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Social Inclusion and Income Distribution in the European Union

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Social Inclusion and Income Distribution[1]

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[1] *The views expressed in this document are those of the authors and do not necessarily represent those of the European Commission.*

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1. INCOME INEQUALITY AND POVERTY IN THE EU: RECENT DEVELOPMENTS AND TRENDS[2]

Evidence

INCOME INEQUALITY

The inequality measure used as a primary Laeken indicator is the income quintile ratio, which shows the ratio of income share 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). The difference between countries with the lowest and highest levels of income inequality, as measured by the quintile ratio, is around two to one within the current European Union (Fig. 1). In Slovenia, Sweden, Czech Republic and Denmark, the quintile ratio is 3. On the other extreme, it reaches 7 in Portugal, indicating that the top fifth of the income distribution has 7 times higher incomes than the bottom fifth. The average for EU25 countries is just below 5, and 20 out of 29 countries this ratio is between 4 and 6. In general, Mediterranean and Anglo-Saxon countries tend to have higher than average inequality, while Nordic countries tend to have lower than average levels. Evidence for the ex-Socialist countries and Cyprus, the last round of enlargement countries, is mixed: they do not cluster at any particular level. There is disparity even among those countries which have geographical proximity and common historical development paths. For example, while the Czech Republic is one of the most equal countries, inequality in Slovakia is relatively high. While two of the Baltic States, Latvia and Estonia tend to have above average degrees of inequality, this is not true for the third State, Lithuania.

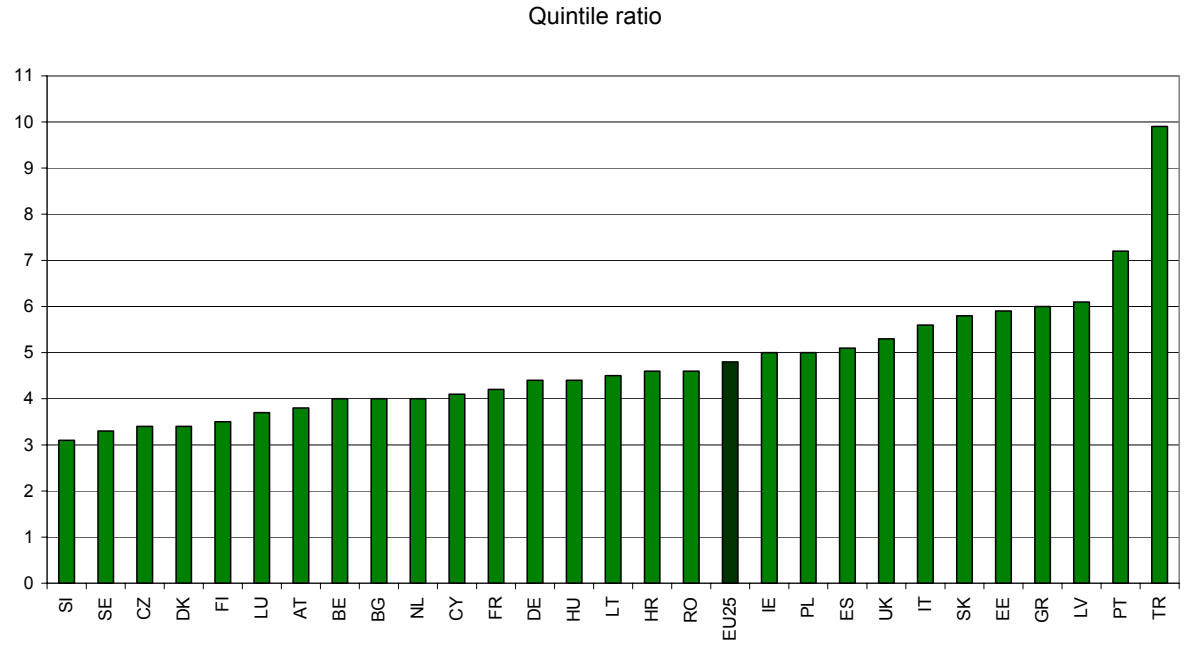
Inequality in Turkey surpasses that of all other EU and candidate countries, and the quintile ratio is as high as 10. As for the other candidate countries, income inequality in Croatia and Romania seems to be around the EU25 average, while it is somewhat lower in Bulgaria.

The quintile ratio highlights the general disparity of incomes, although it does not necessarily reveal the differences between the most needy and the most affluent sections of the population. These groups, however, are very difficult to capture in general household surveys. According to a study of Atkinson (2003), focusing only on the richest, the share of the top 0.5% reached 10% of total incomes in the UK in 2000 (see Fig. A1 in Appendix A – which is included here for illustrative purposes). Some additional analyses on income differences across bottom, middle and top income quintiles are presented below. As regards the relationship between

[2] Orsolya Lelkes, Asghar Zaidi, European Centre for Social Welfare Policy and Research, Vienna

inequality and social expenditure, as Fig. 2 shows, although countries with higher social spending tend to have a somewhat lower level of inequality, the relationship is far from linear. At a given level of social expenditure, therefore, say 25% of GDP, the Gini coefficient ranges between 0.22 and 0.38. This suggests not that the overall level of social expenditure does not matter as such, but rather, that the structure of this expenditure: how and on whom this money is spent, may be important.

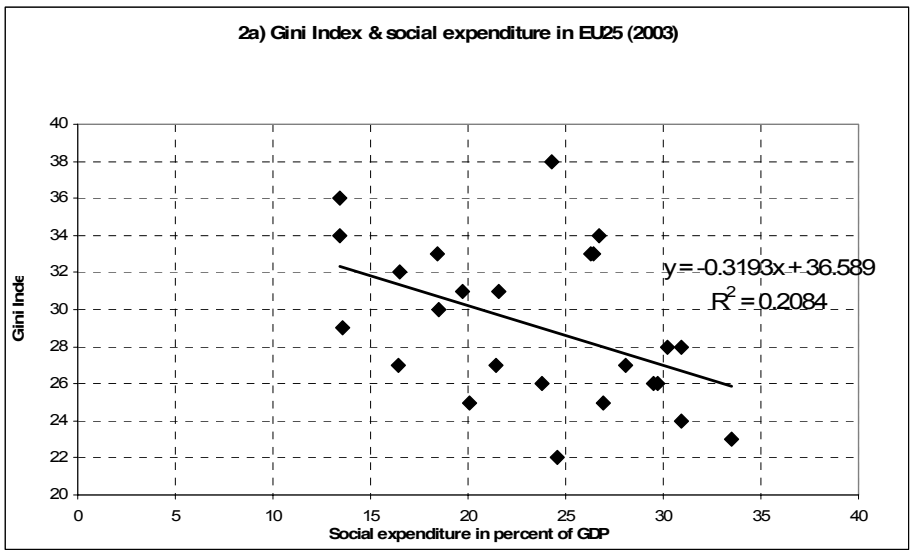
Fig. 1: Income inequality, as measured by quintile ratio, among the total population in EU25 and the candidate countries



Source: Eurostat (2006), NewCronos database, except HU: EU-SILC 2004

Reference year: 2004, except: NL, UK, CZ, EE, CY, LV, LT, HU, PL, SI, SK: 2003; MT: 2000

Fig. 2: Relationship between social expenditures and income inequality (Gini Coefficient)

