and inequality. Nevertheless, the information presented in Chapter 8 suggests that changes in taxes and benefits would be expected, other things being equal, to have reduced poverty and inequality in the UK, Sweden, Austria and Hungary. This does not mean that poverty and inequality will in fact have fallen since 2001 since other things were almost certainly not equal and may, therefore, have served to offset the effect of tax and benefit changes.

## Annex 2: EUROMOD<sup>51</sup>

EUROMOD is a tax–benefit microsimulation model covering the countries of EU–15 in a comparable and consistent manner. The analysis using EUROMOD therefore covers only EU–15. The simulation features of EUROMOD allow it to answer a range of ‘what if’ questions, as well as permitting the calculation of income tax and social contribution liabilities (or payments), which are often absent from household survey data.

The datasets that are used in the current version of EUROMOD are shown in the table below. The choice of dataset is based on judgement of the national EUROMOD experts of the most suitable dataset available for scientific research. Throughout the features of tax–benefit systems and related policies are incorporated in the model as they existed on 30 June 2001.<sup>52</sup> In most cases the input datasets of household circumstances refer to a period a few years prior to this 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.<sup>53</sup> In general no adjustment is made for changes in population composition.

The basic output from EUROMOD is household disposable income and the micro–level change in the value of this as a result of changes to any of the determinants of direct personal taxes including contributions or cash transfers: for example, policy rules, levels of original income, household composition. The analysis is based on the following definitions and assumptions.

Children are defined as individuals younger than 18 years and the elderly as people aged 65 or more. It is generally assumed that income is shared within the household and the modified OECD scale is used to equivalise the income of individuals when comparing across households.

Household disposable income is defined as original income added up over each household member plus between–household transfers (maintenance and alimony), minus taxes (income tax, social contributions and other direct personal taxes) plus cash social benefits. These, unless otherwise stated, include public pensions in payment but do not include regulated private pensions that may substitute for these. Non–monetary benefits are not included. Gross incomes are defined as original incomes plus social benefits.

Risk–of–poverty is defined as living in a household with equivalised household disposable income below 60 per cent of the median (where the median is calculated across individuals).

<sup>51</sup> See Immervoll et al. (1999) and Sutherland (2000) for general descriptions. Sutherland (2001 and 2005) provides descriptions and discussions of technical issues. The version of EUROMOD used in this paper is 31A.

<sup>52</sup> It is necessary to specify a precise date because the timing within the year of regular uprating and other adjustments to tax–benefit systems varies across countries.

<sup>53</sup> This process is documented in EUROMOD Country Reports. See:

<http://www.iser.essex.ac.uk/msu/emod/countries/>

The model does not account for any non-take up of benefits or tax avoidance or evasion. It is assumed, therefore, that the legal rules apply and that the costs of compliance are zero. This can result in the over-estimation of taxes and benefits.<sup>54</sup> 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, Lietz and Sutherland (2005).

Country	Base Dataset for EUROMOD	Date of collection	Reference time period for incomes
Austria	Austrian version of European Community Household Panel	1998+1999	annual 1998
Belgium	Panel Survey on Belgian Households	1999	annual 1998
Denmark	European Community Household Panel	1995	annual 1994
Finland	Income distribution survey	2001	annual 2001
France	Budget de Famille	1994/5	annual 1993/4
Germany	German Socio-Economic Panel	2001	annual 2000
Greece	European Community Household Panel	1995	annual 1994
Ireland	Living in Ireland Survey	1994	month in 1994
Italy	Survey of Households Income and Wealth	1996	annual 1995
Luxembourg	PSELL-2	2001	annual 2000
Netherlands	Sociaal-economisch panelonderzoek	2000	annual 1999
Portugal	European Community Household Panel	2001	annual 2000
Spain	European Community Household Panel	2000	annual 1999
Sweden	Income distribution survey	2001	annual 2001
UK	Family Expenditure Survey	2000/1	month in 2000/1

<sup>54</sup> It can also result in the under-estimation 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).

## **PART IV**

# **THE EFFECT OF NON-MONETARY FACTORS ON LIVING STANDARDS**

## CHAPTER 7 IMPUTED RENT AND BENEFITS IN KIND<sup>55</sup>

The analysis so far in this report has been based on examining the distribution of income in EU Member States and, in particular, the relative numbers with income falling below a given level as an indicator of the extent of relative poverty or deprivation. However, income, in the way that it is defined in the foregoing analysis, which accords with the conventional definition, is only a partial measure of purchasing power, or the capacity to spend on goods and services, and, therefore, of living standards. This is because it excludes, on the one hand, the purchasing power which comes from accumulated wealth and, on the other, the receipt of non-monetary benefits or services provided free of charge or at a subsidised rate, which effectively reduce the need for expenditure out of income. These two elements are considered in turn below and some attempt is made, if in a preliminary way, to indicate their importance for assessing the extent of inequality in the distribution of purchasing power and relative rates of poverty in different part of the EU.

### Wealth effects

Accumulated wealth in various forms, property, financial assets, works of arts and so on, adds to purchasing power and living standards over and above the effect of income since it offers the potential for borrowing, quite apart from the revenue generated if assets are sold. Although there is general agreement about the influence of wealth on living standards, the fact that it is not typically used as an indicator or even taken into account when comparing the situation of different individuals or households is largely due to measurement difficulties, inherent in the need both to identify and to value assets which may not have a clearly defined price. Only limited attempts have, therefore, been made to estimate wealth and its distribution across societies and the data available to assess its effect on relative living standards are extremely limited.

Nevertheless, it is important to keep in mind the potential effect of wealth on relative living standards, including between people in different age groups, since older generations are likely, on average, to have accumulated more assets than younger generations and so are likely to enjoy relatively more purchasing power than indicated by the difference in incomes. While the data do not exist at present to take account of the effect of wealth on inequality in society and the risk of poverty and exclusion, some indication of its potential effect can be given in respect of housing. This is perhaps the most important component of wealth for most people and is one which can vary markedly between them. Nevertheless, house ownership and the way that it varies across society gives only a very partial indication of the way that wealth as a whole varies, since other assets of various kinds tend to represent a much larger component of potential purchasing power at the top end of the scale, among the most prosperous, than at the bottom. As such, it will tend to understate the extent of inequality in wealth distribution.

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<sup>55</sup> by Terry Ward, Loredana Sementini and Nirina Rabemifara

Accordingly, given its importance, the effect of wealth on inequality and relative rates of poverty is an issue which will be taken up in future reports.

Moreover, the analysis below gives only a preliminary view of the effect of taking account of housing on the picture of the distribution of purchasing power and relative poverty presented in the earlier parts of this report on the basis of household income. It is limited to examining differences in home ownership between people with varying levels of income and in the rent paid for accommodation by those with similar income levels, which is taken as an estimate of the implicit income stream enjoyed by home owners who do not have to pay rent. As such, this income stream is imputed to home owners, or more precisely to those living in the households concerned, to make their position more comparable to those receiving income from property they have rented out or from financial assets, both of which are included in the measure of income used in the preceding analysis.

### **IMPUTED RENT**

Housing in the same way as other forms of wealth, such as financial assets in particular, generates an effective income stream not only if it is rented out to third parties, but also in terms of the accommodation it offers to those who own it, over and above its value as an asset. The income concerned, or the 'imputed rent', is equivalent to the amount which the owner would receive if the property were let on the market and, accordingly, represents how much he or she saves by not having to pay such rent. There is widespread agreement that the implicit income yielded by housing in this way should in principle be taken into account in order to allow explicitly for differences in home ownership when assessing the extent of dispersion in purchasing power between households and the risk of poverty<sup>56</sup>. This risk, in other words, is likely to be greater if someone with low income has to pay rent than if they own their accommodation.

At the same time, the situation is complicated, however, by the possible payment of mortgages by home-owners who may enjoy an imputed rent from their property but equally have to bear the cost of servicing loans taken out to purchase it. Such payments reduce disposable income in much the same way as payment of rent by those who are not home-owners, though the latter are not investing in an asset they can eventually sell or borrow against which in itself potentially adds to their purchasing power. The level of

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<sup>56</sup> This has been recognised explicitly by the Eurostat Statistics Programme Committee, which recommended the inclusion of imputed rent in the calculation of income for purposes of estimating the relative numbers at risk of poverty and social exclusion and showed that it was capable of making a significant difference to the results obtained. See 31<sup>st</sup> Meeting of the Statistical Programme Committee, Luxembourg, 26 and 27 November, 1998. For an analysis of the effects of including imputed rent in income, see J. Frick and M. Grabka, "Imputed Rent and Income Inequality: A Decomposition Analysis for Great Britain, West Germany and the U.S.", *The Review of Income and Wealth*, 49, no. 4, 2003 and A. Jacquot and J.-C. Driant, 'Loyers imputés et inégalités de niveau de vie', INSEE, Paris, *Document de travail*, n° F0407, October, 2004. The latter shows that when imputed rent is taken into account, young people and those living in inner city areas represent a larger share of the low income population in France,



mortgage payments for those with differing levels of income is indicated in the following analysis along with that of payments of rent.

### THE EXTENT OF HOME OWNERSHIP

Data are available at EU level to obtain some indication of the relative importance of this element, but as yet only for the 'old' EU-15 Member States (from the European Community Household Panel and the EU Household Budget Survey). The analysis here, therefore, is confined to these countries and is intended primarily to give an insight into, first, the importance of imputed rent in relation to monetary income and, secondly, how this varies between people in different age groups and with different levels of income.

A number of points emerge from the analysis:

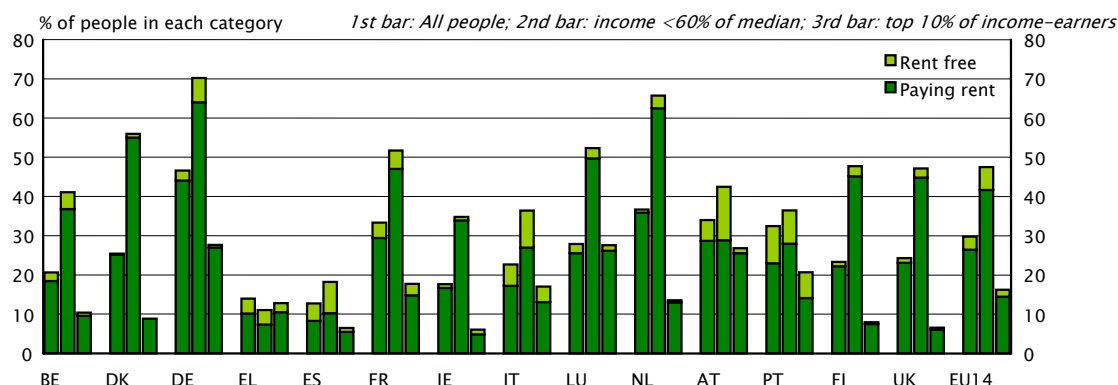
- around 30% of people in the EU-15, on average, live in rented accommodation rather than in housing they own according to the latest data available (for 2001). This proportion, however, varies significantly across countries. In Germany, some 47% of people live in rented accommodation and in Austria and the Netherlands, around 35%, while in Greece and Spain, the proportion is only around 13–14%, and in Ireland, just under 18%.(Figure 7.1);
- an average of just over 10% of people living in rented accommodation in the EU-15 do not actually pay any rent – ie their housing is rent free. This proportion again varies markedly across the EU-15. It is particularly high in all four southern Member States, reaching over a third in Spain and around a quarter or more in Greece, Italy and Portugal, which might reflect the relative importance of agriculture in these countries and, therefore, of tied housing. By contrast, it is under 5% in Denmark, Finland, the Netherlands and the UK and only just over 5% in Germany and Ireland;
- as might be expected, people with low incomes are, in general, much more likely to live in rented accommodation than those with higher levels and, correspondingly, are less likely to enjoy the imputed rent from owning their own housing. This is the case in all EU-15 Member States – on average, some 47% of those with income below 60% of the median live in rented accommodation as opposed to under 7% of those in the top 10% of income-earners – with the sole exception of Greece. Here only 11% of those with income below 60% of the median live in rented accommodation, slightly less than in the case of the top income-earners, and the vast majority own their own housing. This again might reflect the importance of agriculture in this country and the relatively large numbers of small holders with income below the median. In Germany, by contrast, over 70% of those

with poverty levels of income live in rented housing and in the Netherlands, over 65%;

- in general, only slightly more of those with low levels of income have rent-free accommodation than is the case for those higher up the income scale. In the EU-15 as a whole, some 12% of those with income below 60% of the median living in rented housing pay no rent (i.e. around 6% of all those with income this low), only marginally higher than the average or for those with high income levels (11% in both cases). In most countries the difference is negligible and in some, the figure is lower for those with low incomes than for with higher levels, which probably reflects the importance of housing tied to jobs or of rent being paid by employers. Only in Germany, Spain, Italy and Austria do markedly more of those with poverty income levels have rent-free housing than high-income earners;
- just under half of people in the EU-15 who own their homes – or more precisely live in housing which is owned by someone living there – have a mortgage, though this figure rises to around 90% in Denmark and the Netherlands and is some two-thirds in the UK. In Greece and Italy, by contrast, the figure is under 20% and in Spain and Portugal, under 30%, suggesting perhaps more people inheriting property or receiving loans from their parents than in other Member States. In general, fewer people with income below the poverty threshold who live in their own homes pay mortgages. This is the case in all EU-15 countries except Germany and Luxembourg, where the reverse is true, and Spain, where there is little difference. In Greece and Portugal, therefore, only 5–6% of home-owners below the poverty line have a mortgage and in Italy, only just over 10% (Figure 7.2).

The general conclusions which can be drawn from the above are, first, that the potential importance of taking account of imputed rent differs across countries, insofar as the proportion of people who own their homes as opposed to paying rent varies. Imputed rent, therefore, seems to be generally a more important factor in the southern Member States than in the northern ones, though it also relatively significant in Belgium, Ireland and the UK. In consequence, in these countries, income tends to be understated relative to that elsewhere because of the omission of this factor. Alternatively, it can be concluded that their purchasing power is, on average, higher than in other countries because they do not have to pay rent out of their disposable income – in other words, imputed rent makes a real rather than simply a hypothetical difference to living standards.

### 7.1 Type of accommodation by income level, 2001

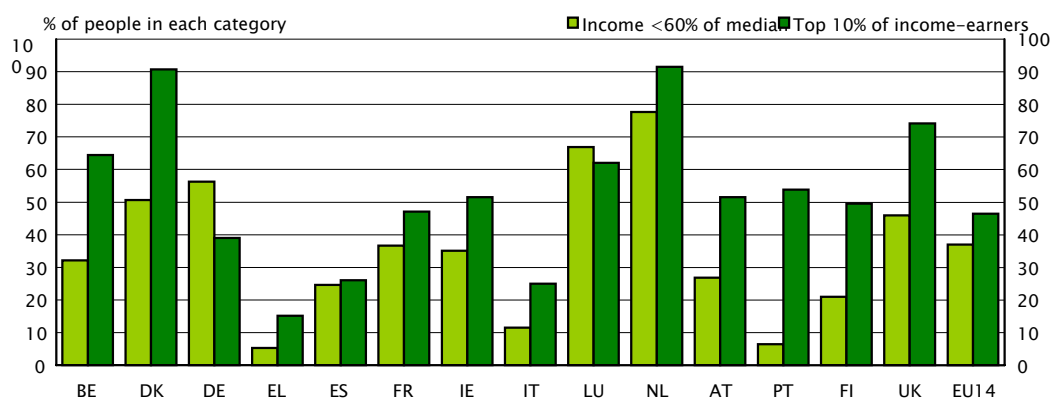


Note: The remainder of people in each case live in owner-occupied h.

Figures 7.1–7.13

Source: Eurostat, ECHO UDB microdata, own calculations

### 7.2 Proportion of home-owners with a mortgage by income level, 2001



Secondly, since in general more people with low incomes pay rent as opposed to owning their homes, the extent of income dispersion described in Part 1 above will tend to understate the actual difference in purchasing power, or living standards, in most countries. Correspondingly, the non-inclusion of imputed rent as part of income means that the proportion of people at risk of poverty will be understated since the median level of income – and the 60% poverty threshold – is lower than it should be. The exception is Greece, where a large proportion of those below the poverty line have their income boosted by imputed rent. (This finding is in line with a study carried out for Greece which set out to estimate the effect of imputed rent – as well as non-monetary benefits – on the measurement of the poverty rate, defined in the same way as in this report, and concluded that the rate would have been reduced from 21.1% to 19.6% in the mid-1990s if imputed rent were included in the definition of income.<sup>57</sup>)

<sup>57</sup> See Tsakloglou P. (1998), 'On the paramount importance of including incomes in-kind in distributional studies: Evidence from Greece', paper presented at an ESRI workshop. Economic and Social Research Council, Dublin.

While some people enjoy rent-free accommodation, which effectively adds to the purchasing power of their income as compared with those paying rent, in very few countries is this disproportionately the case for people on low incomes<sup>58</sup>.

Thirdly, the fact that in most countries a smaller proportion of home-owners with income below the poverty line pay mortgages in some degree offsets the above effect. In the four southern countries, in particular, however, relatively few of the people on low incomes have either a mortgage or pay rent, but this is also the case for people in general, so the effect on comparative levels of purchasing power is accordingly reduced. Nevertheless, in Greece, only 12% of those with poverty-levels of income pay either rent or a mortgage, as opposed to 22% of those with higher income levels and in Portugal, 32% as opposed to 46%.

Of course, as noted above, it should be emphasised that those paying mortgages also have the benefit of the wealth which their property represents, which means that they are always likely to be better off in terms of their potential purchasing power than those paying rent of a similar amount.

The analysis can be extended to people in different age groups. This shows that:

- in the EU-15, on average, there is not much difference between broad age groups in the relative numbers renting accommodation as opposed to owning their own homes. There are, however, differences between countries. In France and Ireland, people of 65 and over are more likely to be home-owners – and recipients of imputed rent – than younger generations, while in Denmark and the Netherlands, the reverse is the case (in the latter, 60% of those aged 65 and over pay rent, 35 percentage points more than families with children under 16) (Figure 7.3). This, of course, reflects changes in the pattern of home ownership and renting over time rather than necessarily changes in housing patterns over people's life cycles. In Denmark and the Netherlands, therefore, it is likely to reflect the greater tendency of young people today to buy their own homes rather than to rent as was the case in the past for the older generation. This trend towards home ownership will tend to mean more people inheriting houses, or the wealth that they represent, over time, which is a tangible form of inter-generational transfer from the older to the younger rather than in the opposite direction which is generally the norm.
- as would be expected, younger people who own their own homes are far more likely to be paying mortgages than older people. Whereas over two-thirds of those living in households with children under 16 in the EU-15 pay mortgages, this is

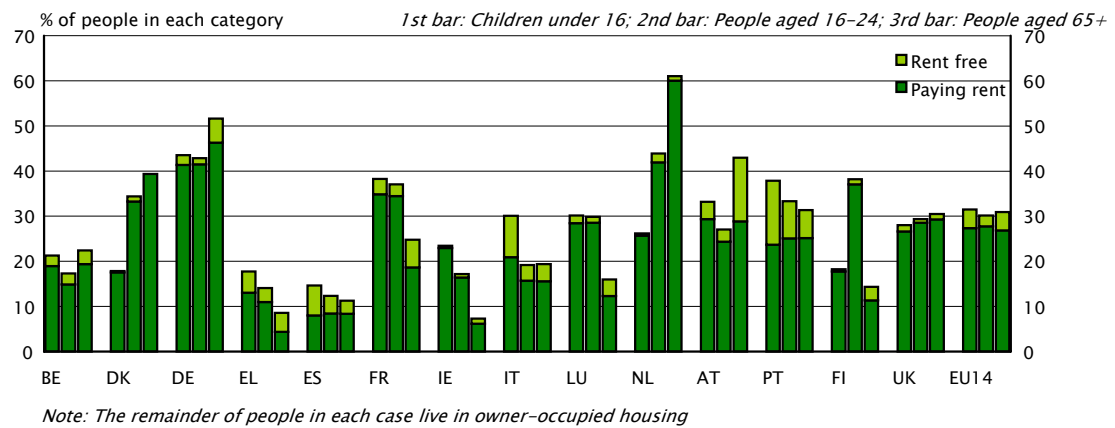
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<sup>58</sup> It may be the case, however, that people on low incomes are more likely than others to have their rents subsidised. If this is so, then it will tend to show up in the data on average payments of rent discussed below.