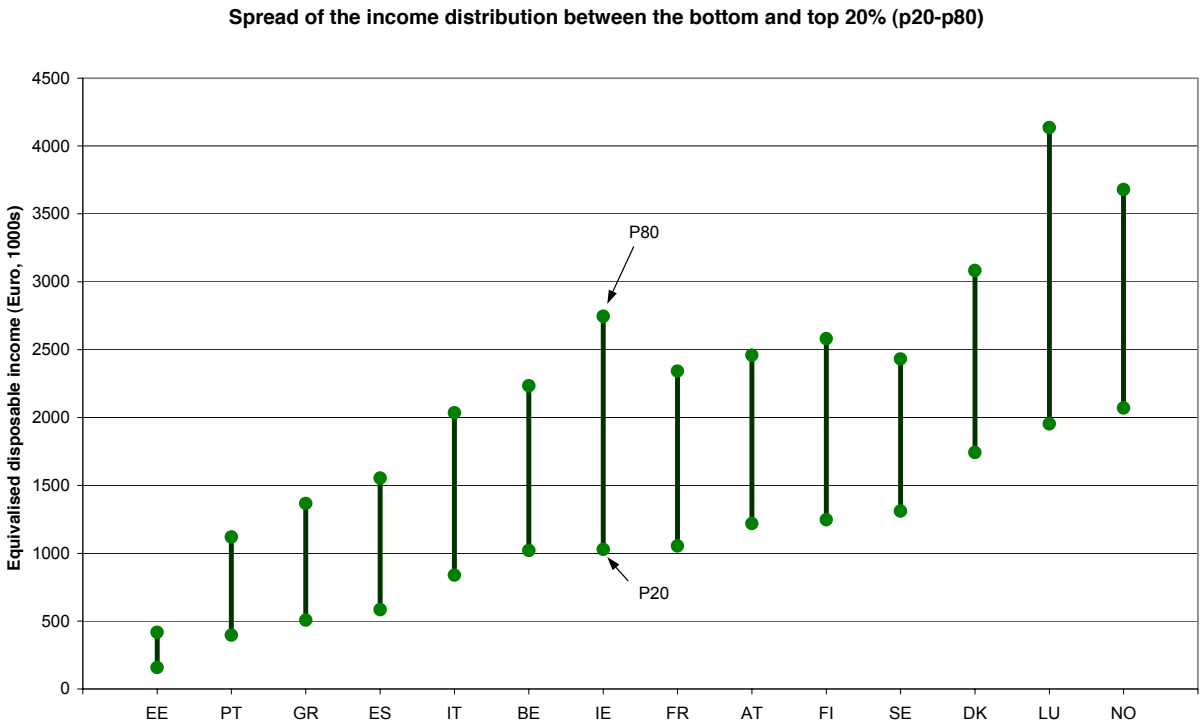


Source: Eurostat (2006), NewCronos database

Reference year: 2004, except: NL, UK, CZ, EE, CY, LV, LT, HU, PL, SI, SK: 2003; MT: 2000

Income inequality indicators conceal differences between countries in absolute monetary terms. Our calculations on the income distribution compare the Euro value of the highest income of the bottom 20%, and the lowest income of the top 20% (see Fig. 3). In other words, we observe the difference between the cut-off points for the bottom and top income quintile. As the bottom quintile may be regarded as one definition of the poverty threshold, this can be regarded as comparing the income thresholds of the affluent and the poor. The income gap between the affluent and the poor is the highest in Luxembourg, and is also relatively large in Ireland, while on the other hand, it is very small in Estonia. The figure also highlights the disparity of income levels across countries. Someone may belong to the top 20% of the income distribution in Estonia, Portugal and Greece, and have lower income than some people in the bottom 20% in Denmark and Luxembourg.

Fig. 3: Spread of income distribution between the bottom and top 20%

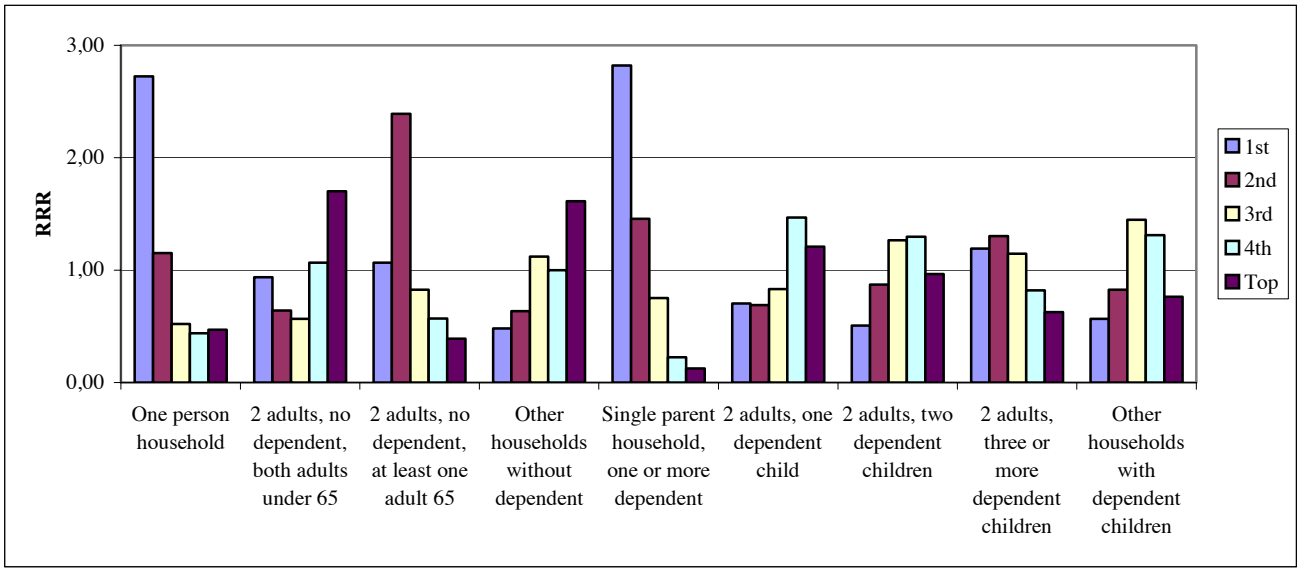


Source: Authors calculation based on EU-SILC, 2004

Notes: EU-SILC was launched in 2004 in 13 MS. This first release of the cross sectional data refers mainly to income reference year 2003. The current release corresponds thus to cross sectional data for a limited set of countries.

It is also interesting to analyse what is the likelihood that different population subgroups belong to top, bottom and middle income classes. Figure 4 presents these results for Ireland (which is identified as a median country from Figure 3), using subgroups based on household type categorisations. These results highlight whether a subgroup is more (or less) likely to be a member of an income class relative to the total population. For instance, the value of 2.7 for one-person households in the bottom quintile implies that this subgroup's "risk" of belonging to the bottom income quintile is 2.7 times higher than that observed for the total population. Single parent households are the other subgroup which has a considerably high risk of belonging to the bottom income quintile in Ireland (2.8 times more likely than the total population). In contrast, two adults (both aged less than 65) with no dependent children and other households without dependent children are more likely to belong to the top income quintile.