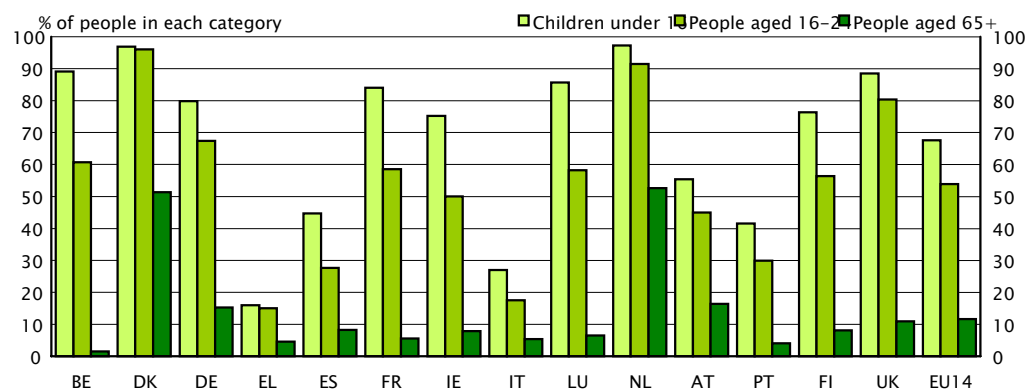
the case for only 12% of those of 65 and over. Even for the former, however, in Greece, the proportion is only 16%, in Italy, 27%, and in Portugal and Spain, 40–45%. In the first three of these countries, only 4–5% of home-owners aged 65 and over have mortgages and in Belgium, the figure is even lower (2%). Only in Germany, Austria, Denmark and the Netherlands do more than 10% of such people have mortgages, though whereas, the proportion is still relatively small in the first two (15–16%), in Denmark and the Netherlands, it is over 50% (Figure 7.4);

- the conclusion reached above that people on low incomes are more likely to be living in rented accommodation does not hold for each broad age group. In particular, for those of 65 and over, in the EU-15 as a whole, much the same proportion of those with income below 60% of the median live in rented accommodation as those with income above this. The only countries where there is much of a difference are Belgium, Ireland, Italy and Luxembourg, where those with low incomes are more likely to be paying rent, and the Netherlands, Austria and Portugal, where the reverse is the case. For families with children, by contrast, substantially more of those with income below the poverty line pay rent than those above in all EU-15 countries. With the exception of Greece, Spain and Austria (where there is relatively little difference but the figures are comparatively low), the difference is 20 percentage points or more in all cases (Figures 7.5 to 7.7);
- in general, a larger proportion of people in each broad age group with low levels of income have rent-free accommodation than those with higher levels, but the difference is relatively small in the EU-15 as a whole. It is slightly larger for older people of 65 and over than for families with children, especially in Germany, France and Austria (in the last, 29% of all those in this age group pay no rent, in the first two, 11–12%). In Spain and Italy, however, it is families with children with low incomes who make up most of those with rent-free housing (11–13% of all those with low income), while in Portugal, by contrast, more families with children with incomes above the poverty line pay no rent than those below;
- the point noted above that fewer home-owners with low income pay a mortgage also holds for broad age groups though the difference is relatively small in most countries. The main exception is Portugal where under 10% of families with children who own their own homes and have income below the poverty line have a mortgage as opposed to over half of those with income above this level.

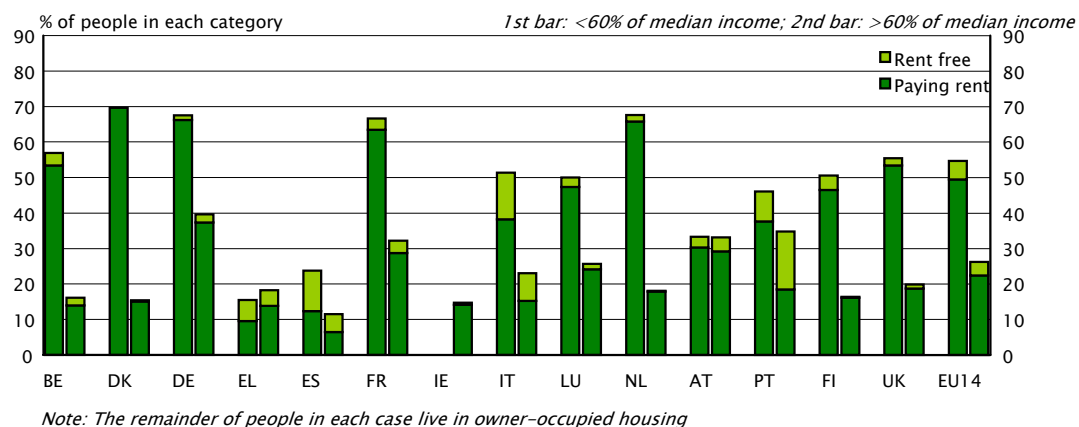
### 7.3 Type of accommodation by age group, 2001



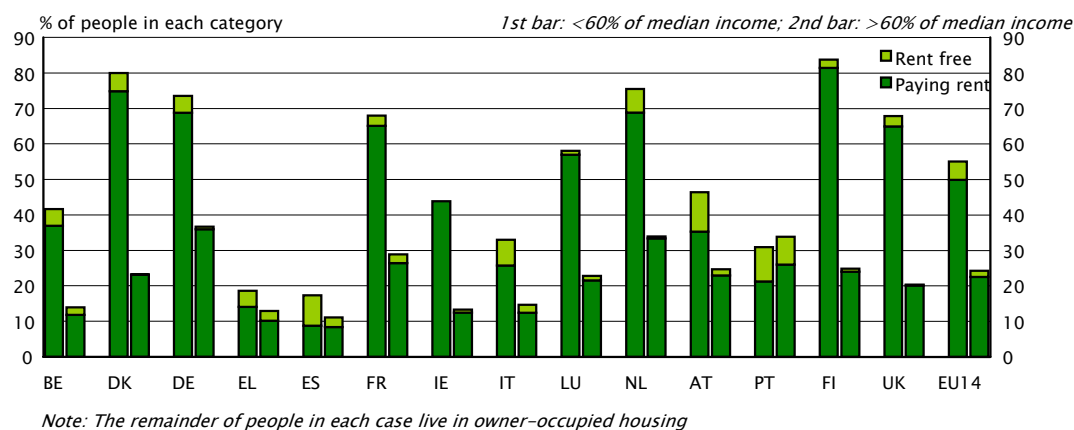
### 7.4 Proportion of home-owners with a mortgage by age group, 2001



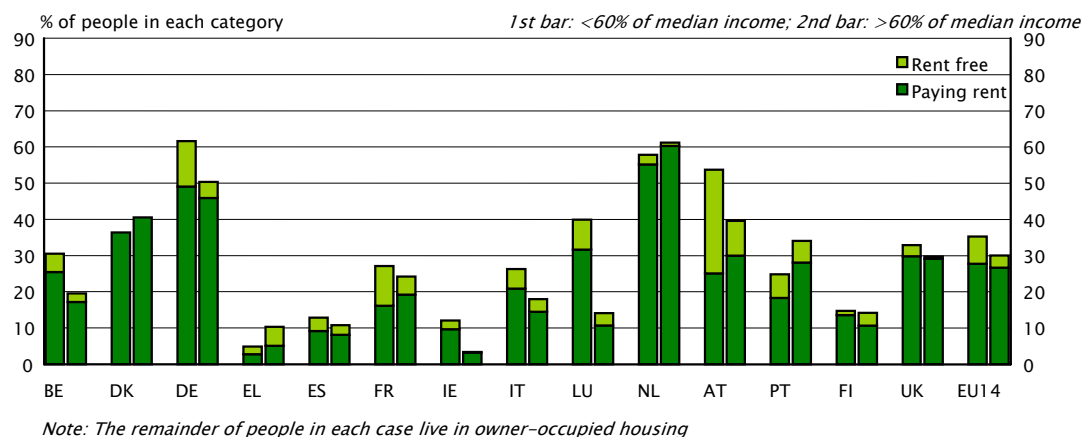
### 7.5 Type of accommodation among children under 16 by income level, 2001



### 7.6 Type of accommodation among people aged 16–24 by income level, 2001



### 7.7 Type of accommodation among people aged 65+ by income level, 2001



### RENT AND MORTGAGE PAYMENTS

Data collected by the ECHP on the amount paid in rent by households with differing levels of income and characteristics can be used to give an estimate of the imputed rent that owner-occupied households in similar circumstances enjoy. Additionally, these data together with those on payments of mortgages can be used to estimate the amount going on the costs of housing which can be deducted from household income to give an indication of household disposable resources after taking account of these costs. Since such costs represent an essential element of expenditure, the resulting figures arguably put home-owners and those renting accommodation on a more comparable footing in terms of the income they have available to spend. This is the approach adopted below.

The argument against this is that housing itself is part of real income and that since households can choose, up to a point, how much or how little to spend on accommodation, it is misleading to compare income net of this expenditure across households which make very different choices in this regard. A household which devotes a large share of its income to maintaining a large mansion and whose income net of such costs is relatively low is not really in a similar position, in terms of relative deprivation, as one living in poor accommodation with the same level of net income. Although, therefore, there are grounds for adjusting income to allow for the differential cost of housing and for taking explicit account of the larger burden that this represents in relative terms for those with low incomes as compared with those with higher levels, the resulting figures need to be interpreted with some caution. At the same time, the potential distortion introduced by the possibility that low income families are more inclined to spend their income on housing than those further up the income scale needs to be kept in perspective, since the households in question are unlikely to be significant in terms of numbers. Nevertheless, figures for disposable income defined as net of housing costs

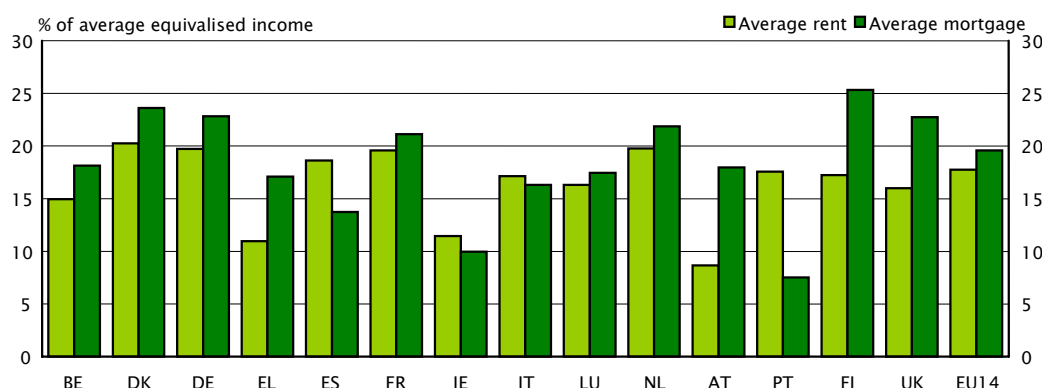


should preferably be examined in parallel with those before such costs are deducted – as set out in Part 1 of this report above – rather than instead of these<sup>59</sup>.

The estimates presented below, which indicate the average cost of housing to households with differing income levels and with differing compositions, need, therefore to be interpreted with this consideration in mind. They also give an indication of the potential implications of allowing explicitly for imputed rent. The analysis stops short, however, of attempting to estimate household income to include this element and is intended simply to give an indication of its importance for assessing relative income, or purchasing power, across households and the incidence of relative poverty.

The amount of income going in rent or mortgage for those paying these varies significantly across the EU-15 – in the case of rent, from an average of below 12% in Greece, Ireland and Austria to around 20% in Denmark, Germany and the Netherlands, and in the case of mortgage payments, from 10% or less in Ireland and Portugal to over 22% in Denmark, Germany, Finland and the UK (Figure 7.8 – in this and the succeeding graphs both rent and mortgage payments are expressed on the same equivalised basis as income in order to be comparable)<sup>60</sup>.

#### 7.8 Average rent and mortgage, 2001



Both rent and mortgage payments represent a much larger proportion of income for those below the poverty line than for those above. In the EU-15 as a whole, both amount to just over a third of disposable income on average as opposed to 17–18% for those with income above the lines and only 13–14% for those in the top 10% of income-earners.

<sup>59</sup> There are also compelling grounds for taking explicit account of housing conditions when assessing relative poverty or deprivation, which then would make it more meaningful to compare income levels net of housing costs. See A. Atkinson, B. Cantillon, E. Marlier and B. Nolan, *Social Indicators: the EU and Social Inclusion*, OUP, 2002, which recommends the development of housing indicators to accompany other indicators of exclusion.

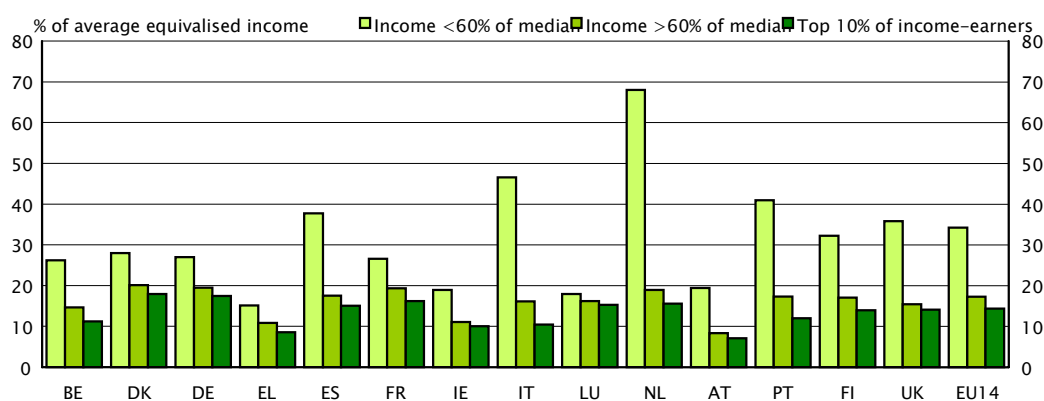
<sup>60</sup> These figures are based on responses to the same question in the ECHP, though it is difficult to know how comparable they are between countries, particularly in terms of whether they are in all cases gross of housing allowances, as they ought to be, and whether mortgage payments include all the monthly costs involved.

These differences reinforce the point made above that including actual or imputed rent in the assessment of income distribution and the incidence of poverty significantly affects the results (Figure 7.9). It also affects the relative position of those with income below the poverty line before allowing for this factor, which will clearly vary according to whether they are renting accommodation or are home-owners, the more so if they do not have a mortgage to service.

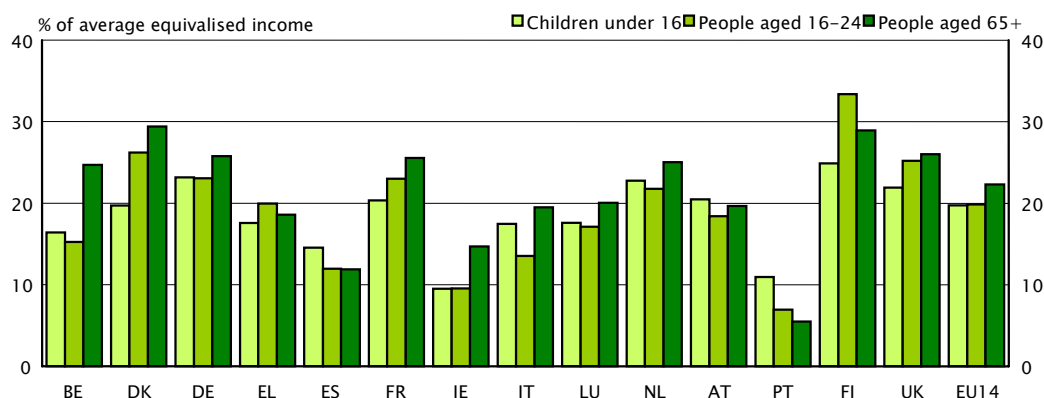
Again, the figures vary markedly between countries. In the Netherlands, where most of those concerned live in rented accommodation, average rent for those below the poverty line amounted to 68% of income on average and over 40% in Italy and Portugal, where comparatively few live in rented housing. In all three cases, average rent amounted to under 20% of income for other people. In Greece, Ireland, Luxembourg and Austria, by contrast, average rent for those below the poverty line was under 20% of income, though since rents are generally low in these countries, this was still in most cases significantly more than the rent paid by those with higher income.

The average cost of accommodation does not vary greatly between people in different broad age groups in the EU-15. For families with children, young people aged 16–24 and those of 65 and over, rent averaged around 20% of disposable income in 2001 for those paying it, though average mortgage payments, as would be expected, were significantly lower for the older age group (just under 14% of income as opposed to 20% for families with children, reflecting the significant numbers of older people who have paid off the mortgages they took out initially to purchase their housing). In most countries, however, average rent was slightly higher relative to income for those aged 65 and over than for families with children, the only exception being Portugal, where it was lower and Greece and Austria, where it was much the same (Figure 7.10).

### 7.9 Average rent by income level, 2001



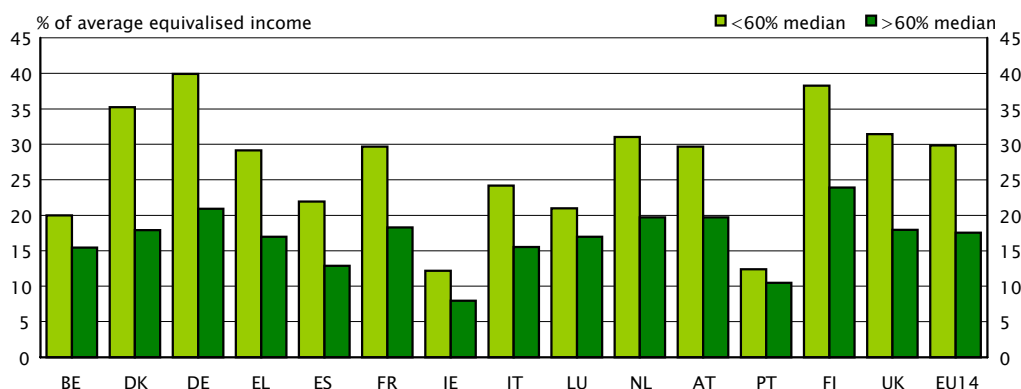
### 7.10 Average rent by age group, 2001



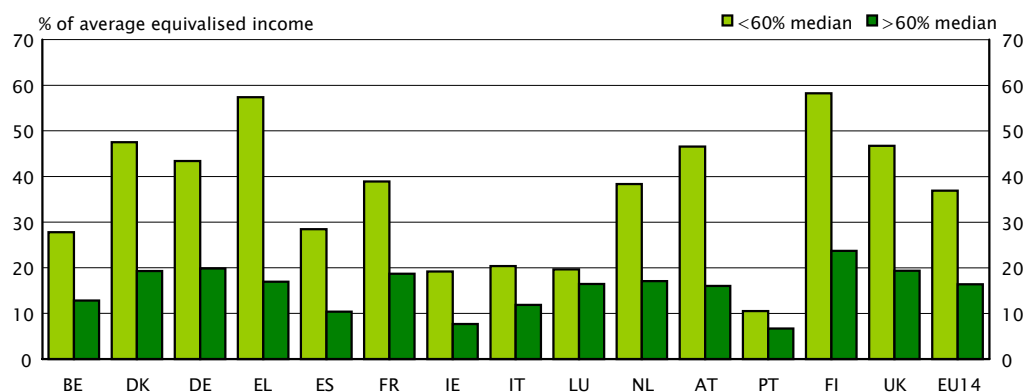
Average rent was particularly high for people of 65 and older with income below 60% of the median, averaging 35% of income in the EU–15 as a whole as opposed to 30% for families with children, though still slightly lower than for young people aged 16–24 (Figures 7.11 to 7.13). In Denmark, Germany, Greece and the Netherlands, rent payments averaged over 40% of income for older people below the poverty line, though in Spain, Ireland and Italy, only around 20% of income and in Portugal, only 13%.