Fig. 4: Relative Risk Ratio (RRR) of membership of Income Quintiles (in Ireland)

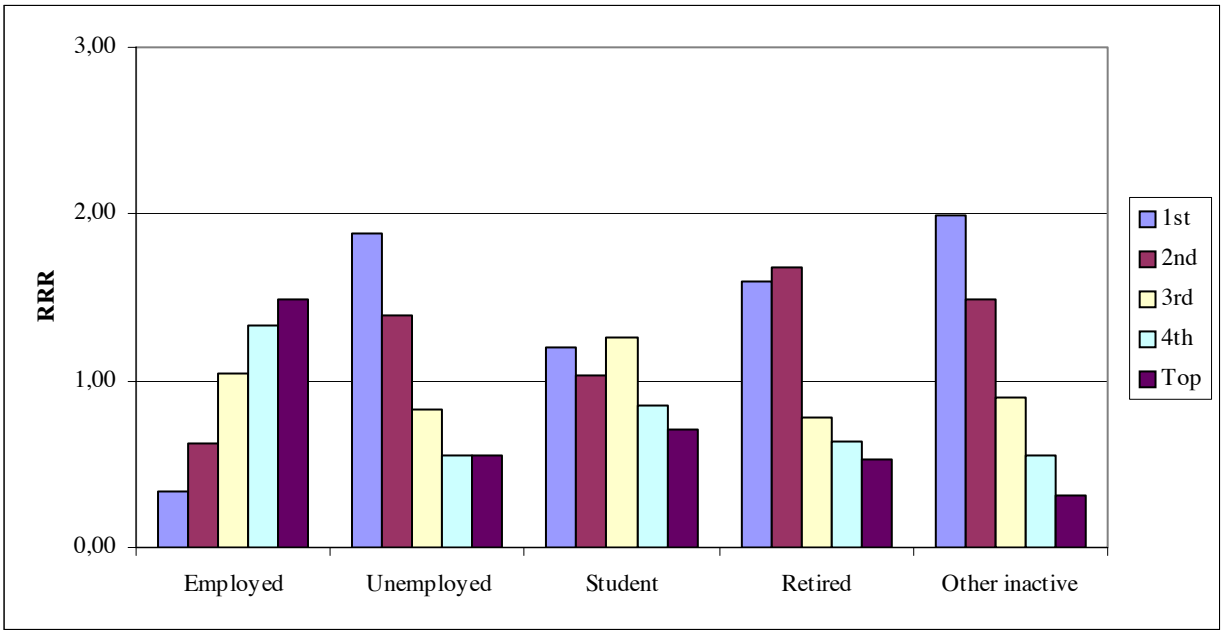


Source: Authors' calculation using 2004 EU-SILC data for Ireland.

These results for other 12 EU countries (for whom the 2003 EU-SILC data are currently available) are presented in Table A.3 (in Annex A). In almost all countries, both single person and single parent households are more likely to belong to the bottom income quintile; with a notable exception of Belgium and Portugal (single person households in Belgium are not great deal more likely to be in the bottom income quintile, and the same is true for single parent households in Portugal).

Figure 5 presents the results using the employment status categorisation (the results for Ireland only). It is not surprising to find that persons in employment are more likely to belong to the top income quintile and the unemployed and inactive persons are more often found in the bottom income quintile. The retired persons in Ireland are also more likely to be in the first two income quintiles. These results for other 12 EU countries are presented in Table A.4 (in Annex A). Without exception, employed persons are more likely to belong to the top income quintile in all countries (although the differentials are less pronounced in Portugal, Italy and Greece). The unemployed persons are more likely to fall in the bottom income quintile in almost all countries (although there are notable differences in the value of the relative risk ratio: ranging from 2.7 in Luxembourg to 1.3 in Portugal). The same is true for the inactive (non-retired) persons – the relative risk ratio for this group to fall in the bottom quintile is high in France (2.1) and Estonia (2.1) and relatively low in Denmark (1.3) and Greece (1.2). Retired persons are also considerably more likely to belong to the bottom income quintile in Denmark (1.8), Finland (1.6), Ireland (1.6) and Sweden (1.6). Luxembourg is the only country where retired persons are more likely to be in the top income quintile.

Fig. 5: Relative Risk Ratio (RRR) of membership of Income Quintiles in Ireland

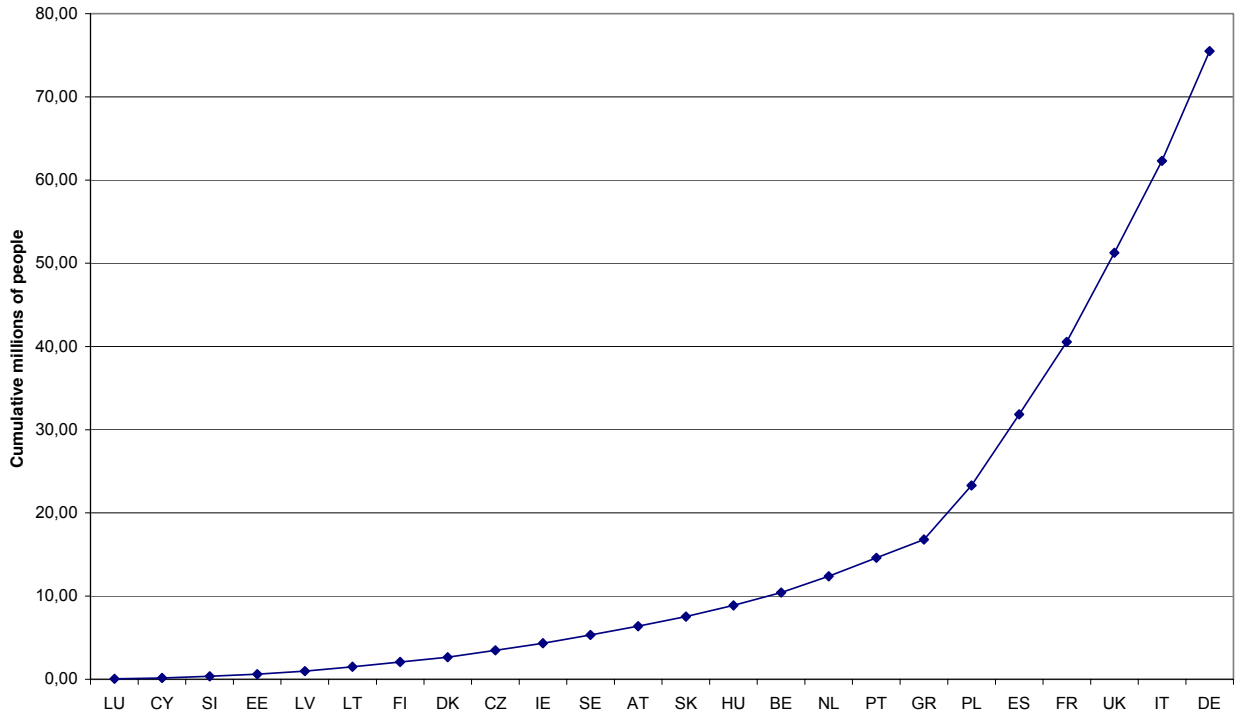


Source: Authors' calculations using 2004 EU-SILC data for Ireland.

INCOME POVERTY

Some 75 million people have income below the (relative) poverty level in the European Union, using country-specific poverty thresholds, the standard measure of poverty in the EU (see Table A.1 in Appendix A). The cut-off point for this poverty threshold is 60% of the national median income. The greatest number of poor people lives in countries which also have large populations, in particular Germany, Italy, UK, France, Spain and to a lesser extent Poland (see Figure 6). In the former five countries the total number of poor reaches 52 million, which suggests that almost 70% of the "European poor" defined in these terms live in these countries.

Fig. 6. Concentration of those at-risk-of-poverty



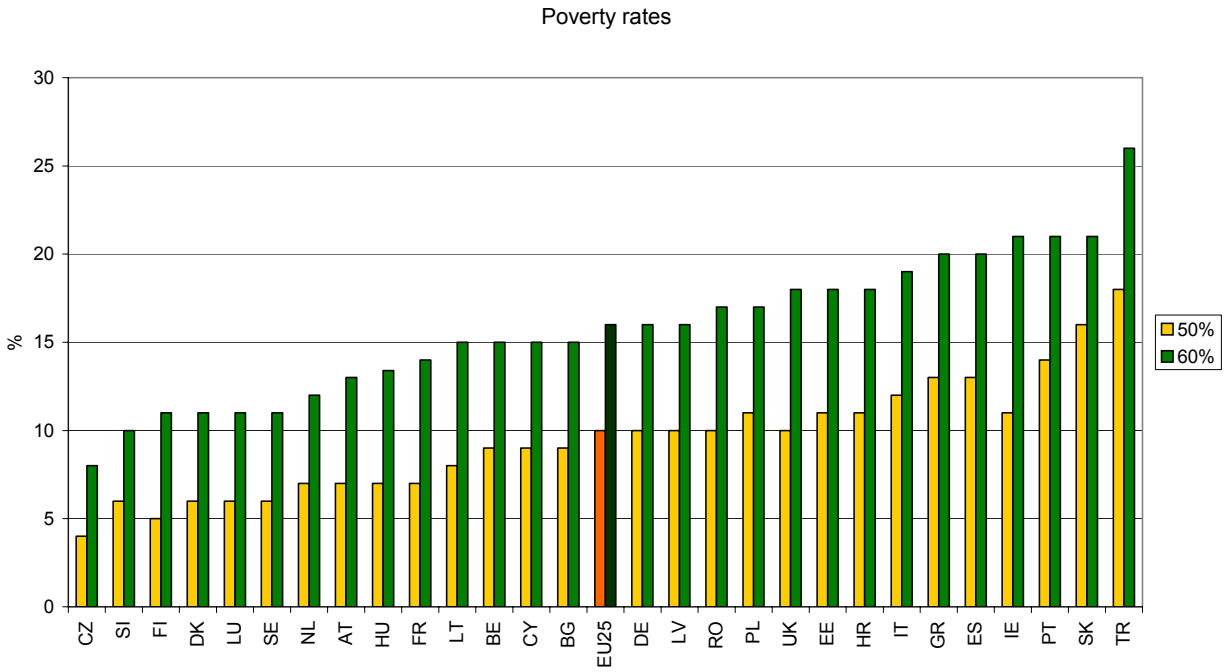
Source: Eurostat (2006), NewCronos database, except HU: EU-SILC 2004

Reference year: 2004, except: NL, UK, CZ, EE, CY, LV, LT, HU, PL, SI, SK: 2003; MT: 2000

The variation in poverty rates, using the standard nation-specific poverty thresholds, is relatively wide across Europe. As Figure 7 shows, Turkey, where the proportion below the poverty line reaches 26% (using 60% of national median income as the threshold) is at the top end of the scale, while Slovakia, Portugal and Ireland have the highest share of population below this level among the current EU countries. The smallest shares are in the Czech Republic, Slovenia, Denmark, Finland, Sweden and Luxembourg, where (relative) poverty rates defined in these terms range between 8% and 11%.

The ranking of countries does not change significantly if the alternative poverty threshold of 50% of national median income is used. On this measure, poverty rates range between 4% (Czech Republic) and 16% (Slovak Republic) within the EU, and reach 18% in Turkey. In other words, although these alternative thresholds indicate a different extent of poverty due to the different monetary value of the cut-off point, they both reveal very similar levels of inequality in comparative terms. Either of them could be used as outcome measures for policy assessment.

Fig. 7: Poverty rates in EU25 and the candidate countries, using 50% as well as 60% of median poverty thresholds



Source: Eurostat (2006), NewCronos database, except HU: EU-SILC 2004

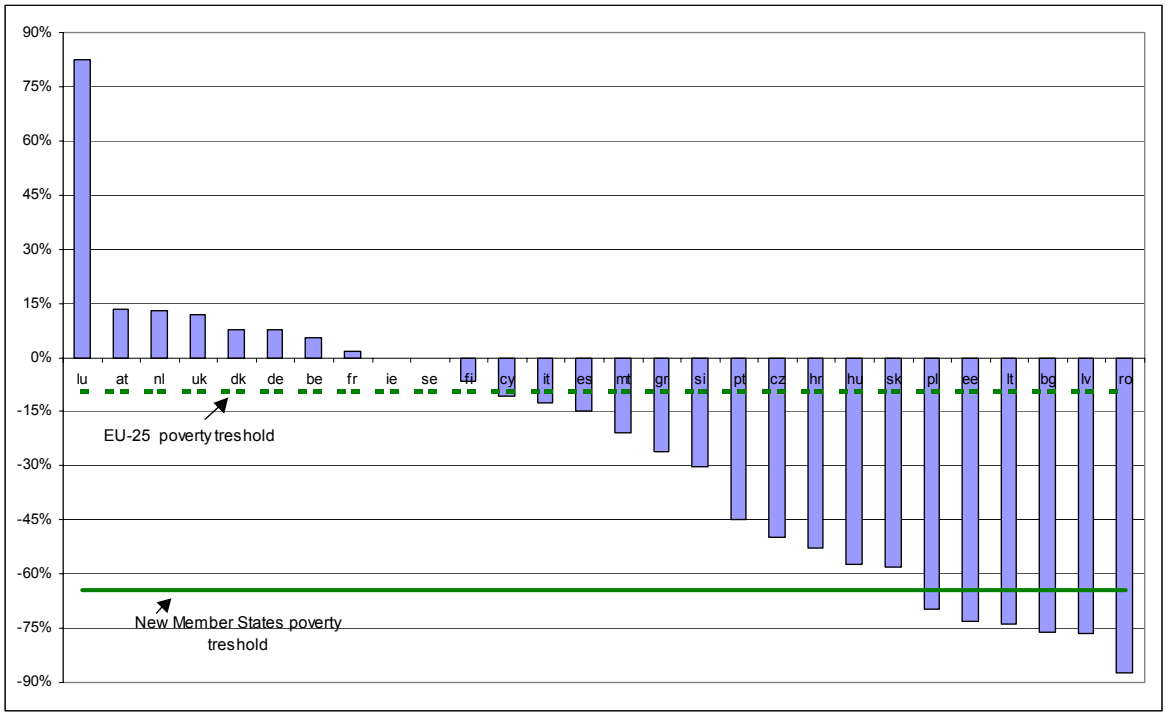
Reference year: 2004, except: NL, UK, CZ, EE, CY, LV, LT, HU, PL, SI, SK: 2003; MT: 2000

The ex-Socialist countries do not seem to perform any better or worse than EU Member States overall, nor do they do seem to cluster together. The Czech Republic and Slovakia are the most marked cases, the former having the lowest rate of relative poverty, the latter the highest. This, however, is subject to the figures on which this finding is based, which come from national and not necessarily directly comparable sources, being accurate, a condition which can only be tested once data from the new EU-SILC become available. In addition, while Hungary and Slovenia, Latvia and Bulgaria have lower than average levels of relative poverty, Latvia, Romania, Poland, Estonia and Lithuania have higher than average figures. There is, therefore, no sign in this respect of a common inheritance of the past relatively generous social welfare systems.

Box. Differences in relative poverty thresholds

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.

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



The extent of poverty: poverty gaps

How poor are the poor? The poverty rates, on which the discussion so far has focussed, indicate how many people have incomes below the particular threshold chosen, but reveal nothing about the extent of their poverty. This aspect is explored in some detail 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 shows 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 incomes between them.