The relatively high risk of poverty among those aged 65 and over in Ireland and Portugal as compared with other countries, which is indicated by the figures on disposable income may, therefore, be somewhat tempered by the relatively low costs of accommodation they tend to pay, coupled with the relatively small proportion paying rent at all. Similarly, in Greece, though rents are high relative to income, very few people in this age group live in rented accommodation. In Germany and the Netherlands, on the other hand, the relatively high costs of accommodation paid by the elderly suggests that the figures on income may understate the risk of poverty if this is defined to take account of housing costs.

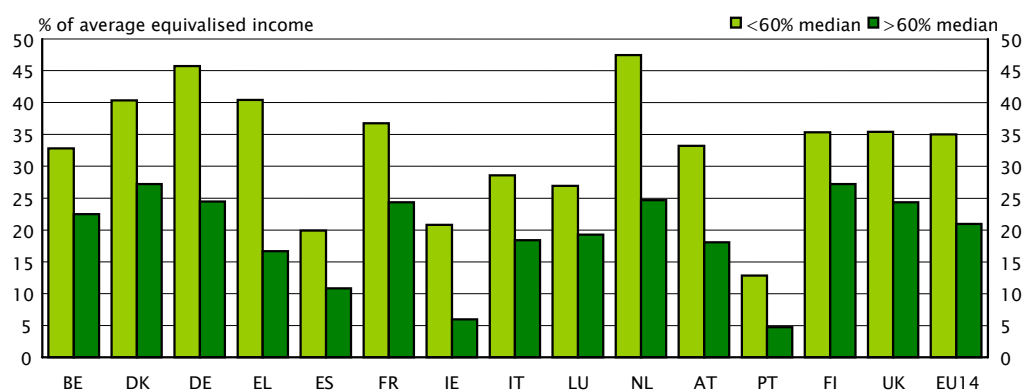
### 7.11 Average rent among children under 16 by income level, 2001



### 7.12 Average rent among people aged 16–24 by income level, 2001



### 7.13 Average rent among people aged 65+ by income level, 2001



Average rent is also relatively high in Germany for families with children with income below the poverty line (40% of income), as it is in Finland and Denmark (over 35% in both cases). In all three of these countries, the incidence of child poverty as conventionally measured is relatively low and would be higher if it were measured after allowing for housing costs. At the other extreme, average rent amounted to only 12% of income in Ireland and Portugal, where child poverty is a more serious problem according to income figures, and only around 20% in Belgium, Luxembourg and Spain.

In Denmark and Finland, rent was relatively high as well for young people aged 16–24 with income below the poverty line, as it was in Austria and the UK (in all cases, over 45% of income) and even more so in Greece for the comparatively small numbers paying rent. By contrast, it was under half as much in relation to income for young people in this category in Ireland, Italy and Luxembourg and only around 10% of income in Portugal. In all of the latter countries, apart from Luxembourg, the proportion with poverty levels of income among this age group was much higher than the EU–15 average, so taking account of the relative cost of accommodation should tend to reduce the figure as compared with the average.

It is apparent from the above, therefore, that the conclusions reached on the risk of poverty among people in different age groups from analysis of data on monetary income alone are subject to significant modification once housing costs are considered explicitly<sup>61</sup>. It is also evident that the extent of this modification varies markedly between countries.

## Non-monetary benefits

Effective income, in terms of its purchasing power, is also affected by the extent to which individuals and households have access to support services and other forms of assistance either at no cost or at below the market price which they would have to pay. Such non-monetary benefits mean that those in receipt, other things being equal, accordingly have more income to spend on other goods and services. Since the availability of these benefits varies considerably across countries, and between people within countries, they can have a significant effect on the relative living standards implied by any given level of income. Lack of data, however, makes it difficult to assess their importance and how far they are likely to affect the conclusions reached as regards both the relative numbers of people at risk of poverty and the extent of the dispersion of living standards from analysing differential levels of income alone<sup>62</sup>.

Nevertheless, some indication of the relative importance of non-monetary benefits across the EU can be obtained from the ESSPROS dataset on social protection expenditure<sup>63</sup>. This includes figures on government spending on non-cash social benefits, or benefits in kind, which covers, for example, outlays on child and elderly care services as well as on the provision of free transport and allowances to cover housing costs. Some of the benefits concerned are included in the data on income compiled by household surveys. This is particularly the case for housing benefits (which are treated in ESSPROS as benefits in kind even though they might take the form of cash payments to cover rent or mortgage payments). These are, therefore, excluded from the analysis. Expenditure on health care has also been excluded because it is rather specific and generally covers everyone – though it could reasonably be argued that it should be taken into account insofar as the non-availability of care would necessitate added personal expenditure out of income, if in an uncertain way. Spending on unemployment benefits in kind, which take the form, for example, of the provision of vocational training is excluded as well, since these again are somewhat specific and do not necessarily relieve people of the need to spend.

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<sup>61</sup> It should be noted that housing costs here do not include maintenance costs, except to the extent that they are included in rent or mortgage payments (e.g. in the case of loans to cover major repairs), which may add substantially to housing costs and which are not necessarily at a similar level for households with different levels of disposable income

<sup>62</sup> Although the ECHP contains some information on the receipt of non-cash assistance, this is very limited and it is hard to assess the benefits covered. No data at all are available for 6 Member States and the information collected in the other countries is confined to whether or not households received such assistance and how many months it was provided for.

<sup>63</sup> See Eurostat (2005), *European Social Statistics: Social protection expenditure and receipts, Data 1994–2002*.

It should also be noted that expenditure on education has also not been taken into account. Although this is not part of social protection, publicly provided education which is free of charge is sometimes included as a non-monetary benefit when assessing the contribution of public expenditure to household living standards. Since the education in question is available to every child, in principle at least on the same basis, it does not affect the distribution of income as such and, accordingly, in this context, like health care, is not a relevant factor.

This leaves expenditure on benefits in kind in respect of old-age, children and families, disability and social exclusion (the last being a residual item in the ESSPROS accounts to cover benefits not included under the other heads) Spending on these benefits, which are the focus here, amounted in total to around 1.5% of GDP on average in the EU as a whole (ie including the new Member States) in 2002, though to 5.5% in Denmark and over 6% in Sweden. These figures in themselves, however, are difficult to interpret in terms of their scale in relation to household disposable income. It is equally difficult to assess how far the expenditure concerned effectively adds to disposable income by relieving households of the need to spend on the goods and services which the benefits provide. While many of the benefits undoubtedly represent essential goods or services which people would otherwise have to buy – such as childcare or care for the elderly – some may be less essential and would not necessarily be purchased if they were not available free or at low cost. Unfortunately, the information available on benefits in kind is not sufficiently detailed to be able to distinguish between different types of benefit and there is a need for an in-depth investigation of both the relative scale of different types and the extent to which people in different circumstances and with different levels of income make use of them.

In the absence of such detailed information, it is possible only to give an indication of the potential importance of benefits in kind and how they might affect comparisons of relative income levels. Inevitably, this has to be based on simplifying assumptions about both the value of benefits in kind and their distribution between households. The main assumptions made are, first, that the expenditure on benefits in kind as recorded by the ESSPROS data reflects their value to households and that all the benefits considered – ie excluding those mentioned above –relieve households of necessary spending and so effectively add to their disposable income (see Box for details of the other assumptions made). These assumptions are unlikely to be valid in all cases and the resulting estimates, it should be emphasised, need to be regarded very much as illustrative of the possible magnitudes involved.

### The estimates of the value of benefits in kind in relation to income

The estimates of the value of benefits in kind to those living in households of different types are calculated from the ESSPROS data on public expenditure on these. This expenditure is expressed in relation to population in each of the countries, which is converted to an equivalised basis (adopting the modified-OECD scale), using the information in the ECHP on household structure, in order to be able to compare with the data on equivalised incomes. The underlying assumption made is that this expenditure reflects the value of benefits in kind to households, in terms of the spending they would need to incur out of disposable income if the benefits did not exist. This, of course, may not be the case, either because households could avoid incurring this spending or because their value is, in fact, higher or lower than this<sup>64</sup>.

Estimates of the effect of benefits on average income are then generated by assuming, first, that they are equally distributed across households which are eligible to access them – households with children in the case of child-related benefits in kind, those of 65 and over, in the case of old-age benefits<sup>65</sup> – and, secondly, that benefits which are means-tested go disproportionately to those with incomes below 60% of the median. While this is undoubtedly the case, the question is what precise proportion of the benefits in question goes to this group and there is no information on this. Here it is assumed that the proportion is half with the other half being evenly distributed across those on higher levels of income, but it could be either significantly more or significantly less than this. As emphasised in the text, the resulting estimates should, therefore, be regarded as illustrative only.

Expenditure on benefits in kind, as defined here, was equivalent, on average, to 3% of median 'equivalised' income in the EU-25 as a whole in 2000<sup>66</sup>. In other words, if benefits were evenly distributed across the population, they would have effectively added this much to the disposable income of someone on median income, assuming that the benefits in question relate to essential goods or services which households would have had to purchase if they were not provided free or on a subsidised basis. On the same assumption, they were equivalent to over 5% of equivalised income of someone at the poverty threshold, if this is taken, as elsewhere in this report, as 60% of the median, and more for people with income below this level, so helping to close the gap slightly in effective purchasing power between those at the bottom of the income scale and those further up.

<sup>64</sup> Higher perhaps since if the benefits in question were supplied privately they would carry a higher price because of the need to make profits; lower since competition among private providers would push down prices.

<sup>65</sup> The age group is defined in this way for purposes of simplifying the estimation. In practice, old-age benefits in kind might also go to people younger than this to varying extents in different countries.

<sup>66</sup> The ESSPROS data on expenditure for 2000 are related to income data for the same year, reported in the ECHP and other surveys for 2001, which is the latest year for which income data are available for all, or nearly all, Member States. For the new Member States, for which data on household composition is lacking from the statistics compiled by Eurostat on income in these countries, it is assumed that this corresponds to the average composition in the EU-15 in order to generate estimates of expenditure per equivalised person. It would be possible to use the LFS data which is the source of the estimates presented in Chapter 2 above to adjust for household composition in the new Member States but this has not been done here since the estimates are intended to be indicative only (there are insufficiently detailed data available on income to undertake the same analysis for the new Member States as for the EU-15 countries).

The relative scale of benefits in kind, however, varies markedly across the Union, from over 20% of the poverty income threshold in Sweden and Denmark and around 14% in Finland to under 4% of this threshold in Ireland, Italy, Malta, Slovakia and, most especially, in Poland (where expenditure on benefits in kind is much lower than elsewhere according to the ESSPROS data, which raises a questionmark over whether or not all of such spending is covered) (Figure 7.14). Apart from the last three countries, expenditure on benefits in kind in the new Member States relative to the poverty threshold was similar in 2000 to the EU average and significantly above in Hungary (just under 8%).

The analysis can be carried one step further by taking account of means-tested benefits in kind which are intended to concentrate the service or concession provided on those with low income levels. On the assumption that 50% of the expenditure on such benefits goes to those with income under 60% of the median – which may be too high or too low (see Box on the estimates) – benefits in kind would amount to almost 18% of the average income of those below the poverty line in the EU-15 (Figure 7.15)<sup>67</sup>. In Denmark and Sweden, they are equivalent to over 30% of disposable income on this assumption, even though means-testing is relatively limited in these two countries, and in the Netherlands, where it is much more prevalent, to some 46%. In all three countries, therefore, the effect of non-monetary benefits on both the distribution of purchasing power and the risk of poverty is potentially considerable and the implication is that the already relatively low risk of poverty could be reduced even further. By contrast, in Belgium, Spain, Ireland and Italy, benefits in kind on this assumption remain equivalent to under 10% of the average income of those below the poverty line, reflecting in the first, the limited extent of means-testing and in the other three, the limited extent of benefits in kind.

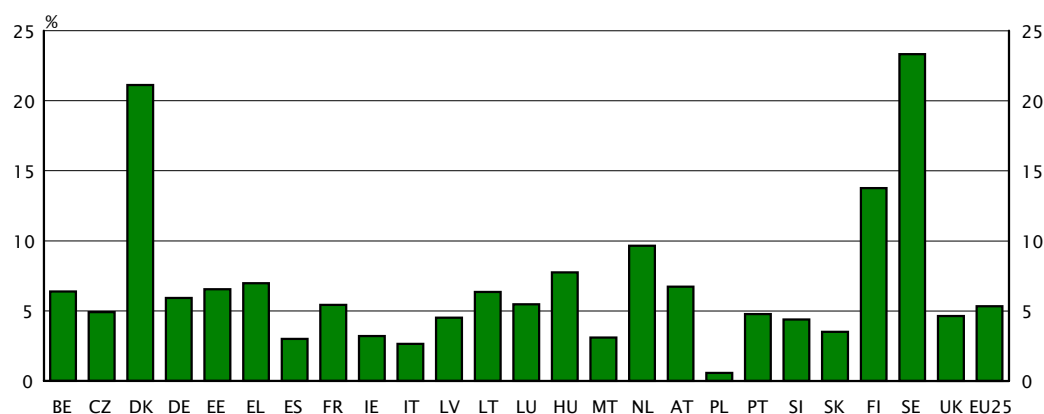
The analysis can also be extended to indicate the potential importance of benefits in kind for people in different age groups, specifically for families with children and older people in retirement.

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<sup>67</sup> Insufficient data are available for the new Member States to do the same calculation, though very few benefits in kind are subject to means-testing in all of these, apart from Slovenia, where they amount to around two-thirds of overall expenditure on benefits in kind.



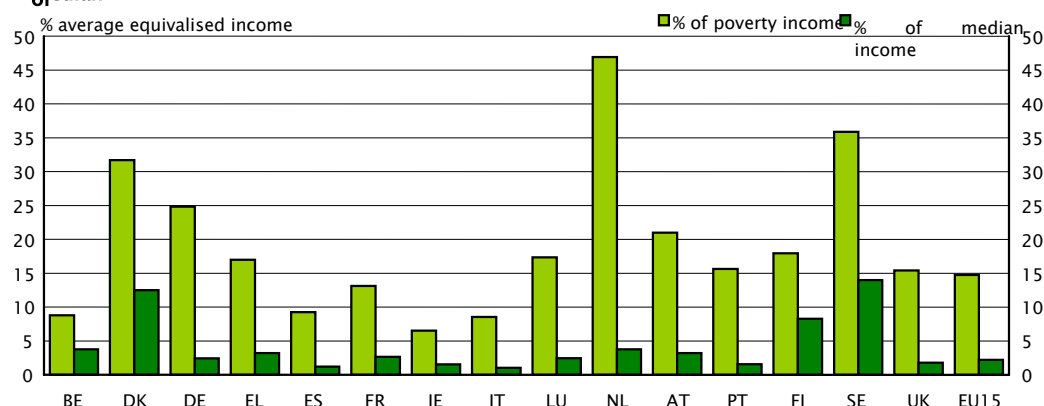
### 7.14 Average benefits in kind relative to poverty income threshold



Note: Benefits in kind are defined to exclude those relating to health, unemployment and housing; expenditure is related to equivalised population in order to express on the same basis as the income figures.

Source: Eurostat, NewCronos database, for ESSPROS data and poverty thresholds

### 7.15 Estimated average benefits in kind going to those on median income and to those with income below 60% median



Note: Benefits in kind are defined to exclude those relating to health, unemployment and housing; expenditure is related to equivalised population in order to express on the same basis as the income figures.

Figures 7.15–7.18

Source: Eurostat, NewCronos database for ESSPROS data and ECHP UDB microdata, own calculations

## NON-MONETARY FAMILY BENEFITS

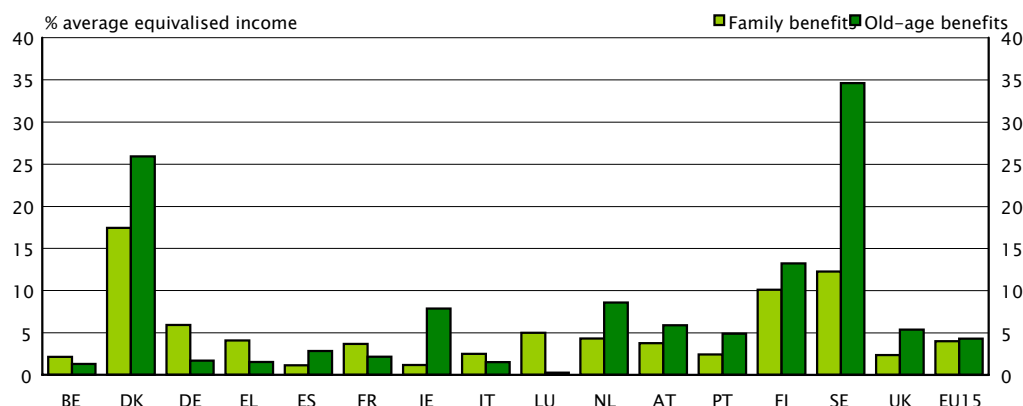
Expenditure on family and child benefits in kind, which include in particular the provision of childcare, is equivalent to around 4% of the mean equivalised income of those living in households with children in the EU-15 in 2000 (Figure 7.16). This figure, however, is as high as 17% in Denmark and over 10% in both Finland and Sweden. By contrast, it is only around 1% in Spain and Ireland and only just over 2% in Belgium, Italy, Portugal and the UK.

On the assumption that means-tested benefits are disproportionately concentrated on low income families in the same way as assumed above, expenditure is estimated to be equivalent to just over 8% of the average equivalised income of those below the poverty threshold in the EU-15 (Figure 7.17). In Denmark, this figure reaches over 40% and in

Finland and Sweden, to around 20%. In Spain and Ireland, on the other hand, it amounts to only 2% and in Belgium, Italy, Portugal and the UK, to under 5%.