Table 1. Relative median at-risk-of-poverty gap by gender and selected age groups

	Males total	Females total	Males between 16-64	Females between 16-64	Males 65 +	Females 65+	Total less than 16 year
EU 25	22	22	23	23	17	17	23
EU 15	22	22	23	24	17	17	23
New Member States	22	21	22	21	13	13	23
Belgium	24	22	25	24	19	17	22
Czech Republic	17	15	17	15	6	8	15
Denmark	22	18	27	21	7	9	19
Germany	24	25	23	27	17	19	31
Estonia	25	23	29	27	8	10	24
Greece	24	25	25	25	23	27	19
Spain	26	24	27	27	24	20	26
France	19	19	22	22	10	12	19
Ireland	20	18	21	23	13	10	24
Italy	26	25	28	29	13	13	28
Cyprus	18	21	15	18	23	25	12
Latvia	24	22	25	26	6	8	25
Lithuania	22	19	24	22	11	14	21
Luxembourg	17	16	17	20	14	14	15
Hungary	20	19	23	22	9	11	19
Malta	19	17	19	17	18	17	20
Netherlands	20	19	24	21	8	7	18
Austria	19	20	18	23	26	20	18
Poland	24	23	24	23	16	15	25
Portugal	25	27	29	30	17	19	29
Slovenia	20	18	21	20	17	16	22
Slovakia	42	38	45	41	18	16	38
Finland	15	14	17	15	9	10	14
Sweden	20	17	26	23	10	13	13
United Kingdom	20	19	25	21	15	19	17
Bulgaria	20	18	21	20	8	14	24
Croatia	23	21	21	21	26	21	23
Romania	21	22	22	21	17	21	23
Turkey	31	31	29	30	29	32	34

Note: Reference year: 2004, except CZ, EE, CY, LT, LV, HU, NL, PL, SI, SK, UK, CR, RO, TR: 2003; MT: 2000

The poverty gap is largest in Slovakia, reaching 42 for men and 38 for women, followed by Turkey, with a figure of 31 for both sexes (see Table 1). On the other hand, the poor have a less severe financial disadvantage in the Czech Republic, Luxembourg, and Finland, with poverty gaps ranging between 14 and 17. These results suggest that there is some correlation between poverty rates and the size of the poverty gap: it seems better to be poor in low-poverty countries, as the poor tend to have higher incomes in relative terms. This might reflect the tendency for low poverty countries to have flatter distributions of income.

The poverty gap varies substantially across age groups, but less so between men and women. We cannot observe a general gender pattern across countries. The poverty gap is wider for men than for women in many countries, especially Denmark, Lithuania, Slovakia and Sweden. In a large number of countries, there are no major differences between men and women, while in a few others, for example in Cyprus and Portugal, the poverty gap is larger for women. The depth of poverty varies substantially across age groups. Poverty in old age tends to be less severe. In most countries, the poor aged 65 and over experience a smaller income disadvantage than the younger age groups, while in others the situation of people of pensionable age does not differ significantly from that of other age groups. Only in a few cases, specifically men in Austria and Croatia and both men and women in Cyprus, is the poverty gap of the elderly comparatively large.

TRENDS I POVERTY AND INCOME INEQUALITY SINCE THE 1990s

Trends in income inequality

Förster and d'Ercole (2005) compiled estimates of long run inequality trends for all OECD countries, using perhaps the most consistent method and by relying on national data sources. In Table 2, results for EU25 and candidate countries are included. These results show that there are clearly different trends for different sub-periods and for different countries. The United Kingdom is the only country that experienced an increase during all three subperiods (mid-1970s to mid-1980s; mid-1980s to mid-1990s; and mid-1990s to 2000), although the rise in inequality for later two periods is 'moderate' or 'small'. Finland and Sweden are the only two countries which have seen marked increases in inequality during the latest period.

Table 2: Overall trends in income inequality: summary results for overall entire population

	Strong decline	*Moderate decline*	*Small decline*	*No change*	*Small increase*	*Moderate increase*	*Strong increase*
Mid-1970s to mid-1980s	Greece	Finland Sweden			Netherlands		United Kingdom
Mid-1980s to mid-1990s		Spain	Denmark	Austria France Greece Ireland	Belgium Germany Luxembourg Sweden	Czech Rep. Finland Hungary Netherlands Norway Portugal United Kingdom	Italy Turkey
Mid-1990s to 2000		Turkey	France Ireland Poland	Czech Rep. Germany Hungary Italy Luxembourg Netherlands Portugal	Austria Denmark Greece Norway United Kingdom		Finland Sweden

Note: "Strong decline/increase" denotes a change in income inequality above +/- 12%; "moderate decline/increase" a change between 7 and 12%; "small decline/increase " a change between 2 and 7%; "No change" changes between +/- 2%. Results are based on the values of the Gini coefficient in four reference years which may vary among countries. "2000" data refer to the year 2000 in all countries except 1999 for Australia, Austria and Greece; 2001 for Germany, Luxembourg, New Zealand and Switzerland; and 2002 for the Czech Republic, Mexico and Turkey; "Mid-1990s" data refer to the year 1995 in all countries except 1993 for Austria; 1994 for Australia, Denmark, France, Germany, Greece, Ireland, Japan, Mexico and Turkey; and 1996 for the Czech Republic and New Zealand; "Mid-1980s" data refer to the year 1983 for Austria, Belgium, Denmark and Sweden; 1984 for Australia, France, Italy and Mexico; 1985 for Canada, Japan, the Netherlands, Spain and the United Kingdom; 1986 data for Finland, Luxembourg, New Zealand and Norway; 1987 for Ireland and Turkey; 1988 for Greece; and 1989 for the United States. For the Czech Republic, Hungary and Portugal, the period mid-80s to mid-90s refers to early to mid-90s.

Source: Adapted from Förster and d'Ercole, 2005.

Another recent OECD study explores the link between trends in inequality and unemployment and finds no general relationship (Burniaux, Padrini and Brandt, 2006). In the period since 1993-1994, among countries where unemployed declined, inequality fell in four of them, but increased in five others. Among countries with rising unemployment, the Czech Republic and Luxembourg experienced rising inequality, while the opposite holds for Austria and Germany. Similarly, they find only a weak link between unemployment trends and changes in relative poverty.

Period after 1993-94				
		Unemployment rate		
		Decline	Almost constant	Increase
Overall income inequality	Decline	France Italy Netherlands Spain	Portugal	Austria Germany
	Almost constant or unclear	Belgium Ireland Norway United States		Greece
	Increase	Canada Denmark Finland Sweden United Kingdom		Japan Czech Republic Luxembourg

Source: Burniaux, Padrini and Brandt, 2006

Due to the inaccessibility of suitable micro dataset, it is not possible for us to provide a systematic comparison on changes in different parts of the income distribution for all EU countries. We refer here to OECD analyses which report on the gains and losses of income shares by income quintiles during the period from the mid-1980s to mid-1990s (Förster and d'Ercole 2005). They note that movements at the higher end dominated the changes in income distribution for the majority of countries. Results included in Table 3 below indicate that in 6 out of 15 EU countries persons in the top quintile increased their share of disposable income (more notably in Finland and Sweden), while 2 other countries gained in the middle income quintiles (most notably in Ireland). In a majority of countries, income shares in the bottom, middle and top quintiles remained broadly unchanged from the mid-1990s to early 2000.

Table 3. Changes in income share by income quintile; for the total population, from mid-1990s to early 2000

	Bottom quintile	Middles quintiles	Top quintile
Austria	-	=	+
Czech Republic	=	=	=
Denmark	=	-	+
Finland	-	-	+++
France	=	=	=
Germany	=	+	=
Greece	=	-	+
Hungary	=	=	=
Ireland	-	+++	---
Italy	=	=	=
Luxembourg	=	=	=
Netherlands	=	=	=
Portugal	=	=	=
Sweden	-	-	+++
United Kingdom	=	-	+

Note: The table shows percentage point changes in the shares of equivalised disposable income received by each quintile of the population. +++ denotes an increase of more than 1.5 percentage points in the share of disposable income received by the each quintile group; + denotes increase of between 0.5 and 1.5 percentage point. = denotes changes between -0.5 and +0.5 percentage points. - denotes decrease between 0.5 and 1.5 percentage point. --- denotes decrease of more than 1.5 percentage points.

Source: Förster and d'Ercole (2005) (Table 2 adapted)

Trends in overall poverty rates

Trends is overall poverty rates are presented in Table A.2 of Appendix A. Below, in Table 3, these trends are summarised for two sub-periods: for 1995-2001 when the ECHP data was available (only for the EU15 countries) and for the period after 2001. For the later period, results for those countries are included which have already provided two years of data from the EU-SILC survey (Belgium, Denmark, Greece, Ireland, Luxembourg, and Austria) and for those New Member States which have at least three data points (Hungary, Lithuania and Estonia). During the period 1995-2001, an increase in the poverty rate is observed for Ireland, France and Finland. In contrast, for the same period, a decline in the poverty rate is observed for Portugal, Greece, Italy and the UK as well as for Germany, Austria, and Belgium. In the period after 2001, only limited evidence is available. Results included below show that Hungary and Luxembourg showed an increase in the overall poverty rate whereas Denmark, Lithuania and Greece have seen a decline in the rate.

Table 4. Trends in poverty in countries with low, medium and high levels of poverty

Period: 1995-2001

		Poverty trend		
		Decline	**No significant change or unclear trend**	**Increase**
Level of poverty	Low		Luxembourg Denmark Sweden Netherlands	Finland
	Medium	Germany Austria Belgium		France
	High	Portugal Greece Italy UK	Spain	Ireland

Note: (1) Low poverty level: poverty rate<12; Medium poverty level: 12<poverty rate<18; and High level of poverty: poverty rate>18. (2) Changes are not tested for their statistical significance.

Period: after 2001

		Poverty trend		
		Decline	**No significant change or unclear trend**	**Increase**
Level of poverty	Low	Denmark	Belgium	Luxembourg
	Medium	Lithuania	Estonia Austria	Hungary
	High	Greece	Ireland	

Note: Within the EU15 countries, only those countries are included which provided results from both 2003 and 2004 EU-SILC surveys. For the New Member States, countries with data series of at least three years are included.

Trends in child poverty and elderly poverty

Estimates of poverty rates among children are especially problematic because of the assumptions that need to be made about the weight that should be attached to them within households relative to adults (ie about the burden they impose on income) and about the share of household income which they have access to. In practice, the assumptions adopted here are the conventional ones – that children have a weight of 0.3 relative to the first adult in the household (ie that they add an additional 30% to household expenditure relative to the latter),

which accords with the so-called OECD-modified scale, and that they have an equal share of household income (measured in equivalised terms) to everyone else living there. The results are dependent on these two assumptions,, both of which are debatable, and this should be kept in mind when interpreting them. It should also be kept in mind that the estimates presented below, as those above, relate to *relative* rather than absolute poverty rates and, accordingly, indicate the risk of poverty rather than deprivation as such.

As mentioned in Appendix B, the most consistent estimates for trends are available only for the EU15 countries and mainly for the period 1995-2001.[3] Results included in Table 4 show that the experience with respect to changes in the poverty risk for children has been mixed for the EU15 countries during the period in question. A significant decline in the poverty rate for children is observed for Germany (from 18% to 14%), Belgium (from 16% to 12%) and Austria (from 16% to 13%). In contrast, an increase in the poverty rate for children is observed for the Netherlands (from 13% to 17%), Luxembourg and France (from 16% to 18%) and Spain (from 24% to 26%). The UK, Ireland, Portugal, Italy and Spain were the countries with the highest risk of poverty among children in 1995 and this continued to be the case in 2001.

As regards at-risk-of-poverty rates for the elderly, data for more than a few years are unfortunately available only for EU15 countries, with the exception of Sweden. Moreover, even for these countries, the most consistent estimates are for the period 1995-2001, which is the focus here.[4] Ireland, Spain, Finland and Austria are the only countries where there was a significant rise in the risk of poverty for the elderly over this period. Two of these countries (Ireland and Spain) were among the five with the highest initial risk. In Austria, however, the poverty rate in 2003 was significantly lower than in 2001, though this might be affected by the change in data source. On the other hand, Portugal, the UK, France and Luxembourg are the only countries that experienced a significant fall in the poverty risk for the elderly between 1995 and 2001.

[3] For France, the Netherlands, Finland and the UK, we have consistent trends for the period 1995-2000 only.

[4] The only notable trend in the latest two years is observed for Denmark and Luxembourg, where there seems to have been a significant decline in the risk of poverty for the elderly population (from 21% to 17% for Denmark; from 12% to 6% for Luxembourg). The opposite trend is observed for France, but the consistency of the data is open to question because of a change in source.

Table 5: Trends in poverty risk of children, using 60% of median income as the poverty line

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Belgium	16	15	14	13	12	11	12		16[b2]	17
Czech Republic							12		15	
Denmark	6		6		7		7		9[b2]	9
Germany	18	15	15	13	13	13	14	20	20	20
Estonia						21	19	18	20	
Greece	18	19	18	17	17	19	18		23[b2]	20
Spain	24	23	26	24	25	25	26	21[b1]	19	24[b2]
France	16	16	16	16	17	18	16[b1]	16	15	14[b2]
Ireland	26	27	25	23	21	22	26		22b[2]	22
Italy	24	24	23	21	22	25	25			26[b2]
Cyprus									11	
Latvia						21		19	19	
Lithuania						18	20	20	17	
Luxembourg	16	14	16	20	19	18	18		12b[2]	18
Hungary						17	15	13	17	
Malta						21				
Netherlands	13	14	13	14	14	17	17[b1]	17	18	
Austria	16	18	15	15	14	12	13		16b[2]	15
Poland						22	22	23	23	
Portugal	26	23	25	26	26	26	27			23[b2]
Slovenia						9	9	7	9	
Slovakia									30	30
Finland		5	5	5	7	6	9[b1]	10	10	10[b2]
Sweden			7		7		7	10		11[b2]
United Kingdom	28	25	27	29	29	27	23[b1]	23	22	

Notes: The year in the first row refers to the survey year. [b] Break in the series; in the majority of EU15 countries the results reported under 2001 come from the last wave of the ECHP, and results beyond 2001 are either from national data sources or from EU-SILC.

[b1]: Break in the series, due to a switch from ECHP to another survey; [b2]: Break in the series, due to a switch to EU-SILC.

Table 6: Trends in poverty rate of elderly population, using 60% of median income as the poverty line

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Cyprus			58						52	
Ireland	19	22	27	33	34	42	44		41 b2	40
Spain	16	14	16	15	16	19	22	28 b1	28	30 b2
Portugal	38	36	37	35	33	33	30		:	29 b2
Greece	35	33	34	35	33	31	33		28 b2	28
United Kingdom	32	28	25	25	21	24	25 b1	26	24	
Belgium	25	25	23	22	22	24	26		23 b2	21
Malta						20			:	
Slovenia						21	20	19	19	
Austria	20	21	22	21	24	23	24		16 b2	17
Denmark							24		21 b2	17
Estonia						16	18	16	17	
Finland		12	12	16	16	19	18	18	17	17 b2
France	19	18	17	18	19	19	11 b1	10	11	16 b2
Italy	18	18	17	17	14	13	17		:	16 b2
Germany	15	17	12	12	11	10	15	17	16	15
Latvia						6		10	14	
Sweden							16	15	:	14 b2
Lithuania						14	12	12	12	
Slovakia									13	11
Hungary						8	12	8	10	
Netherlands	8	7	4	4	7	6	9 b1	8	7	
Luxembourg	12	9	9	9	8	9	7		12 b2	6
Poland						8	7	7	6	
Czech Republic							6		4	

Notes: See the notes for Table 4

Demographic factors

AGE

Figure 8a presents the risk of poverty among children in comparison with the poverty risk for the overall population. Within the EU15 countries, the highest at-risk-of-poverty rate among children is in Italy (26%), Spain (24%), Portugal (23%), Ireland (22%) and the UK (22%). With the exception of Ireland, these countries exhibit a significantly higher poverty risk for children than for the overall population. Greece and Germany are only slightly behind (with 20% at-risk-of-poverty rate amongst children) – Greece has the same poverty risk for the overall population, whereas in Germany, the at-risk-of-poverty rate for children is 25% greater than for the overall population. In the new Member States, only Poland, Slovakia and Estonia have at-risk-of-poverty rates among children in excess of 20%, although in almost all of these countries the rate for children is higher than for the overall population. Two notable exceptions are Cyprus and Slovenia, where the poverty risk among children is lower than for the overall population. In the candidate countries, by far the highest poverty risk among children is in Turkey (34%), while Croatia stands out as having a relatively low rate.