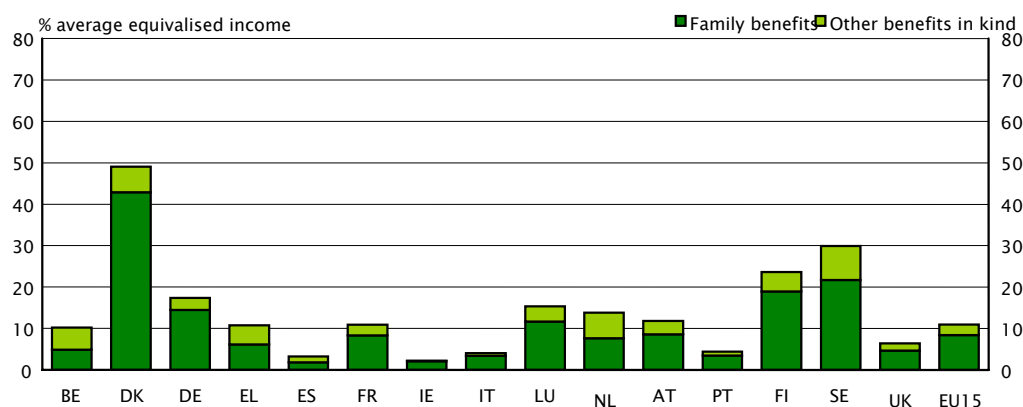
Taking account of benefits in kind, therefore, tends to increase the comparatively high levels of income of children and families in the three Nordic countries even further and reduces further the relatively small proportion with income below the poverty line. By contrast, taking explicit account of such benefits in assessing the relative position of children in Spain, Ireland, Italy, Portugal and the UK, the countries where the risk of poverty rate was highest in the EU-15 in 2001, would seem to make little difference.

#### 7.16 Average family and old-age benefits in kind relative to average equivalised income of recipients



Note: Benefits in kind are defined to exclude those relating to health, unemployment and housing; expenditure is related to the equivalised population in order to express on the same basis as the income figures.

#### 7.17 Estimated family and other benefits in kind relative to average equivalised income of those below 60% of median



Note: Benefits in kind are defined to exclude those relating to health, unemployment and housing; expenditure is related to the equivalised population in order to express on the same basis as the income figures.

### NON-MONETARY OLD-AGE BENEFITS

Expenditure on benefits in kind intended for the elderly are of a similar order of magnitude, on average, to family benefits, amounting to just over 4% of the mean income of those aged 65 and over in the EU-15 countries on an equivalised basis. As in the case

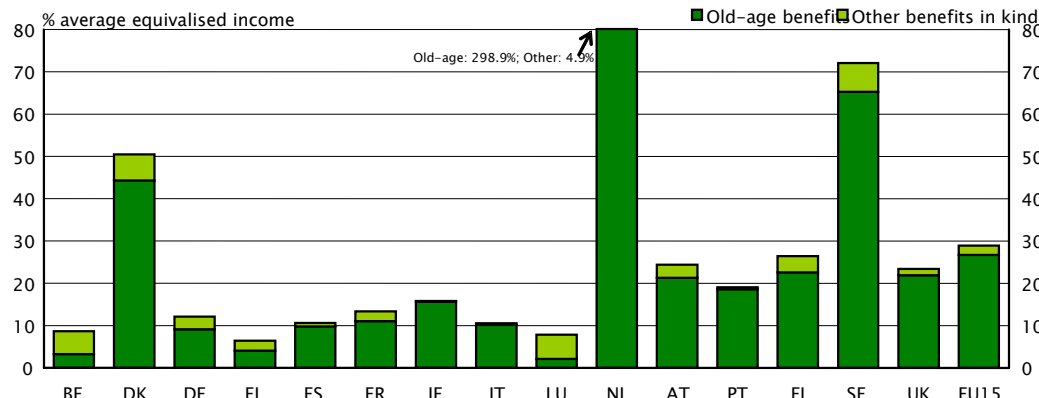
of family benefits, this expenditure is highest in the three Nordic countries, amounting to over 35% of mean income in Sweden and over 25% in Denmark. In Belgium, Germany, Greece, Italy and Luxembourg, by contrast, it amounted to under 2% of mean income.

Benefits in kind for the elderly tend to more subject to means-testing than those provided for families and children. In Italy, the Netherlands, Portugal and the UK, in particular, all or nearly all such benefits are means-tested, and in France, Ireland and Austria, two-thirds or more. In consequence, expenditure is concentrated on those with low incomes in these countries. In the EU-15 as a whole, such benefits are estimated to amount to some 27% of average equivalised income of those below the poverty line (Figure 7.18). In the Netherlands, where comparatively few people of 65 and over have poverty income levels, they are estimated, to have a much higher value than average poverty-level income, which might suggest that the assumption made to generate the estimate may be questionable – or, in other words, that the benefits concerned are less concentrated on those below the poverty line than assumed here. In Austria, Portugal and the UK, they amounted to some 20% of the mean equivalised income of those below the poverty line. Nevertheless, it is still the case, the Netherlands apart, that benefits in kind are much higher in relation to the equivalised income of the elderly below the poverty line in Denmark and Sweden than elsewhere (65% in Sweden, 45% in Denmark).

Taking account of benefits in kind for the elderly, therefore, makes very little difference to the conclusions reached on the basis of income data alone in the case of Greece and Belgium, where the risk of poverty among those of 65 and over is significantly higher than average, but potentially some difference in Ireland and Portugal, where such benefits amount to over 15% of average poverty level income.

These conclusions are not changed greatly if allowance is also made for other benefits in kind which the elderly – and, indeed, families and children – might have access to according to their circumstances. These benefits are classified in ESSPROS under disability and social exclusion (i.e. the residual category). Disability benefits in kind, of course, will go only to a small proportion of households but benefits classified under social exclusion might be distributed more widely among the elderly and families with children. The difficulty is not only knowing how much of the expenditure on these should be allocated to the two groups but also determining the nature of the expenditure concerned and its effective value to households. If the benefits in question were equally distributed across everyone, then they would amount to an average of 2–3% of the mean equivalised income of those below the poverty line in the EU-15 as a whole, but 5–7% in Denmark, Sweden and the Netherlands as well as in Belgium and Luxembourg.

### 7.18 Estimated old-age and other benefits in kind relative to average equivalised income of those below 60% of median



Note: Benefits in kind are defined to exclude those relating to health, unemployment and housing; expenditure is related to 65 and over.

## Conclusions

The concern of this chapter has been to present estimates of the effect of taking explicit account of housing costs, on the one hand, and non-monetary benefits, on the other, when assessing the relative position of households with differing levels of income as conventionally measured. The primary intention is to give an indication of the importance of allowing for such factors when interpreting estimates of income inequality and relative poverty rates. The estimates presented are intended to be preliminary rather than final measures of these two aspects and they will be examined further in future reports. The estimates of housing costs are also intended to give an insight, even if very partial, into the importance of taking account of the effect of wealth on the relative position of households and on the distribution of effective purchasing power in EU countries, which equally needs to be examined more extensively in the future.

The estimates show that housing costs vary markedly between households in differing circumstances, absorbing a much higher share of income of those at the bottom end of the scale than of those further up, which in general implies that households below the poverty line are in an even worse position than those further up. The extent of this, however, varies significantly across the EU. The extreme case is Greece where taking explicit account of housing costs, or imputed rent, reduces the relative number of people below the poverty line because most of these either own their own housing or pay no rent. Many of those concerned have small holdings in agriculture and consume their own produce to a substantial extent, which is equally not taken into account in the measurement of their income and which also tends to reduce the effective poverty rate<sup>68</sup>

Many of them are also aged 65 or over, which accordingly implies that the high rate of poverty among this age group in Greece might be overstated, which is equally the case in

<sup>68</sup> See Tsakloglou P. (1998), *op cit*, who estimates that including income in kind in the calculations would have reduced the relative poverty rate as conventionally defined from 21.1% to 18.4%.

Ireland and Portugal, where housing costs for such people tend to be low. By contrast, average housing costs of families with children with income below the poverty line are particularly high in Germany, Denmark and Finland, which implies that the poverty rates for these as conventionally measured might be understated – though in the latter two countries, in particular, the opposing effect of non-monetary benefits also needs to be considered. These and other examples not only highlight the importance of allowing explicitly for differences in housing circumstances when assessing inequality and relative deprivation but also emphasis the need to take account of such differences when drawing policy conclusions.

The conclusions are similar as regards non-monetary benefits, which vary equally widely in terms of scale between countries and which affect the relative position of households in differing circumstances, both those with children and older people and those with differing levels of income. The support provided by means-tested benefits in kind to low income families in a number of countries, therefore, implies that income can give a misleading impression of their effective living standards, quite apart from the greater importance of non-monetary benefits in general to households on low incomes as opposed to those on higher ones (ie a given level of goods and services provided free of charge represents a higher value relative to income the lower the latter).

Equally, benefits in kind going to families with children and the elderly, in the form in particular of care services, are much larger in some countries than others as well as being worth more to those at the bottom end of the income scale. Such benefits are especially important in Denmark and Sweden, where poverty rates in any case tend to be relatively low but where they are almost certainly overstated as compared with those elsewhere by the exclusion of non-monetary benefits from the definition of income.

## **PART V**

### **POLICY UPDATE**

## CHAPTER 8 RECENT POLICY DEVELOPMENTS AFFECTING INCOME DISTRIBUTION<sup>69</sup>

### Introduction

Although the achievement of a high level of social protection has a high priority in the European Union and common objectives have been set for social inclusion as part of the open process of coordination, responsibility for policy in these areas lies firmly with Member States. While these have pursued similar paths in many areas, the measures taken in respect of social benefits and taxation to achieve particular objectives and the priority attached to different ones vary significantly across countries. This variation reflects not only differences in the scale and nature of problems in this area which policy is aimed at addressing, but also differences in underlying political and economic circumstances (including in the resources available in the light of budgetary policy and the state of public finances), in the design and nature of the tax and benefit system and in social attitudes (including, in particular, towards redistribution and the relief of poverty).

Despite common objectives, therefore, it is difficult to detect common trends in the policy changes affecting income distribution and the relative position of those on low incomes which have been made by governments across the EU and the four candidate countries in recent years. This is evident from the review of these changes presented below, which is based on information provided by a network of country experts on the main developments in taxes, social benefits and other relevant aspects of policy as well as on their assessment of the effects of these on the relative position of those with differing levels of income and in different circumstances<sup>70</sup>. A major purpose of the review was not only to examine the policy efforts being made by governments across Europe to tackle the problems of low incomes identified in this report but also to assess how far the picture presented in earlier chapters, which in most cases is based on data relating to the position a few years ago, is likely to have changed in the intervening period.

The measures which have occurred mainly involve changes to income tax schedules, social contributions and social benefits, though they also include changes in minimum wages and social services. A widespread tendency has been to seek to increase incentives to work and to restrain public expenditure, in particular to ensure the viability of social insurance schemes, while at the same time trying to avoid reducing support for those on very low incomes by extending minimum income guarantees. This is especially the case as regards those in retirement. Income tax rates have been cut and/or allowances increased in many countries, along with attempts to simplify the tax system, and although those on low incomes have tended to benefit, those on high incomes have usually

<sup>69</sup> by Terry Ward and Loredana Sementini (Applica) and Peter Szívos (Tarki)

<sup>70</sup> This information was provided in the form of a common 'template' defining the measures to be considered and the approach to be adopted in order to ensure comparability across countries. The names of the country experts are listed at the beginning of this report.

benefited more. Moreover, any beneficial effects at the bottom end of the scale have been tempered by the fact that many of the people concerned do not pay tax and therefore receive no gain.

In the new Member States as well as the candidate countries, the policy action taken has been particularly diverse and not always consistent, which further increases the difficulty of assessing the effect on those with differing income levels. For example, although income tax rates have been cut in a number of countries and the number of rates reduced – at the extreme, to just one of 19% in Slovakia – in Poland, an additional top rate of 50% has been introduced. Similarly, while maternity and other parental benefits have been widely increased, in Poland and Romania, they have been reduced.

The main policy changes since 2000 and, more especially, since 2002, are outlined below country by country, starting with the EU-15 countries, followed by the new Member States and then going on to the four candidate countries. Tables in the annex to the chapter summarise the effect of the changes on the bottom 20% and top 20% of income earners.

### The eu-15 countries

In *Belgium*, the most important policy change, in cost terms was the tax reform progressively implemented over the period 2002–2005. This included the extension of the middle tax brackets, the consolidation of the 52% and 55% tax brackets into the 50% bracket, the alignment of married and single tax allowances and the introduction of tax credit on earned income, replaced in 2004 by an increased reduction in social security contributions for low paid employees. The targeted reduction in social contributions will be fully implemented in 2006, while the tax credit will continue to apply to the self-employed.

The reform was accompanied by an increase in child benefit, in the form of the transformation of the child tax allowance into a refundable tax credit, so benefiting low income families with several children previously unable to benefit fully from the tax allowance. This amounts to EUR 340 per child. Lone parents were granted a supplementary tax allowance of EUR 1 180 at the same time.

Various measures have also been introduced since 2000 to lower the cost of labour, in the form especially of reductions in employers' social contributions and targeted particularly on low wage workers.

The minimum income guarantee for older people was increased by almost 10% between 2001 and 2005 and entitlement to receipt was extended to everyone in the household. In addition, tax relief was introduced to those taking care of a parent of 65 or over in their home.

The general minimum income guarantee (*Revenu d'intégration*) has been raised in recent years but only very gradually (by 1% in October, 2004, with a further 1% planned for October 2006 and 2% for October 2007).



The tax reform also increased significantly the childcare costs deductible from tax (from EUR 6.84 a day to EUR 11.16 a day), so reducing the effective cost concerned. In a similar vein, a system of service vouchers (*titres services*) which households can use to buy services such as childcare, care for the elderly or home-help from authorised agencies at reduced prices, and partially tax deductible (30% up to EUR 2200), was introduced in 2003. The aim in part was to encourage a shift of both purchases and the workers providing the services from the informal to the formal economy. The companies concerned receive a government subsidy (of around EUR 21 per voucher) to cover labour costs. (Over 12,500 people have so far been employed under the scheme, many of working before in the shadow economy).

Two assessments of the tax reform (by Valenduc in 2002 and Orsini in 2004, the latter using the Euromod microsimulation model) concluded that the gains of the reform are concentrated in the middle and upper income groups. Moreover the tax credit component of the reform seems to have a very limited effect on labour supply and are unlikely to be concentrated on low-wage workers. Potential second round effects are, therefore, unlikely to alter the direct effect of the tax reform substantially.

In **Denmark**, the 2004 tax reform increased income tax allowances, reduced marginal tax rates, especially for those on low income, and raised the income threshold for the middle tax rate, so that by 2007 only 60% of those in full-time employment will pay middle rate tax compared with 90% previously. The effect of the reform is likely to largest on middle income groups but all those employed will enjoy some tax relief, low-income groups more than high income ones.

In 2002, benefits for refugees and immigrants ("*start help*"), introduced to help these find jobs, became subject to much stricter qualifying conditions.

In January 2004, a ceiling was imposed on general social benefits with the aim of increasing work incentives.

Under the tax reform, the mandatory requirement on both the employed and benefit recipients to save 1% of income (Special Pension Saving) was suspended and seems unlikely to be reactivated in the near future if at all.

In **Germany**, the most important recent policy changes affecting income distribution are the 2000 income tax reform, the exemptions from social security contributions and the Hartz laws. The tax reform was implemented progressively over the period 2000–2005. The main changes were a significant reduction in tax rates, with the lowest rate being reduced from 22.9% in 2000 to 15% in 2005, and a significant increase in personal allowances.

According to Haan and Steiner (2004), relative gains should increase with taxable income, leading to a widening of income inequalities. (In particular, the net income of the bottom two deciles are estimated to increase by around 1%, that of the top two by 4% and 7%,

respectively. Equally, the redistributive effect of increased allowances is limited since those not liable to tax are not affected.

The 'mini-jobs' reform introduced in April 2003 extended the existing exemption from social contributions from gross earnings of EUR 325 a week to EUR 400 with reduced contributions for those earnings up to EUR 800 EUR: The effect should be both to favour workers on low wages and to encourage those employed in the informal economy to take up regular employment. It should also benefit those working only a few hours a week, such as students or pensioners.

The Hartz laws (named after the Commission which reported in 2002) are probably the most radical reform of the welfare system so far undertaken in Germany. They put the emphasis of policy on activation and the prevention of exclusion through employment policies, an improved balance between working and family life and targeting social assistance on the most vulnerable groups. They include an expansion of childcare facilities, more help in finding jobs, increased incentives to work (through reducing the duration of unemployment benefits), combating the informal economy, reform of the Public Employment Service, a tightening of the rules governing entitlement to unemployment and social assistance benefits. The last is the most controversial aspect of the reform because by reducing benefits it might increase poverty and inequality.

Under the laws, an in-work child benefit for low-income families was introduced in 2005 (of EUR 140 a month payable for three years).

Pension reforms aimed at limiting the rate of contributions payable will result in a reduction in pensions in relation to earnings (the standard replacement rate falling from 70% to 64%) but only from 2030. The intention, however, is to prevent this leading to increased poverty among the lowest recipients.

In *Greece*, a number of developments initiated in the late 1990s have gathered pace more recently. The means-tested social solidarity supplement for pensioners was raised by 107% in real terms between 2000 and 2005, while average earnings over the same period rose by less than 14% in real terms.

Over the same period, non-contributory basic pensions for farmers as well as means-tested social pension were increased by 42% in real terms. In addition, contributory pensions for farmers have been phased in since 1998 and both the number of recipients and the value of the pension have risen gradually. Latest figures show that in 2004 about two-thirds of all pensioners among farmers were entitled to a contributory pension that raised their total retirement benefits by 45% on average.

On the other hand, much publicised policies implemented in 2000–02 have had much less of an impact, mainly due to low take-up. These are:

- a rebate of social insurance contributions for low earners

- unemployment assistance for the long-term unemployed aged 45 and over
- refundable tax credits aimed at households in less favoured areas and at families with children aged 6–16

More recent measures introduced by the incoming Conservative government following the general election of March 2004 seem likely to have a regressive distributional effect.

The abolition of the Social Insurance Funds' Solidarity Account, which served to transfer income from wealthier social insurance funds to those facing financial difficulties and funded by a "solidarity contribution" in the form of a progressive tax on pensions, is likely to raise income inequality among pensioners. (Calculations show that higher pension recipients stood to receive a substantial amount from the winding-down of the fund, those on low pensions little at all.)

Income inequality among pensioners is also expected to widen as a result of the uniform uprating of pensions in 2005. Between 1994 and 2005, low pensions were fully indexed for inflation, while higher levels were only partially indexed, so narrowing income inequality among pensioners.

In *Spain*, there was a partial tax reform in 2003, with a reduction in the maximum tax rate from 48% to 45% and in the minimum rate from 18% to 15% and the introduction of a refundable tax credit for working mothers with children below 3 (of EUR 1200 a year. While these served to increase the disposable income of taxpayers across the board, the gain to the higher income earners is likely to have been greater than to those at the lower end of the scale and non-taxpayers (ie those with incomes below the tax threshold) did not gain at all. As a result, the effect was likely to have been to widen income inequality slightly.

Since 2000, tax allowances and higher rate bands have not been indexed in line with inflation, except in 2003 and in 2005, when the uprating of bands and limits in line with expected inflation over the coming year was introduced. In consequence, higher income earners have tended to experience some (relatively small) reduction in their incomes relative to those lower down the scale.

The lower and upper earnings limit for payments of social contributions were not indexed for inflation between 2000 and 2005, the effect being in this case to benefit higher income earners and to reduce disposable income for towards the bottom end of the scale. In 2005, the lower earnings limit was increased above the rate of inflation, so relieving some low income earners of social contributions.

In 2005, minimum pensions and social assistance to the unemployed were increased above the inflation rate, so benefiting those at the lower end of the income scale, though over the preceding 5 years, these benefits had been eroded by inflation. The net overall effect over the period was therefore relatively small.