Figure 8b presents the risk of poverty among the elderly in comparison with that for the overall population. By far the highest at-risk-of-poverty rate for the elderly is in Cyprus (52%), while all other Member States with relatively high rates are EU15 countries: Ireland (40%), Spain (30%), Portugal (29%), Greece (28%), and the UK (24%). The new Member States for the most part have the lowest rates – the average poverty risk for the elderly in the EU15 (around 19%) being more than twice as high as that in the new Member States (around 9%). With the exception of Cyprus, Malta and Slovenia, all new Member States seem to do relatively well in protecting their elderly citizens from the risk of (relative) poverty. The same is also true of the Netherlands, Luxembourg, Italy and Germany. Elsewhere in the EU15, the risk of poverty among the elderly is considerably higher than for the overall population – most notably in Ireland where it is almost twice as high as for the latter.[5]

It should be noted, however, that an important resource for many of the elderly is their free access to housing as they are more likely to be home owners than those younger. The figures here do not take account of this and accordingly they may overestimate the proportion of the elderly effectively at risk of poverty once allowance is made for this factor.

[5] For Ireland, the median poverty gap is rather low for the elderly (11% for Ireland as opposed to 16% for the whole of EU25. For more details on other aspects of poverty amongst the elderly, see Zaidi et al. (2006).

HOUSEHOLD COMPOSITION

Figure 9a shows the relative risk of poverty among households without dependent children. In almost all countries, this sub-group is a low risk group with the rate being lower than for the overall population. A notable exception is Cyprus where the households in question have a significantly higher risk of poverty (28%) than for the population as a whole (15%). Other countries with comparatively high rates for this sub-group are Slovenia (13% vs. 10%), Denmark (14% vs. 11%) and Finland (14% vs 11%).

Figure 9b shows the relative risk of poverty among two-adult households with one dependent child. This sub-group also stands out as having a relatively low risk in almost all countries, the only exceptions being Slovakia, Malta and the Czech Republic.

Figure 9c presents the relative risk of poverty among two adult households with two dependent children. This sub-group also has one of the lowest risks in almost all countries. The exceptions are the Southern European countries of Portugal, Spain and Italy as well as Slovakia, in each of which the risk of poverty for such households is significantly higher than for the overall population. This is also the case in Luxembourg, though here the overall risk is relatively low

Figures 9d, 9e and 9f present results for subgroups that are identified as having a high risk of poverty in almost all EU countries.

Figure 9d shows the relative risk of poverty among two adult households with three or more dependent children. Not surprisingly, the rates here are in line with those for children as a whole presented above (in Figure 6a). In particular, the relative risk of poverty for this subgroup is considerable in the high poverty risk countries of Italy, Spain, Portugal and Slovakia, where it is more than 60% higher than for the overall population.

Figure 9e shows the relative risk of poverty among single person households. In most instances, the rates are in line with those for the elderly (presented in Figure 6b above). Cyprus and Ireland stand out as having considerably higher rates for this group than for the overall population. Rates are lower in Spain, Portugal, Greece and Slovenia, but still significantly higher than the rate for the population as a whole. In all the other countries, with the sole exception of Poland, where the risk is lower, the risk of poverty for those living alone is also higher than the overall risk, if in most cases only slightly.

Figure 9f shows the relative risk of poverty among single parent households. Without exception, in all countries, this subgroup has a higher risk than for the overall population. Within the EU15, over a third of all single parent households have income below the poverty

line in Ireland, the UK, Spain, the Netherlands, Germany, Greece and Italy, while the same is the case in Malta, Slovakia and Estonia among the new Member States.

LABOUR MARKET FACTORS

LABOUR MARKET PARTICIPATION

Labour market participation, or the lack of it, is a key factor explaining rates of (relative) poverty among working age population. The unemployed are the most vulnerable group, though the economically inactive also tend to have higher rates of poverty than those in employment. This is not surprising, given that earnings from work tend to constitute a substantial share of total household income.

The incidence of poverty is relatively high among the unemployed in most EU countries – over twice as high on average as among the total population as a whole (Figure 10). In the UK, Italy, Germany, Netherlands, Luxembourg, Slovenia, Hungary, the Czech Republic and Malta, the incidence is at least three times higher. The poverty risk of the unemployed depends on two main factors: the concentration of unemployment within the household (or more accurately, the labour market status of other household members) and the unemployment insurance and social assistance system in the country in question. As regards the former, the more other household members are also out of work, the higher the risk of poverty. As regards the latter, while the unemployment insurance system has a clearly positive role in cushioning individuals from the income shock of job loss and helping them re-enter the labour market, it may also have a disincentive effect by undermining their willingness to work. The latter depends on the institutional design of the benefit and income tax system, and in particular on the entitlement and withdrawal rules when entering part time or full time employment.

The relatively high poverty risk in some countries can be partly explained by the nature of the unemployment benefit system. In the UK, Italy, Czech Republic for example the maximum duration of unemployment insurance benefits is 6 months (2002 data, based on OECD 2004). In these countries, the net replacement rate for the initial period of unemployment is around 50% for a single person on average earnings. The relationship between the insurance system and the risk of poverty, however, is not direct, as the latter also depends on the social assistance and other benefits (such as in respect of housing) which are available to those out of work.

Poverty among the unemployed tends to be relatively high in all the new Member States, with the exception of Cyprus. In many ex-Socialist countries, the rules governing entitlement to benefit have been gradually tightened as a result of pressure on the State budget.

SELF-EMPLOYMENT

In many countries, poverty among the self-employed is relatively low, while in some, the reverse is the case. The number of self-employed with poverty levels of income seems to be relatively high in Sweden, Austria, and Lithuania, while it is relatively low in Germany, Cyprus and Luxembourg, There are other countries where the incidence of poverty among this group is about the same as among the total population. These include Spain, the UK and the Czech Republic These differences in the relative position of the self-employed may reflect differences in macroeconomic condition and in the income risks associated with being self-employed (as compared to being an employee). The empirical literature suggests that entrepreneurship in itself brings higher job satisfaction and that a large number of people would prefer to be self-employed than an employee for a given level of income (Blanchflower et al., 2001). Entry into self-employment, however, is typically limited by capital constraints (Blanchflower and Oswald, 1998). Equally, however, there is evidence that, in some countries, people might become self-employed to evade tax and/or social contributions (Peter and Bukodi, 2000). This might be the case predominantly for those with low earnings potential who correspondingly are likely to be at greater than average risk of poverty.

At the same time, it should be emphasised that survey data on the income of the self-employed are inevitably much more problematic and uncertain than those on the earnings of employees. Moreover, given the incentive for the self-employed to understate income for tax purposes, the data collected on this are almost certainly more likely to be under-estimates than over-estimates[6].