Minimum wages were also increased well above inflation in 2005 (by 11%), more than compensating for the reductions in real terms in previous years (as the uprating according to expected inflation was below actual inflation). In 2005, however, minimum wages in real terms were only 2.5% above the level in 2000, implying some reduction relative to average earnings.

In *France*, the most significant policy change affecting income distribution between 2000 and 2005 was probably the reductions in income tax cut made under successive Governments. The first set of changes in the tax schedule (2000–2002) were slightly progressive, due to the introduction of PPE, a refundable tax credit, alongside the cut in rates. But the effect of these changes on disposable income at the lower end of the scale relative to the top was limited since a substantial number of people at the lower end income distribution are not liable to income tax while the refundable tax credit does not benefit the poorest (since it is conditional on being employed and therefore does not apply to the unemployed, those in retirement and those living on social assistance).

Since 2002, there has been a uniform reduction in all higher rates of tax, markedly diminishing the progressive nature of the tax system. The cut of 5% in 2002 benefited the top decile most of all (40% of the overall 'giveaway' going to them). The bottom three deciles gained nothing at all.

Universal Healthcare Insurance (CMU – *Couverture Maladie Universel*) has also been introduced since 2000, providing 6 million people with free health care and bringing those not previously covered into the health insurance system.

In 2004, the allowances for families with children under 3 were merged into a single benefit, the PAJE. The upper income threshold (above which no benefit is payable) was raised at the same time so as to extend coverage to 200,000 additional families (bringing the total covered to 80–90% of all families with a child under 3), so benefiting those at the upper end of the income scale.

The French unemployment insurance scheme (UNEDIC), managed by the social partners, was also modified over the period 2000–2004. In 2001, a '*back-to-work assistance plan*' (PARE) was introduced linking entitlement to benefit to those becoming unemployed having worked for 4 of the preceding 15 months as well as to them agreeing an individualised plan for return to work. The 'single decreasing benefit' (*allocation unique dégressive*, AUD), with payments declining with the duration of unemployment, was abolished at the same time. In 2002, the social partners agreed a three-year plan from 2003–4 for increasing contributions (to 4% for employers and 2.4% for employees) and reducing the entitlement period from 4 of the previous 15 (or 21) months to 4 of the previous 7. In consequence, an estimated 150–180,000 became ineligible for unemployment insurance benefits in 2004. A third of these will be picked up by the ASS ('specific solidarity allowance'), another third by the RMI, leaving a third at least almost certainly worse off.

The pension reform of Summer 2003 – extending the number of years of contributions required for a full pension to 40 from 2008 for all employees and then to 41 from 2012 and 41.75 from 2020, restricting early retirement, raising pensions for the lowest paid (to 85% of the net minimum wage), introducing a financial incentive for postponed retirement and new legislation facilitating private pensions – is unlikely to have an immediate effect on the distribution of income.

In *Ireland*, cuts of 2% in both the standard and top rate of income tax (to 20% and 42%, respectively) benefited those towards the top end of the income scale, in particular, especially at the very top.

In 2004, the application of social contributions to benefits in kind, which tend to be received proportionately more by those in the middle and upper ends of the earnings distribution, had the reverse effect of reducing relative incomes of the more prosperous. The abolition of the ceiling on contributions paid by the self-employed in 2001 also tended to narrow the income distribution, though this was offset by a reduction in their contribution rate from 5% to 3%.

Since 2000, child benefits have been increased substantially, though predominantly between 2000 and 2002, while Child Dependant Additions (CDAs), paid only to those in receipt of a social welfare, have been frozen in nominal terms. The rationale was to shift child support away from payments conditional on not being out of work.

For social welfare recipients, child support increased by around 30% in real terms between 2000 and 2002, with a slight fall since. For others with children, benefits the increased markedly over the whole period, though much more in the first two years than since.

Both contributory and non-contributory old-age pensions increased relative to wages between 2000 and 2005, by 10–14% more for a single person and by slightly more than this for a couple. Since pensioners tend to disproportionately towards the bottom end of the income scale, this of itself should have tended to reduce income inequality.

Rates of both unemployment assistance and benefit have risen by significantly more than wages since 2000 (by around 12% for single people and 20% for couples).

Measures were introduced in 2000 and 2001 to increase childcare, in the form, for example, of additional civil service crèches, additional childcare support staff, the training of childcare workers and capital grants for commercial crèches for community-based childcare facilities.

The minimum wage was increased by around 3% more than the rise in average wages between 2000 and 2005, estimated to have reduced slightly the proportion of those with income below 60% of the median.

Model simulations suggest that policy changes described above had a combined effect of reducing the proportion of people with income below 60% of the median by around 1 percentage point between 2000 and 2005, with most of the reduction occurring in the first two years. They also suggest that there was a larger reduction (of some 3 percentage points) in the proportion below 50% of the median – ie among the poorest – though with the fall being concentrated in the years after 2002 rather than before.

In *Italy*, the most important policy change affecting the distribution of income in recent years has been the Personal Income Tax (IRPEF) reform, implemented in stages between 2003 and 2005. This has served to consolidate income tax rates from 5 to 4, an increase in the lowest rate from 18% to 23% and a reduction in the top rate from 45% to 43%, coupled in each case with a significant raising of income thresholds. At the same time, tax allowances have also been consolidated, with tax deductions for dependents being reduced in line with income to ensure the progressiveness of the tax system.

A lively debate has been going on in Italy since 2003 on the effect of the reform on income distribution, and a number of studies (see references below) have shown that so far, it has been negligible. It is expected, however, to widen inequalities from 2005 on (when the highest tax rate is reduced and the income threshold raised), benefiting middle-income groups in particular relative to those at the lower end of the scale

The introduction of the ‘Biagi Law’ in 2003, initiating new forms of temporary employment contract and attempting to make it easier to enter the labour market, is likely, in contrast, to improve the relevant position of some of those at risk of poverty, in particular, workers without permanent jobs, the unemployed and young people looking for their first job. Some of the new contractual forms are likely to affect disposable income since they do not involve the payment of social contributions.

In *Luxembourg*, the most significant change in this area since 2000 are the income tax reforms of 2001 and 2002; the increase in the child benefits in 2002 and the pension reform of 2002.

The income tax reform was aimed at reducing the weight of the income tax, with the top rate being cut from 46% in 2000 to 42% in 2001 and 38% in 2002 and the tax threshold being increased by almost 50% at the same time (to EUR 9,750 in 2002). The effect was to increase the disposable income of the most prosperous and to leave that of the least prosperous largely unaffected.

This effect was offset in small part by an increase in 2002 in child benefits (by EUR 25 a month). At the same time, private sector pensions (old age, survivor and disability) were brought into line with those in the public sector, the main changes being an increase in the flat-rate component (dependent on the number of years of contributions) by 12% and of the earnings- (or contributions-) related component by 4%. Though this will serve to raise relative incomes of pensioners, the effect on income distribution among pensioners is as yet unclear.

In the *Netherlands*, there have been a number of changes in the tax and benefit system since 2000 – such as the introduction of tax credits, the abolition of unemployment benefits at 70% of the minimum wage after exhaustion of entitlement to earnings-related benefit and subsidies for childcare – but none have had a major effect on income distribution. In addition, child benefits, minimum benefit levels and minimum wages were not indexed for inflation between 2003 and 2005, so reducing the relative income at the lower end of the income scale, though only slightly because of the low rate of price increase.

Major changes, however, are expected to occur in 2006 in employment and disability policy and in health care insurance, which are likely to reduce disposable income and have (negative) effects on income levels.

In *Austria*, the tax reform which came into effect in 2005, lowered the average tax rate for all income groups and increased the income limit for tax credits, which particularly benefited low income earners. The reform also increased the supplement for children for single parents, so tackling the high risk of poverty among these in the country. This followed an earlier change in 2000–2001 when tax rates and had been reduced and the general tax credit along with child tax credit increased.

An important change was the introduction in 2002 of universal childcare benefits, which enabled mothers who had never been in work to receive the payments in addition to those in employment and which raised both the level and duration of the benefits. The overall effect of this was to increase the income of those at the bottom end of the income scale, though the extension of duration may reduce incentives to work. (Statistics suggest that mothers tend to return later to employment than was the case with the former parental leave allowance.)

Since 2000, pensions have not been uprated in line with inflation and have fallen even further behind average earnings. On the other hand, the minimum pension top-up (*Ausgleichszulagenrichtsatz*)<sup>71</sup> was increased in 2000, 2002 and 2003 more than the consumer price index, especially for couples. At the same time, the pension reform of 2004 effectively reduced the pension receivable by those retiring early.

In *Portugal*, a number of policy developments occurred over the period 2000–2005 which had the effect of increasing the income of the poorest groups in society while narrowing the distribution of income only slightly.

In particular, minimum income and minimum pensions have been consistently increased above the inflation rate over the period as well as above the rise in average earnings (by around 2% a year more between 2000 and 2005), while minimum wages have also been raised slightly in relation to earnings.

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<sup>71</sup> In Austria there is no real minimum pension, but those eligible for pensions receive a minimum pension top-up if their pension together with other income falls below a minimum level.

The system of child benefits was changed in 2003 from being a universal one to one which removed entitlement to benefit from households with income above a certain level. The effect was to make the system more progressive and more effective in tackling poverty (this is confirmed by a study by Rodrigues, Albuquerque and Fernandes simulating the impact on income distribution).

In addition, the main personal income tax credits (in respect, for example, of savings retirement and education and investment in shares) were ended in 2005, largely affecting the middle and high income groups, so serving to narrow the distribution of income a little.

In *Finland*, very few of the policy changes introduced have had a clear-cut effect on income distribution. Two most notable exceptions perhaps are, first, the almost continuous cut in income tax (which is due to carry on in the next few years, in particular in respect of capital taxes), which has benefited higher income earners; secondly, the changes in unemployment benefit, which have benefited those at the bottom end of the scale. These began in 2002 with a rise in the replacement rate from 42% to 45% and further measures took effect from 2003, including an increase in the duration of benefits from 24 to 28 months (a move contrary to the trend in the rest of the EU to reduce duration so as to increase incentives to work).

Major reforms to the pension system were agreed in 2003 and took effect in 2005, one of the main aims being to encourage people to stay in work longer by increasing the pension receivable by those retiring at an older age. At the same time, the earnings on which pensions are calculated was changed from those received over the last 10 years to the those received over the working career as a whole, so tending to reduce the amount involved. Up to 2008, however, those retiring can choose the most advantageous option.

In addition, as part of the *Action Plan Against Poverty and Social Exclusion*, spending on health care and social services, mainly for those with disabilities and the elderly, has been increased in the period 2004–2007, along with the allowance for home care and maternity and minimum sickness benefit.

According to recent figures, the widening of the income distribution which occurred in the 1990s seems to have continued since 2000, perhaps due to increased income from capital rather than to policy changes.

In *Sweden*, tax allowances were raised in 2005 in the form of increased allowance for pension contributions (following an earlier rise in 2000–2002), increased basic allowances for low and middle income earners and an increase in the level at which wealth tax is payable. This effect was to increase disposable income at the lower end of the scale but to a limited extent since not all those on low income pay tax. In addition, inheritance and gift taxes have been abolished as from 2006, benefiting the wealthier members of society especially, though to a relatively small extent.



Reform of the pension system took effect in 2003. As part of this, the minimum pension, now termed the guaranteed pension, was increased but also made taxable, so benefiting non-taxpayers at the bottom end of the scale in particular.

In 2001, a ceiling on user charges for child and elderly care services was introduced, the aim being to try to ensure that low-income families were not deterred from using the service (which is heavily subsidised) by high fees or, in the case of elderly care, to reduce the incentive for avoidance of fee payments, such as by transferring wealth to relatives. A further concern was to tackle high and increasing marginal deduction rates (poverty traps) facing lone-parent especially because of the combined effect of income-related fees for childcare and means-tested housing allowances.

Although the effect of these measures was to benefit users of care services generally, the gain was greater for higher income earners than for those in lower income groups who were probably not paying the highest fee rates anyway.

In the *UK*, income tax was reduced slightly between 2000 and 2005, mainly as a result of a significant increase in the lower rate limit, largely in 2002 (by around 20%) coupled with rises in allowances for old-age pensioners. These had the effect of increasing disposable income though probably more for those further up the income scale than those at the bottom, any of whom do not pay tax anyway. The lower earnings limit for social contributions was also increased significantly, together with the upper earnings limit and an increase in the contribution rate charged on higher incomes. The latter tended to reduce income inequality while the former probably tended to widen it slightly.

Consistent rises in council tax (ie on housing) above inflation also tended to reduce income inequality since they affected those with higher incomes more than those with lower levels eligible for relief.

Basic pensions increased virtually at the same rate as average earnings over the period 2000 to 2005. However, means-tested social assistance to pensioners increased by substantially more (by around 25–30% more), partly as a result of an easing of the rules relating to savings and income from employment, so benefiting those at the bottom end of the income scale. On the other hand, there was a significant reduction in real terms in income support – or social assistance – to younger age groups.

The introduction of child tax credit and subsequent increases in this resulted in substantial increases in support – ie well above the rise in average earnings – for low and low-middle income families, as well as increased support for childcare in a number of cases, between 2000 and 2005.

The minimum wage was consistently increased above the growth in earnings over the period 2000 to 2005, by over 10% more for those over 21, while in 2004, a minimum wage was introduced for those aged 16–17. Those on low wages have therefore experienced some improvement in their relative position.

Overall, the aggregate net effect of the tax and benefit measures introduced since 2000 seems to have been to benefit those towards the bottom end of the income scale more than those further up, so reducing income inequality.

## The *new* Member States

During the period of accession to the EU in the new Member States and the current candidate countries, in the final years of transition from planned economy, there were turbulent changes in society and consequently in social welfare policy. Each year, almost every law affecting income distribution was amended, in many cases several amendments being introduced rapidly, some of which were cancelled shortly after implementation (examples include alimonies for single mothers and indexation rules in Poland). There were changes to personal income tax (rates, exemptions, reliefs), corporation tax (exclusively reduction of the rate), changes in indexation and the re-setting of minimum wages and state pensions, as well as other element of the benefit system.

In the *Czech Republic*, the level of minimum wages in relation to social benefits has been discussed a great deal in recent years, as it has in many of the new Member States, the concern being to finding a suitable balance between protecting people from poverty and not destroying incentives to work. Since 2000, for a single person, the minimum wage has been increased from just under the minimum subsistence rate to 15% above this at the beginning of 2002 and to 37% above at the beginning of 2005. For a couple with two children, it has been raised from 67% of the minimum subsistence level applying to them to 98% of this level at the beginning of 2005, which still means that such a family can receive slightly more by not working than by being employed. At the same time, although the minimum wage has risen in relation to average earnings – from 33.4% in 2000 to 37.5% in 2004 – it is still under 40% of the latter.

The problem, in practice, mainly affects low skilled workers, who might well not be capable of securing a job paying much more than the minimum wage, especially if they have large families. In such cases, disposable income could be much higher than if they are employed and the incentive not to work overwhelming. This is often the case with Roma families, who are, therefore, especially vulnerable to falling into the poverty trap. For many of these, there is little motivation to hold a minimum-wage job when they can obtain more income by staying at home, collecting benefits and perhaps even doing occasional work in the informal economy.

All family benefits have been adjusted each year in line with inflation. Moreover, there was a substantial increase in parental allowances in 2004 (by 40%), well above the rate of inflation, so giving rise to a marked increase in real terms in these benefits, aimed at helping parents caring for children under four, over the period 2000–2005.

As in other new Member States, reform in the tax–benefit system is ongoing. A commission of experts was established in 2004 to design a new pension system and the

Ministry of Labour and Social Affairs have been preparing a new Act on Social Needs and Social Inclusion as well as significant changes in sickness benefit.

In *Cyprus*, public assistance (the means-tested benefit of last resort) was increased by between 25% (for a couple with two children) and 37% (for a single person) in real terms between 2000 and 2005., significantly more than the rise in average earnings (around 10% in real terms). This was coupled with the strengthening of incentives to work (higher income disregards plus employability measures). (In 2005, the minimum income guaranteed under social assistance top a couple with two children corresponds to around 33% of the median.)

In 2002, a universal child benefit was introduced, payable up to the age of 18. or longer if in full-time education or national service, with supplements inversely related to income. (The risk of child poverty, 11% in 2003, is lower than the EU average.)

The income tax system has also been reformed, the top rate of tax being reduced from 40% to 30% and income thresholds raised. As a result, the average tax rate on annual income of EUR 70,000 was reduced from just under 32% in 2002 to 20.6% in 2005 and on income of EUR 14,000 from 5% to zero. To compensate, the standard rate of VAT was increased from 10% to 15%. The overall effect is to widen income inequalities.

At the same time, the earnings-related pension system, introduced in 1980 to replace the old flat-rate non-contributory system, is maturing and average pensions are increasing as a result. This has been accompanied by an increase in the minimum pension (by 82% in real terms between 1997 and 2004) as well as in the social pension (by 70%). This can be expected to have some effect on the high risk of poverty among the elderly which is much higher than elsewhere in the EU (52% in 2003, down from 58% in 1997).

In *Estonia*, where there is a single rate of income tax which applies to all incomes above the tax threshold (ie the tax is proportional above this level), the tax rate was reduced from 26% to 24% in 2005. Under present legislation, the tax rate is scheduled to fall further to reach 20% by 2009. At the same, the personal tax allowance (the threshold) will be increased from EEK 20400 in 2006 to EEK 24000. These changes benefit middle and upper income earners, in particular.

A parental benefit scheme was introduced in 2004 to provide a replacement income of 100% for one of the parents over the first year following the birth of a child, with a ceiling of three times the average wage and with a flat-rate minimum equal to the level of the minimum wage for those not previously in work.

In 2004 the child benefit for the first child was doubled (from EEK 150 to EEK 300) and the variation in rates according to the number of children was ended.

In 2001, a new scheme of social benefits for people with disabilities was introduced, increasing the income of those concerned, but since then, benefit rates have remained unchanged.

A new unemployment insurance scheme was implemented from 2002–2003 (contributions were introduced in 2002 and the payment of unemployment insurance benefits – at 50% of former earnings – began in 2003). Entitlement of the unemployed to benefit depends on having paid contributions for 12 months and not having left their job voluntarily. Unemployment allowances, for those not qualifying for insurance benefit or who have exhausted their entitlement, have remained unchanged throughout the period 2000–2005.

In 2005, the minimum guaranteed income level, which is the basis for calculating means-tested social assistance and which had remained unchanged since 1997, was increased by 50% (to EEK 750) to above the cost of a basket of food calculated to be the minimum necessary for subsistence.

In *Hungary*, a number of changes have been made in the past few years which affect the distribution of income. In 2001, the minimum wage was raised by 57%, followed by a further rise of 25% in 2002, so that minimum wages were almost doubled in two years.

Cuts have also been made to personal income taxation,. At the lower end of the scale, those earning the minimum wage have paid no tax since 2002 and tax has also been reduced for middle and upper income earners. In 2005, the number of rates was reduced from three to two rates by the elimination of the middle rate (of 26%), coupled with changes in tax bands. This had the effect of lowering the tax bill for a large share of taxpayers (all those earning above HUF 0.8 million), but middle and upper income earners gained the most.

In order to encourage employment, people receiving childcare allowance for children of over a year-and-a-half or receiving child support are permitted to work for up to four hours a day. Since 2003, once the child is one-year old, parents have been able to transfer childcare allowance to grandparents to enable them to return full-time employment. In addition, since January 2005 recipients of the childcare allowance have been allowed to work part-time after the child is one.

Housing maintenance support, part of the social assistance system to help those in need, was reformed in 2004, with the amount being increased significantly and local authorities being given a capitation grant to ensure they can cover its payment.

Under a programme agreed in 2004, needy families have been given help to manage debt on home loans and unpaid utility bills (with an option of suspending repayment for up to 10 years) and debt management services have been expanded. The programme is aimed at increasing the number of recipients of such services by 5000 by 2005 as well as to

eliminate overdue debt, which is expected to affect some 10,000 people. As a result, household debt is expected to be cut by HUF 2 billion.

A major priority of policy is to reduce the risk of poverty among children (as indicated in the Hungarian NAP on social inclusion). In 2000, childcare benefit was re-introduced after being temporarily withdrawn by the Government at the time. The amount is related to the previous earnings of the mother, with an upper limit of 70%, and payable for the first two years after birth. In 1999, a tax credit system was introduced for families with children and the amount being subsequently increased considerably, especially for those with three or more children. According to data from 2002, however, 17% of families do not have taxable income, so are unable to benefit at all, and 6% are able to claim only part of the credit. Since then, these proportions have increased since the minimum wage has become no longer liable to tax and the number of recipients of full credit has fallen. (According to 2004 data, 600,000 employees earn the minimum wage.)

Since September 2003, meals have been free of charge in nurseries and since 2004 in crèches as well for children receiving regular child protection benefit. In 2004, this affected 100,000 children in nurseries. In elementary and secondary schools, children receiving such benefit together with those with disabilities or from a large family are entitled to a 50% reduction in the price of meals, affecting 343,000 children in 2004. In addition, an even wider group of children have been given entitlement to free textbooks.

There are plans to redesign child support system in the future, to unify benefits and tax credit as well as to change the unemployment benefit system.

Special policy attention has also been given to those in retirement. In 2002, a one-off supplement of 40% of the average monthly old-age pension was paid and a new basis for indexation of pensions – a pensioner CPI – was introduced. In 2003 and 2004, widows' pensions, paid in addition to their own pension, were raised from 20% to 30%, affecting around 580,000 people. Since 2003, a 13<sup>th</sup> month pension has also been gradually introduced, the full 13<sup>th</sup> month payment becoming effective in 2006. In 2004, an additional two-week pension was paid in two instalments, while in 2005, three weeks of additional pension will be paid in two instalments. In aggregate, together with other increases, this has resulted in pensions rising in real terms by 8% in 2003, 2.5% in 2004 and, it is estimated, by almost 4% in 2005.

In *Malta*, there have been a number of changes in taxes and benefits since 2000, perhaps the two most significant being, first, the imposition in 2003 of capital gains at a rate of 35% on the sale of inherited property. This affects all income groups the resulting reduction in inherited property sales, the consequent shortage of supply and the associated increase in prices could have most of an impact on those with low income, such as young people, the elderly, the homeless and immigrants.

The introduction of entitlement to 3 months unpaid and non-transferable parental leave in 2002, though couched in terms of favouring families, could further disadvantage

women on the labour market, to the extent that they, rather than men, are likely to take it up, so foregoing earnings and perhaps damaging their career prospects. (The employment rate of women in Malta is already well below that in any other EU country.) Moreover, because they are not credited with social contributions when they are not working, they are also liable to suffer a reduction in their pension entitlement.

There is no subsidised childcare. In 2005, however, the child allowance for families with 4 or more children was increased, though this is means-tested and may disadvantage women who lose entitlement because their husband's income is too high. Moreover, benefits such as career break and the reduced hours option apply only to public sector employee.

Also in 2005, tax credits were introduced for women returning to employment after 5 years of inactivity with the aim of encouraging more women to work.

In 2001, the differential in the public sector between high and low salary earners was reduced to a maximum of 4 to one, with a consequent increase in the relative income of those at the lower end of the scale.

In 2003, means-tested unemployment assistance was increased to 58.3% of the minimum wage and to 83.4% in the case of families with 5 or more members.

In *Latvia*, the focus of policy until recently has been on establishing a free market system and individual responsibility, with social policy directed towards assisting those unable to help themselves rather than on the alleviation of poverty as such. Entry into the EU and preparations for this has led to some change in emphasis. In January, 2003, legislation on Social Services and Social Assistance was introduced to give all citizens and permanent residents in need the right to receive social assistance, social care and social rehabilitation services, based on their situation and income. Municipalities were charged with guaranteeing a minimum income (GMI) to the poorest inhabitants based on means-testing (earlier surveys had indicated that families with children, in particular, had received too little support). This is coupled with a lump-sum benefit for those in extraordinary circumstances. The level of GMI, however, is insufficient to provide the scale of support necessary, quite apart from the fact that not all those eligible are aware of their right to support. The possibility of increasing the level of GMI is under discussion, though whether or not this happens depends largely on municipalities.

Even though GMI is too low to attain its aim, the level has been regularly reviewed and increased slightly each year since 2003. Moreover, the more prosperous municipalities have set GMI higher than the national level.

In October, 2004, maternity benefit was increased by just over 50%. In December 2004, childcare benefit for those with children under one was increased significantly. This indirectly encourages participation in the social insurance system, as the benefit payable

is linked to the contributions over the previous 12 months (at 70% of the average amount contributed), with a minimum paid to those who were not in work.

In 2005, the income tax threshold and dependant allowances were increased significantly, in part to compensate for the failure to adjust these for inflation in previous years.

In *Lithuania*, the economic and financial situation has tended to improve since 2002, increasing the scope for reducing taxes. In 2003, tax allowances were increased by around 35% and the additional allowance for those with children was extended from those having three or more or more to all parents in 2004. The flat-rate income tax of 33% on wages and salaries is due to be reduced to 27% from July 2006 and to 24% from July 2007.

In 2003, the cut in old-age pensions and disability benefits for those in work made in 2001 because of the high budget deficit, was restored, while pensions paid to those with low contribution rates (who accordingly receive less than the average pension) were increased both in 2003 and 2004. An early retirement pension (at 4% below the full rate) was introduced in 2004 for the long-term unemployed who are within 5 years of reaching retirement age and in 2005, a non-contributory social benefit was initiated for those with disabilities. At the other end of the scale, a second pillar pension scheme was established in 2004 with employees having the option of directing part of their social contributions to a private pension fund.

During the period 2000–2004, inflation was below 1% a year (it is forecast to rise to close to 3% in 2005) so that indexation of benefits was not an issue. Benefits, which are generally relatively low, were increased periodically, while pensions were raised by around 36% between 2002 and 2005. In the latter year, the income threshold used to determine eligibility for means-tested assistance (minimum income guarantee), which has been unchanged for 8 years, was increased by 15%

Unemployment benefits have been increased since 2002 and an earnings-related element was introduced in 2005. Also in 2005, child benefits were extended from children under 3 to those under 7. These generally favourable measures for those on low incomes were reinforced by one-off cash benefits to low income families with school children in each year 2003–2005 (7% of all school children were covered in 2004) in order to contribute to the costs of kitting out children for new school year. In addition, the minimum wage was raised by some 28% between 2003 and 2005.

Membership of the EU has served to increase economic growth and given people more chance to work abroad, so reducing unemployment and putting pressure on employers to increase wages, though it is uncertain how far this has tended to raise relative incomes among poorer households.

In *Poland*, new regulations have been implemented with regard to family benefits (in 2004), social assistance (in 2004), unemployment and active labour market policies (in

2004), health insurance (in 2003), accidents at work and occupational diseases (in 2003), maternity and sickness benefits (in 2002) and housing benefits (in 2001). A number of these measures are long-term and have led to significant improvements in the position of particular groups (such as single mothers and low-income people in retirement who now have access to a minimum pension). Some, however, are temporary or one-off leading to no permanent gains to those on low incomes. As a result, assessing how far the changes introduced have affected income distribution and poverty is difficult.

Significant changes are planned in the future to a number of public policy areas, in particular, in to active labour market policies for both young and older people (with the introduction of new programmes), measures to assist people with disabilities (with changes in the rules on State support for enterprises), and free or subsidised meals at school.

In *Slovenia*, the country with the strongest economic performance in this group, a number of changes were made to taxes and social contributions. A special law was passed in May 2000, reducing the tax liability of those on low income, though this applied only to the 1999 and 2000 tax years. In 2004, the lowest tax rate was reduced from 17% to 16%, though this had only a minor effect on the distribution of disposable income, while the lowest income tax band was maintained unchanged in relation to average earnings.

In future, income tax bands will be uprated in the line with by the CPI and not with average wages, so tending to increase the tax-take in real terms. In addition, the effective tax rate on certain income from contracts, concentrated among high income groups, has been increased.

Since 2002, there have been no significant changes in benefits, except for pensions. These have been gradually reduced partly as a result of the ending of their indexation in line with wages. Average pension decline from 75.8% of average net earnings in 1999 to 70.2% in 2004. Full wage indexation was proposed in 2005 and the relevant legislation is in the process of going through parliament.

In 1999, a state pension was introduced for people of 65 and older, not entitled to a social insurance pension and with very low income

In 1999 also, the system of child benefits was changed a greater emphasis being placed on targeting, so that eligibility and the amount payable came to depend to a greater extent on family income. In 2001, the Social Assistance Act significantly increased the number of recipients and the amount of funds available, particularly for temporary social assistance (which could be renewed under certain conditions).

In 2001, housing allowances, which had been expanded prior to 2001, were restricted to recipients of social assistance only.



In *Slovakia*, where radical changes were introduced in 2005, two measures are probably the most important:

- a) the introduction of a flat-rate tax system (not benefiting those out of work but instead worsening of their position as a result of a shift from direct to indirect taxes; little benefit for low income earners; a loss for middle-income groups; a significant gain to high income earners);
- b) a large cut in social assistance benefits (entitlement, level of benefits) that has not been sufficiently compensated by so-called activation/incentive/compensatory measures (e.g. subsidised school meals for children from poor families as well as housing benefit, health care benefit, etc. but at a very low level).

In the previous year, significant measures were also introduced, to a large extent to shift the emphasis of policy from a passive to active approach. In January 2004, the new law on Employment Services was implemented, which initiated a range of active labour market policy (ALMP) measures aimed at assisting groups of job seekers, identified as being disadvantaged under the law.. These measure have been financed mainly from the ESF.

According to the national employment authority (the Office of Labour, Social Affairs and the Family) almost 270,000 in 2004 participated in these measures. The majority, around 220,000 were covered by so-called activation grants, entitlement to which is limited to 6 months a year and paid at a flat-rate per month. The work which recipients of the grant are entitled to do is not recognized as regular employment, which means that it does not qualify for social insurance (for pensions, sickness benefits, etc.). Jobs are typically low skilled in public works.

These grants can to some extent be regarded as compensating for large cuts in social assistance benefits for the long-term unemployed and jobless households introduced in early 2004.

The second biggest group, over 27,000, went through training and/or retraining, though little is known about how far this increased their employability and their ability to get stable jobs.

Although the law provide subsidies to employers who organise training for their employees or who create sheltered jobs for job seekers with disabilities, no employer took advantage of this in 2004.

Despite the new law and the financial resources made available from the ESF, no significant improvement in the income or position of those without work towards the bottom end of the income scale is evident. From 2006 on, activation grants will need to be funded from municipal budgets with probably no support from the ESF, and city mayors have already signalled that this might create serious problems given the tightness

of local budgets. Without alternative finance, the position of those dependent on activation grants might worsen again in 2006.

## The acceding and candidate countries

In *Bulgaria*, changes in income tax since 2002 have reduced the progressive nature of the system by first cutting the top rate of tax and then the lower rate, though at the same time, the employees' share of social contributions was increased.

Since 2002, pensions have been indexed according to a formula combining 75% of price inflation and 25% of wage inflation, so resulting in a small increase in real terms (though a reduction, of course, relative to wages).

In 2002, universal child benefits were replaced by means-tested benefits targeted at families with below average incomes. Many of the families eligible, moreover, especially those with slightly higher incomes, fail to apply because of the complicated procedures.

The generally adverse effect of the above measures on the relative incomes of those at the bottom end of the scale have been offset, however, by other measures. In 2003, minimum income thresholds were introduced for the calculation of social contributions in order to reduce the widespread practice of employers paying contributions at the minimum wage level and not recording the payment of wages above this. As a result of the measure, earnings officially recorded increased and although there was probably little or no increase in take-home pay as such, wage rates became more transparent. At the same time, employees became entitled to benefits at a higher rate.

The minimum wages was increased by 30% in 2001 and has subsequently been indexed, along with public sector wages both of which have tended to benefit low income earners.

Those at the bottom end of the income scale have also benefited from the introduction in 2002 of a public work scheme targeted at recipients of means-tested social assistance who are unemployed and paying them the minimum wage (which is some three times higher than social assistance). Some 100,000 were employed under the scheme in 2003–04, receiving not only increased income but also help in re-integrating into the labour market.

In *Romania*, one of the two acceding countries who are due to enter the EU in January 2007, there have been a number of changes to the pension system in recent years, the net effect of which on those at different points of the income distribution is uncertain. Though the significant inequalities that resulted from altering the calculation formula and the failure to index properly over the period 1990–2000 have been addressed, they have not been tackled effectively. Since 2002, both the so called “re-correlation” and the indexation arrangements, aimed at reducing the gap between pensions at the top and

lower level, had only limited effect. Similarly, in 2005, all pensions began to be recalculated according to the 2000 legislation, but this did not significantly increase low pensions, especially in the case of older pensioners because of the incomplete wage records. At the same time, under present legislation, a minimum level of pension is not stipulated and the maximum level one can be as much as 2½ times the average wage. Moreover magistrates and diplomats are entitled to a second pension (a “service pension” equal to 80% of the previous wage). Accordingly, there is substantial inequality in the system which contributes to the overall inequality of income distribution.

The universal child allowance has fallen in real terms to a major extent. At present, it amounts to around 2% of the average salary and since families in the bottom 20% of the income distribution tend to have more children than those higher up the income scale, this has not only served to reduce disposable income of the poorest families but has widened the gap in income between upper and lower income groups. This has been offset to some extent by the introduction of two means-tested family allowances in 2004, which reduced poverty among families with children, but less so for those with 5 and more children since the increase stops after the 4th child.

In 2002, unemployment benefit ceased to be earnings related and became a flat-rate sum, instead, equal to 75% of minimum income. The payment period was also reduced significantly in the case of young people (who had paid contributions for less than 5 years). The risk of poverty among the unemployed is, therefore, much greater than before 2002.

Changes to income tax in 2005, especially the introduction of a single tax rate of 16%, has almost certainly widened inequalities. The gains to high-income earners have are only partially been diminished by higher taxes on dividends introduced shortly afterwards.

Legislation on social exclusion passed in 2002 stipulates that recipients of guaranteed minimum income who suffer from two or more disadvantages (joblessness, lack of proper housing, disability, a large family and soon) should be entitled to support aimed at increasing their access to employment, housing, education and health care. Its effect in practice, however, has not been evaluated but s likely to be small.

In *Croatia*, changes to income tax were for the most part aimed at improving the relative position of low-income earners (though any effect was largely offset by a widening of pre-tax wage differentials). The progressive nature of the tax schedule was increased in 2001 by the introduction of three tax rates (15%, 25% and 35%) instead of two (20% and 35%) and, in 2003, by introducing a (fourth) top rate of 45%, though this applied to relatively few people. This was accompanied by an extension of tax exemptions (for example, to private health insurance, personal pension contributions and life insurance), benefiting middle and to high income groups, in particular, together with the imposition of a ceiling on social contributions to the benefit of those at the very top of the income scale. The net effect of these various changes on income distribution is uncertain.

A comprehensive reform of the pension system was initiated in 1999, aimed at gradually increasing the retirement age, reducing early retirement entitlement and adjusting the formula for calculating pensions. The most important change in this area, however, was the repayment from 2001 of the 'pensioner debt' accumulated after the abolition of the wage indexation of pensions in 1993–1995. This increased pensions overall but the recipients of the lowest pensions were not affected, so widening inequality among pensioners (see (Nestić, 2005).

Between 1999 and 2004, pensions were indexed for 50% of consumer price increases and 50% of wage increases, so reducing their value slightly relative to earnings. In 2004, however, pensions were fully indexed against wage increases, though in 2006, the old formula will be re-applied.

In 2002, stricter criteria were applied to the means testing of child benefits and new age limits introduced, leading to a 10% reduction in numbers claiming benefit and a 22% reduction in the average benefit paid (Raboteg–Šarić, 2003)

New rates of social assistance were set in 2003, but they have remained unchanged in money terms since then so they have fallen behind the increase in earnings, therefore widening the gap between recipients and those in employment.

Since 2003, minimum wages have been indexed in relation to the average wage (at 35% of the latter), instead of being altered at variable intervals by differing amounts, though in practice they broadly kept pace with wages. The change, however, means that those at the bottom end of the earnings scale or whose income is related to minimum wages enjoy increased stability and certainty of income.

In **Turkey**, the VAT rate on some basic food items, health services and medical products of all types and educational good and services was reduced significantly at the end of 2004 (from 18% to 8%).

The introduction of Social Risk Mitigation Project in 2003 with a \$500 million grant from the IMF/World Bank, which includes income support to poor families with children conditional on attendance to school and regular health checks, seems to have had a positive effect on the income of the poorest in society.

In 2003, unemployment insurance benefit was paid for the first time following the establishment of the unemployment insurance system in 1999 and the collection of contributions since June 2000.

In 2003 also, a budget (amounting to EUR 193 million in 2003 and EUR 214 in 2004) was allocated for the first time since its establishment to the *Sosyal Dayanışma ve Yardımlaşmayı Teşvik Fonu* (Social Aid and Solidarity Encouragement Fund, SYDTF), charged with distributing cash and benefits in kind to the poor.

## Summary tables of policy changes

<b>Belgium</b>					
Change in policy	When? (year)	Groups affected	Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)	Likely effect on income of top 20% (increase/decrease/little change/uncertain)	Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)
Reduction of SSC for employees	2000	Low paid workers	Increase	Little change	Little change
Tax reform – new rates/brackets	2002-2005	All taxpayers	Little change	Increase	Decrease
Tax reform – increase in tax exempted quota	2002-2005	Married couples	Increase	Increase	Little change
Earned income tax credit	2002	low paid workers	Increase	Little change	Little change
Employment bonus credit	2005	low paid workers	Increase	Little change	Little change
Indexing of social benefits	2005	all hholds receiving benefits	Increase	Little change	Increase
GRAPA + RI	2002	Low income retired+ younger age groups	increase	Little change (no change)	Little change
Refundable child tax credit + Lone parent tax rebate	2003	Hholds with children + lone parents	increase	Little change	Little change
Child care tax credits	2002-2005	Child care users	Little change	Increase	Little change
Titres – Services	2003	Low skilled+ hholds buying priv. services	Increase	Little change	Increase
Reduction in SSC for employers	since 2000	Low paid workers	Increase	Little change	Increase
Net overall effect of the above changes	n/a		Increase	Increase	Decrease
<b>Denmark</b>					
Change in policy	When? (year)	Groups affected	Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)	Likely effect on income of top 20% (increase/decrease/little change/uncertain)	Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)
Tax reform	2004-7	All income earners	Increase	little change	Increase
“Start help”	2002	Refuges and immigrants	Decrease	No change	Decrease
Ceiling on cash benefit	2004	Unemployed	Decrease	No change	Decrease
SP (the special pension savings)	2004-5	All income earners and benefit recipients	Increase	Increase	Little change
Net overall effect of the above changes			n/a		

<b>Germany</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Tax reform – tax rate cuts	2000 – 2005	All taxpayer	Little change	increase	decrease
Tax reform –tax allowance	2000 -2005	Low-income tax payer	Little change	Little change	Little change
SSC deduction – mini-job reform	2003	Low-income workers	increase	No change	increase
Unemployment benefit I	2005	unemployed	decrease	No change	decrease
Unemployment benefit II	2005	Long term unemployed	decrease?	Little change	?
Social assistance for those incapable of work	2003	Low-income household	Increase (poor pensioners)	No change	increase
Parental leave benefit	2004+	All household	increase	increase	Increase
Pension reform – payment of health contributions	2001+	current and prospective pensioners	Decrease	decrease	Decrease
Health care reform	2000+	All hh / esp. pensioners	decrease	decrease	decrease
<b>Greece</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
EKAS (means -tested pensioners' social supplement) uprated by 107% in real terms	2000-05	370,000 low- income recipients	increase	no change	increase
Means-tested social pension uprated by 42% in real terms	2000-05	52,000 recipients	increase	no change	increase
Non-contributory basic farmer pension uprated by 42% in real terms	2000-05	800,000 recipients	increase	no change	increase
Contributory farmer pension phased in (some two-thirds of farmer pensioners entitled, receiving 45% more on average)	Jan 1998	500,000 recipients	increase	no change	increase
Social contribution rebate for low earners introduced (take- up by only 30-40th of 470th estimated to be eligible)	Aug 2000	low earners	small increase	no change	slight increase
Unemployment assistance introduced (take-up by 5th of 35th estimated to be eligible by 2003)	Jan 2002	long-term unemployed aged 45+	small increase	no change	slight increase
Refundable tax credits introduced for hholds in less favoured areas with children aged 6-16 (some 60th hhholds received average of €480 pa	Jan 2002	low income families	slight increase	no change	slight increase

Income condition for access to large family benefits dropped	Jan 2002	large families on middle incomes	no change	no change	no change
Top income tax rate cut from 45% to 42.5% and then to 40%.	2000-02	top tax payers	no change	increase	decrease
Tax allowance increased by 52% in real terms	2000-05	all tax payers	increase	increase	uncertain
Income threshold for top tax rate cut by 11% in real terms	2000-05	upper middle and top tax payers	no change	no change	no change
Social Insurance Funds' Solidarity Account (ΛΑΦΚΑ) abolished	Jan 2005	pensioners	slight increase	large increase	decrease
Progressive revaluation of pension benefits ended	Jan 2005	pensioners	no change	increase	decrease
<b>Spain</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Failure to index tax allowances and band rates	All except 2003 and 2005	Tax payers and those just below exemption limit	Little reduction	reduction	Probable increase
Reduction of tax rates	2003	Tax payers	No change	Increase?	reduction?
Re-fundable tax credit for working mothers	2003	Working mothers with children under 3	Little change	Slight Increase?	Slight reduction?
Failure to index social contributions earnings limits	All years	Employees	Little change	Little increase	Reduction?
Increase of minimum pensions	2005	Pensioners under the contributory scheme	increase	unchanged	probable increase
Increase of the unemployment social assistance benefit	2005	unemployed	Slight increase	No change	Probable slight increase
Increase in the Minimum Wage	2005	Low income workers	I don't know	No change	I don't know
Net overall effect of the above changes	n/a				
<b>France</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Tax reform: tax rate cuts / tax credit (PPE)	2000 – 2004	Tax liable households / employed households	Increase	increase	Decrease
Housing benefits	2001	All	Increase	Little change	Increase

Social assistance / RMA	2004	Low-income households	Little change	No change	Uncertain
Unemployment insurance / PARE plan	2001	Unemployed persons	Increase	Increase	Uncertain
Unemployment insurance / contribution, entitlement period, ASS	2003+	Unemployed persons	Decrease	Decrease	Decrease
Child benefits	2004	Families with children	Increase	Increase	Increase
Universal healthcare insurance CMU	2000	Low-income households	Increase	No change	Increase
Sickness insurance	2004+	all	Decrease	Decrease	Decrease
Long term care	2002+	Old or disabled dependants	Small increase	Little change	Little change
Minimum wage	2003+	Low-productive workers	Increase	No change	Increase
<b>Ireland</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Tax reform – tax rate cuts	2001	All tax payers	little change	increase	decrease
Increase in child benefit/ freezing Child Dependant Additions	2000-5	All families, social welfare recipients with children	small increase	increase	fall
Increase in old age pensions	2000-5	All elderly	increase	increase	increase
Increase in unemployment benefits	2000-5	All unemployed	increase	little change	increase
Increase in minimum wage relative to wage growth	2000-5	Low paid	increase	no change	increase
Net overall effect of the above changes	n/a				
<b>Italy</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Reform of the Personal Income tax (IRPEF)- 1 <sup>st</sup> module	2003	all income earners	Little change	Little increase	Little change
Reform of the Personal Income tax (IRPEF)- 2 <sup>nd</sup> module	2005	all income earners	Little change	increase	increase
Abolition of the Minimum Income Guarantee (RMI)	Since end of 2004	Low income households in a selected number of municipalitie	Little change	Little change	Little change



		s (300, experiment)			
Introduction of a bonus (unatantum) of 1000 euros for the 2 <sup>nd</sup> child	2004 only	Households with a 2 <sup>nd</sup> child born between 1-12-2003 and 21-12-2004	Little change	Little change	Little change
Net overall effect of the above changes	n/a	n/a	n/a	n/a	n/a
<b>Luxembourg</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Increase of social contributions	2000	Nearly all	Little decrease	Little decrease	Uncertain
Reform of minimum income guarantee (RMG), incl reduced minimum age	2000	Those aged 25-30, new migrants	Little increase	No change	Little increase
Income Tax reform - cut in tax rate and increase in minimum tax threshold	2001	All taxpayers	Little change (increase)	Increase	Decrease
Increase in pensions, social assistance (RMG) and min. wage in line with wage rise 1997-99 <sup>72</sup>	2001	Those aged 60+, those on low income	Increase	Little increase	Little increase
Income Tax reform - reduction in tax rate	2002	All taxpayers	Little change (increase)	Increase	Decrease
Increase in family benefits	2002	Families with children	Increase	Increase	Increase
Decrease in social contributions	2002	Nearly all	Little increase	Little increase	Uncertain
Pension reform - increase in pensions and end-of-year allowances	2002	Pensioners	Increase	Increase	Uncertain
Reform of minimum income guarantee - increase (from 20% to 30%) in income not taken into account and abolition of residence condition for European citizens	2002	Low income	Increase	No change	Increase
Failure to index tax allowances rates bands inflation	2003	All taxpayers	Little change (decrease)	Little change (decrease)	Little change
Increase in pensions, social assistance and min.wage (in line with wage rise 1999-2001)	2003	Those aged 60+, those on low income	Increase	Little increase	Little increase
Minimum income for those with disabilities introduced	2003	Disabled persons	Increased	No change	Increase
Failure to index tax allowances/ rates bands for inflation	2004/05	All taxpayers	Little change (decrease)	Little change (decrease)	Little change
Increase of social contributions	2005	Nearly all	Little decrease	Little decrease	Uncertain

<sup>72</sup> Every two years, pensions (old-age, survivor, disability), the minimum wage and the minimum income guarantee (social assistance) are indexed on the increase of the wage observed between t-4 and t-2.

Increase in pensions, social assistance and min. wage in line with wage rise 2001-03.	2005	Those aged 60+, those on low income	Increase	Little increase	Little increase
<b>Netherlands</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Tax credits	2001	Income earners and their partners	Increase	Increase	Little change
		Lone parents, young with disabilities, elderly	Increase	Little change	Little change
End of WAZ contributions	2004	Self-employed	Little change	Little change	Little change
Increase in flat rate contributions	2005	Employees+ social benefit recipients	Decrease	Little change	Little change
Unemployment: end of consecutive benefit	2003	Employees	Decrease	Little change	Little change
Supplementary benefit for social assistance	2005	Long-term social assistance beneficiaries	Little change	Little change	Little change
Child care subsidised by government and employers	2005	Employees	Increase	Increase	Little decrease
No indexation	2003-2005	Beneficiaries; Minimum wage earners	Decrease	Little change	Little change
<b>Austria</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Income tax reform 2004/5	2004/5	all income earners but especially low paid	increase	little change	(small) increase
Increase health insurance contributions	2004/5	all income earners	(small) decrease	(small) decrease	little (no) change
Increase in upper-contribution limit	2005	Better paid	no change	decrease	(small) increase
Pension reforms 2003/4	2004 onwards	elderly (60+)	decrease	decrease	no change
Adjustment of pensions	2004/5	elderly (60+)	(small) decrease	decrease	(small) increase
Introduction of universal child care benefit	2002	families with children	increase	little change	(small) increase

Increase in base amount of family allowance	2003	families with children	increase	increase	no change
Increase of care allowance	2005 (no adjustment 1996-2004)	old and/or disabled people in need of care	2005: increase before: decrease compared to CPI	2005: increase before: decrease compared to CPI	no change
Reduction in allowance for glasses; increase in co-payments for hospital stays	2005	The sick + those in need of glasses	small change as poor people are mainly excepted from these measures	(small) decrease	no change
Increase in minimum wages according to collective agreements	no time frame	low paid	(small) increase	no change	small (no) change
Net overall effect of the above changes	n/a		increase	little change	(small) increase
<b>Portugal</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Increase in social pensions relative to earnings	2000 to 2005	Elderly (65+)	increase	No change	Little increase
Increase in real minimum income	2000 to 2005	Poor	increase	No change	Little increase
Freeze on salaries over €1000 in public sector	2003 /2004	Civil Servants	Little reduction	reduction	Uncertain
Change in child benefits	2003	All	Little increase	Little decrease	Little increase
Changes in the resources conditions of the minimum income	2005	Poor	Little increase	No change	Little increase
Ending of main personal income tax allowances (Tax Credits)	2005	Middle/top of the distribution	Little change	Little decrease	Uncertain
<b>Finland</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Municipal income tax – increase	2000-2003	Tax payers	Little change	Decrease	Increase
Municipal income tax – increase in earned income allowance	2000 – 2004	Low-income tax payers	little change	No change	Increase
Municipal income tax – increase in deduction for work-related expenses	2000-2003	Tax payers	little change	Increase	Little change
State income tax – new tax rates and bands	2001-2004	Tax payers	little change	increase	Decrease
Cut in employees' social contributions	2000 - 2003	Wage earners	Little change	increase	little change
Sickness specific	2001- 2003	Pensioners	Increase	increase	Increase/?

contributions abolished					
Changes in tax on dividends and voluntary pensions	2005	Pensioners + high incomes	Little change	decrease	decrease
Reform of unemployment insurance	2002 – 2003	Unemployed	Increase	Little change	increase
Increase in national pensions	2001	Pensioners	Increase	Little change	increase
Major pension reform	2005+	Pensioners	?	?	?
Social assistance	2002-2005	Low-income households	Little change	No change	Little change
Social service and health care improvements	2004-2007	Low-income households in need of social services	Increase	Little change	Increase
<b>Sweden</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Increase in basic state pension	2003	The elderly	Increase	little change	increase
Increase in parental leave benefits	2005	Families with young children	Increase	Some increase	Increase
Increase in allowance for pension contributions	2005	All tax payers	Increase	Increase	Unchanged.
Increase in basic allowance for low and middle income earners	2005	Low and middle income earners	Increase	No change	Some increase but only to low income taxpayers
Indexing of lower level for payment of income tax	2003-2004	Middle and higher income earners	No change	Increase	Decrease
Indexing of lower income tax limit by less than inflation	2005	Middle and higher income earners	unchanged	Some decrease	Minimal increase
Increase in lower limit for wealth tax payments	2005	Wealthy	Unchanged	Increased somewhat	Decreased somewhat
Increase in child benefits	2001	Families with children	Increase	Increase	Increase
Ceilings imposed on child care charges	2001	Families with children	increase	Large increase	Decrease
Ceiling imposed on elderly care charges	2001	The elderly and their families	increase	increase	
Net overall effect of the above changes	1999-2001	All	Some increase	Some increase	Unchanged
Net overall effect of the above changes	2002-2005	All	Increase	Increase	Increase

<b>UK</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Income tax: overindexation of allowances and lower band rate	All years, especially 2002	Tax payers	Increase	Increase	Probable reduction
Social contributions: increase in rates and extra charge above upper limit	2003	employees	Reduction	Reduction	Increase
Social contributions: lower limit increased more than upper limit	2002	employees	Reduction	Reduction	Reduction
Council tax: rise above inflation	All years	All living in hholds	No change or small fall	Reduction	Small increase
Income support: increase below earnings and RPI	All years	Low income	Reduction	No change	Reduction
Basic pension: increase equivalent to earnings increase	All years	Elderly (60+)	Small increase	Little change	Small increase
Pension credit	2003	Low income elderly (60+)	Increase	No change	Increase
Child tax credit	2003	Families	Increase	Little change	Increase
Working tax credit	2003	Low paid	Increase	No change	Increase
Minimum wage increased above earnings and inflation	Most years	Low paid	Some increase	Little change	Unclear
Net overall effect of the above changes	all	all	Increase	Little change	Increase
<b>Czech Republic</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Increase in rate of unemployment benefit and duration of entitlement.	Oct 2004	unemployed, especially older unemployed	very little change	no change	Uncertain
Increase in minimum wage relative to subsistence minimum and av. earnings	2000 2001 2002 2003 2004 2005	low paid and unemployed – beneficiaries of social benefits	little change	no change	Uncertain
Change in calculation of income tax for families with children	2005	Low income families with children	little change	little change	Uncertain
Change in parental tax allowance	2004	Families with young children	Little change	No change	Uncertain
Net overall effect of the above changes			Little change	Very little change	No change

<b>Estonia</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Income tax rate cut from 26% to 24%	2005	all income earners	increase	increase	little change
Income tax annual allowance increased	2003-2004	all income earners	increase	increase	probable increase
Supplementary tax allowance introduced for large families	2001	families with 3 or more children	increase	increase	probable increase
Unemployment insurance contribution introduced (1% of wages)	2002	all wage earners	decrease	decrease	little change
Contribution for 2nd pillar pensions introduced (2% of wages, compulsory for new employed, voluntary for others)	2002	majority of labour force	decrease	decrease	little change
Parental benefit introduced	2004	families with small children	increase	increase	probable increase
Supplementary benefits for large families extended from 4+ children to 3+	2004	families with 3 or more children	increase	increase	probable increase
Child benefits for first child increased	2004	all families with children	increase	increase	little change
Disability benefits introduced	2001	People with disabilities	increase	little change	increase
Increase in minimum wage	2000-2005	low paid	increase	no change	increase
Unemployment insurance benefits introduced	2003	unemployed	increase	increase	little change
Unemployment allowances not increased	2000-2005	unemployed persons	decrease	no change	little change
Minimum guaranteed income level increased	2005	People on low income	increase	no change	increase
Flat-rate pension increased relative to earnings	2003-2005	elderly (60+)	increase	little change	increase
Net overall effect of the above changes	n/a		increase	increase	some increase
<b>Cyprus</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Public assistance revalued	2000-05	the poor	increase	no change	slight increase
Old age pensions improved / matured	2000-05	the old	increase	little change	slight increase
Child benefit introduced	2003-04	families with children	some increase	slight increase	slight increase
Personal income tax system reformed	2003-04	tax payers	slight increase	large increase	decrease

<b>Lithuania</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Increase in tax allowances	2003	employees	increase	Small increase	Small increase
Extension of tax allowance to parents with 1 or 2 children	2004	Families with children	Small increase	Small increase	Uncertain
Part transfer of social contributions to private pension funds	2004	Pensioners	decrease	Decrease	Small decrease
Cut in old-age pensions and disability benefits for those. In work	2001	Pension recipients	Uncertain	Small decrease	Uncertain
Restoration of full pension for disability benefit to those in work	2003	Pension recipients	Uncertain	Small increase	Small decrease
Increase in contributory pensions to low income earners	2003, 2004	Pension recipients	Increase	No change	Increase
Early retirement pension introduced	2004	Long-term unemployed	increase	No change	Small change
Non-contributory) disability benefit introduced	2005	Those with disabilities without social insurance	increase	No change	Small change
Increase in pension	2003-05,	Pensioners	Probable increase	Uncertain	Uncertain
Increase in income threshold for means-tested assistance	2005	Low income families	Small increase	No change	marginal increase
Increase in unemployment benefit; link to earnings introduced	2005	Unemployed	Small increase	No change	Uncertain
Increased age limit for child benefit	2005	Families with children	marginal increase	Uncertain	Uncertain
Property included in means-test	2004	Low income families	Decrease	No change	Marginal decrease
Increase in minimum wage	2003-05,	Low wage earners	Increase	No change	Increase
<b>Latvia</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Introduction of guaranteed minimum income	2003	Families with children, unemployed	increase	No change	uncertain

Increase in maternity benefit	2004	Families with children	Little increase	No change	No change
Alimony Guarantee Fund launched	2004	Lone parents (mostly women)	Little increase	uncertain	uncertain
Increase in childcare benefit	2005	Families with children	Little increase	increase	uncertain
Increase in minimum wage	2005	Low paid	Little increase	No change	No change
<b>Hungary</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Increase in minimum wage	2001-	Low paid workers	Increase	little	increase
Increase in minimum wage	2001-	Unemployed	Decrease (barrier to labour market entry)	no change	decrease
Elimination of tax on min. wage	2003	Low paid	Increase	no change	increase
Reduction in number of tax bands	2005	Taxpayer	Increase	increase	increase
Introduction of cap of tax allowances	2005	High earners	no change	decrease	increase
Increase in housing support	2004	Low income families	Increase	no change	increase
Debts consolidation	2004	Deprived families	Increase	no change	no change
Child tax credit	2000	Families with children	Increase	increase	decrease
Family allowance cut in real terms	2000-2002	Families with children	Decrease	little decrease	decrease
Child tax credit cut in real terms	2002-	Families with children	Little decrease	decrease	increase
Re-introduction of childcare fee	2000	Mothers previously employed	Increase	little	increase
One-off pension supplement	2002	Pensioners	Increase	no change	increase
Extra pension	2003-	Pensioners	Increase	no change	increase



<b>Malta</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Capital gains tax	2003	all	reduction	reduction	probable reduction
Adjustment in property values	2004	all	increase	increase	probable increase
One year tax holiday	2005	working women	increase	increase	increase
Exclusion from social contributions	2004	Unemployed+ inactive	decrease	decrease	probable decrease
Entitlement to 1 week unpaid maternity leave	2001	pregnant women	decrease	decrease	no change
Increase in child allowance	2005	large families	increase	increase	increase
Entitlement to 3 months unpaid parental leave	2002	all income earners	decrease	decrease	no change
Increase in unemployment assistance	2003	Low income	increase	no change	increase
Disability pension	2005	Low income	increase	No change	increase
Increase in rent subsidy	2005	Low income families	increase	No change	No change
Supplementary allowance	2003	Low income	Increase	No change	increase
Tax credits	2001	women	Increase	increase	increase
Public-private partnership	2002	elderly	Increase	increase	Probable increase
Pension contribution	2004	elderly	decrease	decrease	decrease
Personalised action plan	2004	Low income	increase	No change	increase
Medical assistance	2003	Low income	increase	No change	increase
Benefit entitlement to part- timers	2002	Part-timers largely women	increase	increase	increase
Tax deduction	2005	High income	No change	increase	Decrease

<b>Poland</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Additional top income tax rate (50%)	2005	Highest income groups	No change	Little change	
New rule for indexing minimum wage (inflation+ 2/3 GDP growth) – to be approved	2005	Low paid	Small increase	Small effect	Small increase
Tighter rules for pension indexation	2005	Pensioners	Small effect	Decrease (pensioners mostly have high incomes)	Increase
One-off supplement for poorest pensioners	2005	Poorest pensioners	Increase	Uncertain	Little change
Direct subsidies for farmers (via CAP)	2004 -2005	Farmers	Increase	Increase	Uncertain
New rules for indexing pensions (inflation+ 1/5 real wage rise)	2004	Pensioners	Small effect	Increase	Decrease
Cancellation some family benefits	2004	Families with children	Decrease	No change	Decrease
Social assistance tightened (threshold, some rates)	2002	The poorest	Decrease	No change	Decrease
Pre-retirement unemployment benefit cancelled	2002	Unemployed (56+)	Decrease	No change	Decrease
Maternity benefit period reduced	2002	Families with children	Uncertain	Uncertain	Uncertain
Means-test for maternity grant	2002	Families with children	Increase (small?)	Decrease (small?)	Increase (small?)
Net effect of above changes	n/a				Decrease

<b>Slovenia</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Lower income tax rate introduced	2004	All taxpayers	Little change	Little change	Little change
Reduction in deductions on 'royalties'	2005	All taxpayers	No change	Small decrease	Small increase
Reduction in tax liability of low income earners for 1999 and 2000	2000	Low income recipients	Small increase	No change	Small increase
Pension indexation Introduced	2000	All pensioners	Decrease	Decrease	Little change
State pensions introduced	2000	Elderly (65+)	Increase	No change	Increase
Changes to family benefits	1999	Children	Small increase	Small decrease	Small increase
Social Assistance Act implemented	2001	People without means	Small increase	No change	Small increase
Housing allowance	2001	Tenants in non-profit rentals	Small increase	No change	Small increase
Net overall effect of the above changes	n/a				
<b>Slovakia</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Increase in social contributions, partly offset by deduction for working parents with children	2004	All income earners	Little change/decrease	Little change	Little change/decrease
introduction of annual indexation of pensions	2004	All income earners	Uncertain	Little change	Uncertain/decrease
introduction of supplementary pensions	2005	Those opting to join system	Uncertain	Uncertain	Uncertain
Change to sickness benefits, incl ceiling on amount	2004	Employees	Decrease	Decrease	Small increase
Extension of entitlement to means-tested child allowance	2001	Families with children	Increase	Little change	Increase
Re- introduction of universal child benefit+means-tested child allowance supplement	2002	Families with children	Little change/increase	Little change	Little change
Parental allowance entitlement extended to fathers	2002	Non-working parents with child under 3	Little change	No change	Little change
Universal child allowance+ tax bonus for each child; abolition of means-tested supplement for children from low income families	2004	Families with dependent children	Decrease	Little change	Decrease
Introduction of means-tested subsidies for school meals	2004	Poor families with children	Increase	No change	Little change

Reduction in social benefits; stricter conditions for entitlement	2004	Low income, jobless households, especially large families	Decrease	Not relevant/ no change	Decrease
Tightening of entitlement to unemployment benefit+cut in level	2000	Unemployed and long-term unemployed	decrease	Not relevant	Decrease
Flat-rate personal and corporate income tax – 19%, unified VAT -19%; tax exemptions abolished, legislature simplified	2004	All income earners	Probably decrease due to shift in tax	increase	Decrease
<b>Bulgaria</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Top income tax rate cut from 38% to 29%;, bottom rate cut from 20% to 18%	2002	Mainly top 20%	Little change	Increase	Decrease
Bottom income tax rate cut from 18% to 12%	2004	Low+ middle income groups	Increase	No change	Small increase
Employees' share of social contribution increased from 25% to 30%	2005	Employed	Small decrease	Decrease	Small increase
Increase in pension age and required years of contributions	2000	Unemployed	Decrease	No change	Small decrease
Child benefit changed to being means-tested	2002	Families with children	Increase	Decrease	Increase
Pensions indexed	2000-2005	Pensioners	Increase	No change	Increase
Guaranteed minimum income frozen	2001-2004	Low income earners	Decrease	No change	Decrease
Guaranteed monthly income increased by 36%	2005	Low income earners	Increase	No change	Increase
Social assistance increased for lone parents	2005	Lone parents	Increase	No change	Small increase
Increase in eligible income for heating benefits	2001	pensioners, low income families	Increase	No change	Increase
Free breakfast for primary school children	2005	Families with children	Increase in income in-kind	No change	Small increase
Minimum wage indexed	2003-2005	Low paid workers	Increase	No change	Increase
Increase in public service wages	2003-2005	Civil servants	No change	Increase	Small decrease
Net overall effect of the above changes	n/a		Increase	Little change	Increase

<b>Romania</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
Introduction of global income tax	2000	All income earners	No change	decrease	Probable small increase
Change in eligibility for guaranteed minimum income	2001	Low income families	Small increase	No change	Probable small increase
Re-correlation and indexation of pensions	2002-2004	Majority of pensioners (55+)	Increase	little change	Probable small increase
Snacks given to children in primary school	2002	All children in primary school (later preschool children)	Little increase	No change	Little change
Change in the unemployment provision	2002	Unemployed	Decrease	No change	Decrease
Change in eligibility for heating vouchers	2004	Low income families	increase	Little change	Increase
Change in parental leave benefit (from earnings related to flat sum)	2004	All parents on parental leave	increase	decrease	increase
Increase in farmers' pension (100%)	2004	Pensioners in the farmers social insurance fund	increase	No change	Probable increase
Introduction of means tested allowances for families with children	2004	Low income families, incl lone parents	increase	No change	Probable small Increase
Change from progressive to single income tax rate (16%)	2005	All income earners	Little change	increase	decrease
Increase in tax on dividends	June 2005	All share holders	No change	decrease	Probable increase
Tax credits made dependent on earnings	2005	All income earners	Small Increase	decrease	Increase
Recalculation of pensions according to the 2000 Law	2005	Pensioners	Little increase	Increase	Little change
Increase in minimum wage relative to av. Earnings	2002-2005	Low paid	Small increase	No change	Increase
adjustment to inflation of universal child allowance	2000-2005	All children	decrease	Insignificant decrease	Probable decrease
<b>Croatia</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Likely effect on income of top 20% (increase/ decrease/ little change/ uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/ decrease/ little change/ uncertain)</b>
3 income tax rates (15%, 25% and 35%) reduced to 2 (20%, 35%)	2001	income earners	increase	little change	small increase
Top rate of income tax introduced (45%) plus	2003	high paid	no change	uncertain	uncertain

extension of exemptions					
Income tax allowance increased and ceiling on exemptions introduced	2005	income earners	increase	uncertain	uncertain
Ceiling on income for payment of social contributions	2003	high paid	no change	little change	little change
Means-testing of child benefits tightened	Jan 2002	Families with children	Decrease	Little change	Decrease
New rates of social assistance set	2003-2005	The poor	Little change	Little change	Little change
Repayment of the "pensioners' debt"	2001	pensioners	small increase	little change	uncertain
Introduction of full wage indexation of pensions	2004	pensioners	uncertain	uncertain	uncertain
<b>TURKEY</b>					
<b>Change in policy</b>	<b>When? (year)</b>	<b>Groups affected</b>	<b>Likely effect on income of bottom 20% (increase/decrease/little change/uncertain)</b>	<b>Likely effect on income of top 20% (increase/decrease/little change/uncertain)</b>	<b>Income share of bottom 20% relative to top 20% (increase/decrease/little change/uncertain)</b>
Unemployment benefits introduced	March 2002	Unemployed	increase	no change	increase
Expenditure tax introduced (on selected goods above the VAT rate)	June 2002	All tax payers	no change	decrease	increase
Social Risk Mitigation Project launched	April 2003	Poor families	increase	no change	increase
Lowest income tax band increased by 20%. For higher bands, increased of 16.7%.	Dec,2003	tax payers	increase	no change	increase
Social Support Project For Rural Areas introduced	2003	livestock farmers	increase	no change	increase
Coal benefit to poor families	2003/2004/2005	poor families	increase	no change	increase
Building tax for those with low income, especially those reliant on social benefits reduced to zero	2004	the poor	increase	no change	increase
Pensions paid by SSK and Bag-Kur (social security system self-employed) raised by 21% , 10% above CPI	2004	pensioners	increase	no change	increase
Advance payment on VAT refunds to pensioners reduced (from 5% to 4% of receipts)	March 2004	pensioners	decrease	no change	decrease
Transfers from the budget to SYDTF	2003, 2004	the poor	increase	no change	increase
Top income tax rate cut by 5% (for wage earners it to 35% and for non-wage earners, 40%)	Dec 31, 2004	High income earners	no change	increase	decrease
VAT rate reduced on education related goods and services as well as for some basic food items	Dec 31, 2004	All	increase	increase	uncertain

## REFERENCES

- Atkinson, A.B. – Cantillon, B. – Marlier, E. – Nolan, B. (2002): Social indicators. The EU and social inclusion. Oxford: Oxford University Press.
- Atkinson, A.B. – Cantillon, B. – Marlier, E. – Nolan, B. (2005): Taking Forward the EU Social Inclusion Process. Pre-final version, 31 May 2005. Luxembourg.
- Atkinson, A.B. – L. Rainwater – T.M. Smeeding (1995): Income distribution in the OECD countries. Social policy studies. No. 18., Paris: OECD.
- Boeri, T. (2002): Let European social models compete and Europe will win. Paper presented at a conference hosted by the Kennedy School of Government, Harvard University, 11–12. April
- Bradbury, Bruce and Markus Jäntti (2001) "Child Poverty Across the Industrialised World: Evidence from the Luxembourg Income Study". In Vleminckx, K., Smeeding, T.M. (eds.).
- Bradshaw, J.,. 2000. 'Child poverty. Comparison of industrial and transition economies', in: S. Hutton & G. Redmond (Eds.), *Poverty in Transition Economies*. Routledge, London
- Brady, D. (2005): Structural theory and relative poverty in rich Western democracies, 1969–2000. LIS Working Paper No. 407. Syracuse, New York: Maxwell School of Citizenship and Public Affairs Syracuse University. <http://www.lisproject.org/publications/liswps/407.pdf>, 12th of July 2005.
- Chen, W–H. and M. Corak (2005): Child poverty and changes in the child poverty in rich countries since 1990. UNICEF Innocenti Working Paper 2005–02.
- Conseil Emploi Revenu Cohesion (2004): Les enfants pauvres en France, rapport 4
- Corak M., C. Lietz and H. Sutherland, 2005, "The Impact of Tax and Transfer Systems on Children in the European Union", Innocenti Working Paper No. 2005–04. Florence, UNICEF Innocenti Research Centre. <http://www.unicef.org/irc> [Also published as EUROMOD Working Paper EM4/05]
- Cornia, G.A. – Court, J. (2001): Inequality, Growth and Poverty in the Era of Liberalization and Globalization. Policy Brief No. 4. Helsinki: UNU/WIDER.
- Cowell, F. (2000): Measurement of Inequality. in: Atkinson, A.B. and Bourguignon, F. (eds.): *Handbook of Income Distribution*. Vol.1. Elsevier Science.
- Deininger, K. – L. Squire (1996): A new data set measuring income inequality. *World Bank Economic Review*. Ed. 10. No. 3., 565–591.
- Dennis, I. – A.C. Guio (2003): Poverty and social exclusion in the EU after Laeken – part1. Statistics in focus – population and social conditions, 8/2003. Luxembourg: Eurostat.
- Diener, E., Oishi, S., 2000. Money and happiness: income and subjective well-being across nations. in: E. Diener & E. M. Suh (Eds.), *Culture and Subjective Well-being*. 185–218. MIT Press, Cambridge, Mass.
- Esping–Andersen, G. (1990): *The Three Worlds of Welfare Capitalism*. Princeton, New Jersey: Princeton University Press.
- EUROMOD Working Papers available from: <http://www.iser.essex.ac.uk/msu/emod/emodwp.php>

- European Commission, 2005. Joint Report on Social Protection and Social Inclusion. European Communities, Luxembourg.
- European Foundation for the Improvement of Living and Working Conditions, 2004. Quality of life in Europe. The First Quality of Life Survey 2003. European Communities, Luxembourg.
- European Foundation for the improvement of living and working conditions (2004a): Life satisfaction in an enlarged Europe. Luxembourg: Office for Official publications of the European Communities
- European Foundation for the improvement of living and working conditions (2004b): Perceptions of living conditions in an enlarged Europe. Luxembourg: Office for Official publications of the European Communities
- Eurostat (2003): "Laeken" Indicators– Detailed Calculation Methodology. Eurostat DOC. E2/IPSE/2003.
- Ferrara M. (1996): The Southern model of welfare in Social Europe. Journal of European Social Policy 6(1): 17–37.
- Förster, M. and M. Pearson (2002): Income distribution and poverty in the OECD area: trends and driving forces. OECD Economic Studies, No. 34. Paris.
- Förster, M. F., Tóth, I. G., 2001. 'Child poverty and family transfers in the Czech Republic, Hungary and Poland'. Journal of European Social Policy, 11, 324–341
- Förster, M., d'Ercole, M. M., 2005. Income Distribution and Poverty in OECD Countries in the Second half of the 1990s. OECD, Paris.
- Förster, M., G. Tarcali and M. Till (2002): Income and non-income poverty in Europe: What is the minimum acceptable standard in an enlarged European Union? Paper prepared for the 27th General conference of the International Association for Research and Wealth, Djurhamn, Sweden, 18–24 August 2002, [www.iariw.org](http://www.iariw.org)
- Gábos, A., Szivós, P., 2004. Poverty in Hungary on the Eve of Entry to the EU. in: T. Kolosi & I. G. Tóth & G. Vukovich (Eds.), Social Report 2004. TÁRKI, Budapest.
- Garfinkel, I. – Rainwater, L. – Smeeding, T.M: (2004): Welfare State Expenditures and the Redistribution of Well-being: Children, Elders, and Others in Comparative Perspective. Prepared for the Levy Institute Conference on the Distributional Effects of Government Spending and Taxation, October 15–16, 2004. [http://www.unicef-icdc.org/publications/pdf/iwp\\_2005\\_02\\_final.pdf](http://www.unicef-icdc.org/publications/pdf/iwp_2005_02_final.pdf), 12th of July 2005.
- Graham, C., Pettinato, S., 2002. Happiness and Hardship. Opportunity and Insecurity in New Market Economies. Brookings Institution Press, Washington, D.C.
- Heinrich, G. Affluence and poverty in old age: new evidence from the ECHP, CEPS/INSTEAD, 2000
- Immervoll H and D Barber (forthcoming). "Can parents afford to work? Childcare Costs, Benefits and Work Incentives", OECD, Paris.
- Immervoll H, H Levy, C Lietz, D Mantovani, C O'Donoghue, H Sutherland and G Verbist (2005) Household incomes and redistribution in the European Union: quantifying the equalising properties of taxes and benefits, EUROMOD working paper EM9/05.
- Immervoll H., C. O'Donoghue and H. Sutherland, 1999, "An Introduction to EUROMOD", EUROMOD Working Paper EM0/99.



- Jolliffe, D. and Semykina, A. (1999): Robust standard errors for the Foster–Greer–Thorbecke class of poverty indices: SEPOV. 1999. Stata Technical Bulletin, STB–51.
- Jolliffe, D. and Krushelnysky, B. (1999): Bootstrap standard errors for indices of inequality: INEQERR. 1999. Stata Technical Bulletin, STB–51.
- Kakwani, N. (1993): Statistical Inference in the Measurement of Poverty. Review of Economics and Statistics vol75(4) 623–639.
- Lelkes, O., (forthcoming). Social Exclusion in Central–Eastern Europe. Concept, measurement and policy interventions. ILO, Geneva.
- Lelkes, O., 2003. “Kinn is vagyok, benn is vagyok. A társadalmi kirekesztés mérése az Európai Unióban és Magyarországon” [In or out. Measuring social exclusion in the European Union and Hungary], Szociológiai Szemle, 13 (4), pp. 88–106.
- Lietz C. and H. Sutherland, 2005, “Social Indicators and other Income Statistics using EUROMOD: an assessment of the 2001 baseline and changes 1998–2001” EUROMOD Working Paper No. EM6/05
- Maasoumi (1997): Empirical analysis of inequality and welfare. in: Pesaran, H. and Schmidt, P.: Handbook of Applied Econometrics. Vol.II. Oxford, Blackwell.
- Makovec, M., O'Donoghue, C., Toso, S., 2005. Child poverty in Europe: methodological and policy issues. manuscript.
- McGillivray, Mark; Shorrocks, Anthony. Inequality And Multidimensional Well–Being. Review of Income and Wealth, Blackwell Publishing, 2005.
- Mills, J.A. and Zandvakili, S. (1997): Statistical Inference via Bootstrapping for Measures of Inequality. Journal of Applied Econometrics, vol.12.133–150.
- Mooney, Z. Ch. and Duvall, R. D. (1993): Bootstrapping. A Nonparametric Approach to Statistical Inference. Sage.
- Nolan, B., Whelan, C. T., 1996. *Resources, Deprivation, and Poverty*. Clarendon Press, Oxford.
- Nygard, F. and Sandstrom, A. (1981): Measuring Income Inequality. Stockholm.
- Oxley, H., T.–T. Dang, M. Förster and M. Pelizzari (2001): Income inequalities and poverty among children and households with children in selected OECD countries: trends and determinants, In:
- Pashardes, P., 2003. Poverty and Social Exclusion in Cyprus. Economic Policy Papers No. 07–03. University of Cyprus. Economics Research Centre, Nikosia.
- Sapir, A. (2005): Globalisation and the Reform of the European Social Models. Background document for presentation at ECOFIN Informal Meeting in Manchester, 9 September, 2005.
- Schwabish, J. – Smeeding, T. – Osberg, L. (2003): Income Distribution and Social Expenditures: A Cross–National Perspective. LIS Working Paper Series No. 350. Syracuse, New York: Maxwell School of Citizenship and Public Affairs Syracuse University. <http://ssrn.com/abstract=434605> , 6th of July 2005.
- Stewart, K. – J. Micklewright (2001): 'Child Well-being in the EU – and Enlargement to the East.' In: Vleminckx, K. – T.M. Smeeding (eds.): 99–127.
- Sutherland H. (ed), 2001, “EUROMOD: an integrated European Benefit–tax model, Final Report”, EUROMOD Working Paper EM9/01.

- Sutherland H. (ed), 2005, "Micro-level analysis of the European Social Agenda: combating poverty and social exclusion through changes in social and fiscal policy" EUROMOD Working Paper No. EM8/05
- Sutherland H., 2000, "EUROMOD: A tax-benefit model for the European Union", *Transfer*, 6 (2) 312–316.
- Tsakloglou P. (1998), 'On the paramount importance of including incomes in-kind in distributional studies: Evidence from Greece', paper presented at a ESRI workshop. Economic and Social Research Council, Dublin.
- UNICEF (2001): A decade of transition. The MONEE project CEE/CIS/Baltics. UNICEF ICDC Monitoring Report, No. 4.
- UNICEF (2005): Child Poverty in Rich Countries, 2005. Report Card No. 6., Florence: UNICEF Innocenti Research Centre.
- Vleminckx, K. and T.M.Smeeding (ed.) (2001): Child well-being, child poverty and child policy in modern nations, Bristol: The Policy Press, 371–406.
- Whelan, C. T., Layte, R., Maitre, B., 2004. 'Understanding the mismatch between income poverty and deprivation: a dynamic comparative analysis'. *European Sociological Review*, 20, 287–302.