RETIREMENT

As is evident from the data on the elderly reported above, retirement as such does not seem necessarily to result in a higher risk of poverty, at least not in all countries. In the Czech Republic, Slovakia, Luxembourg, Netherlands, Poland, and Italy, the rate of poverty among the retired population is relatively low, in some of them being only half as high as for the total population. On the other hand, those in retirement tend to have a relatively high risk in the UK, Portugal, Greece, and Spain and most notably in Ireland and Cyprus.

[6] It is also the case that the net income from trading reported by the self-employed might exclude payments made to themselves which are treated in their accounts as business costs.

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Annex

Fig. 8a: Child poverty (2004)

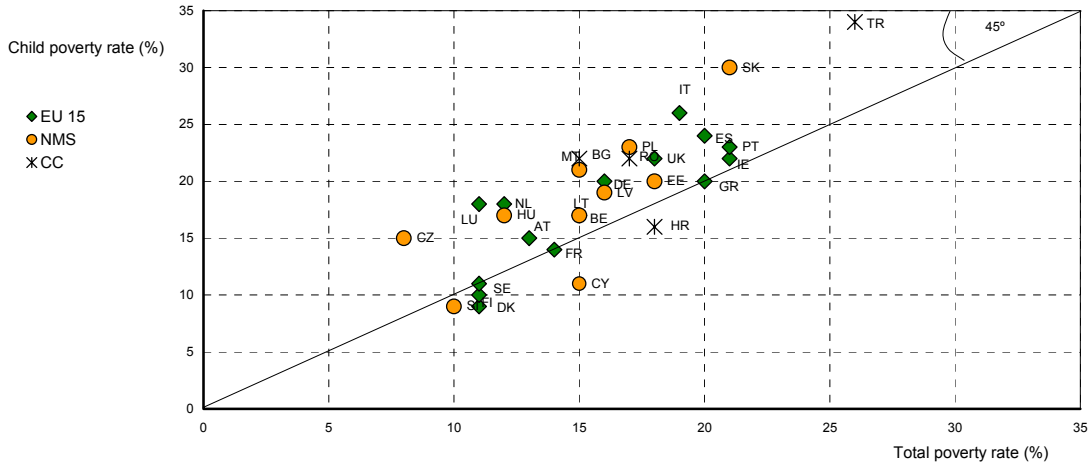
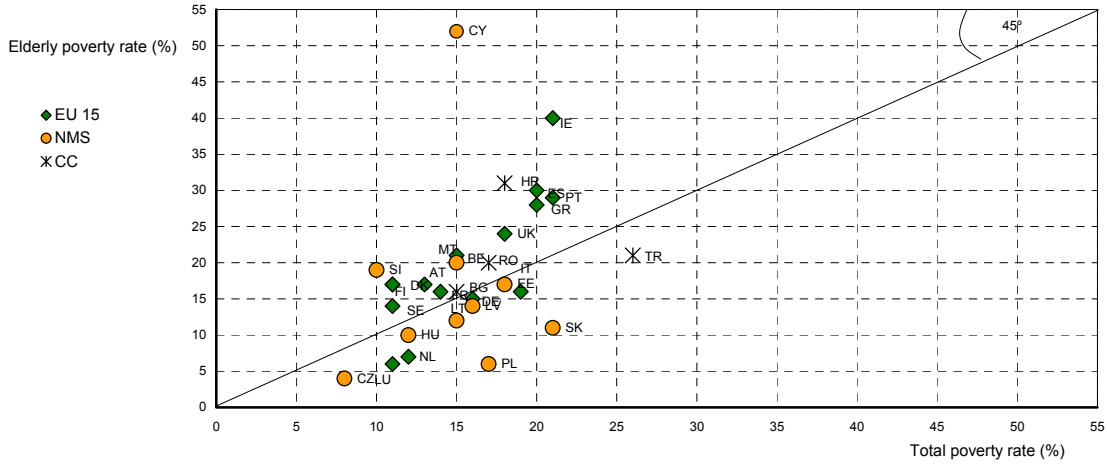


Fig. 8b: Elderly poverty (2004)



Poverty rates by household type (2004)

Fig. 9a: households with no dependent children

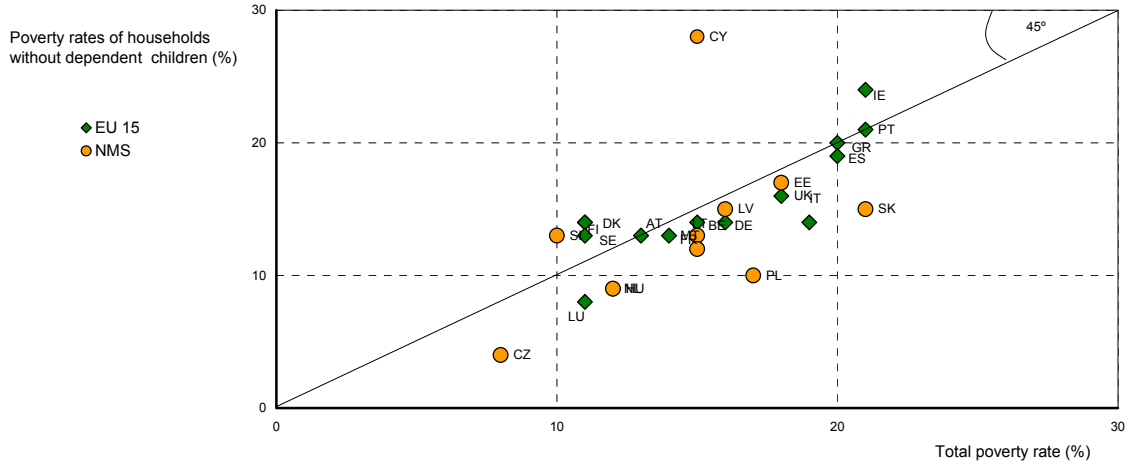


Fig. 9b: two-adult households with one dependent child

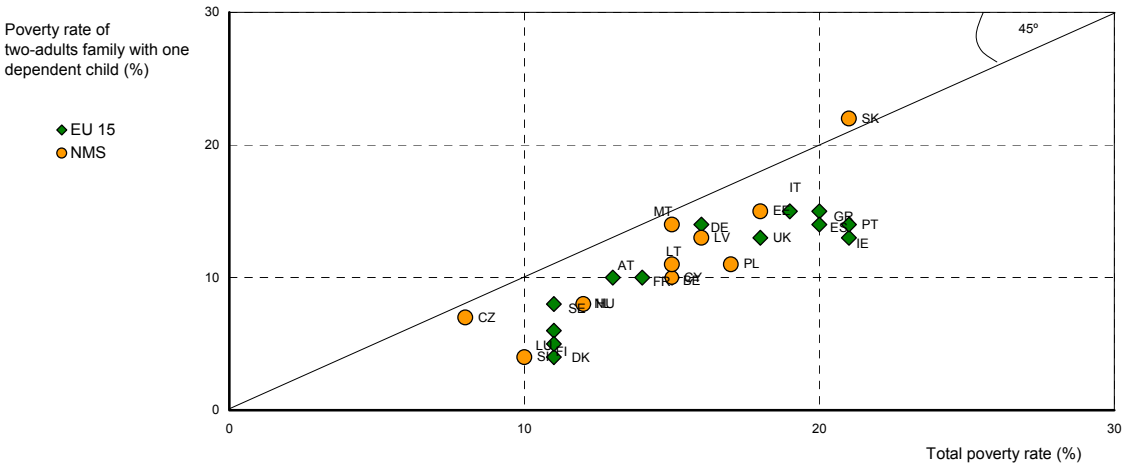


Fig. 9c : two-adult households with two dependent children

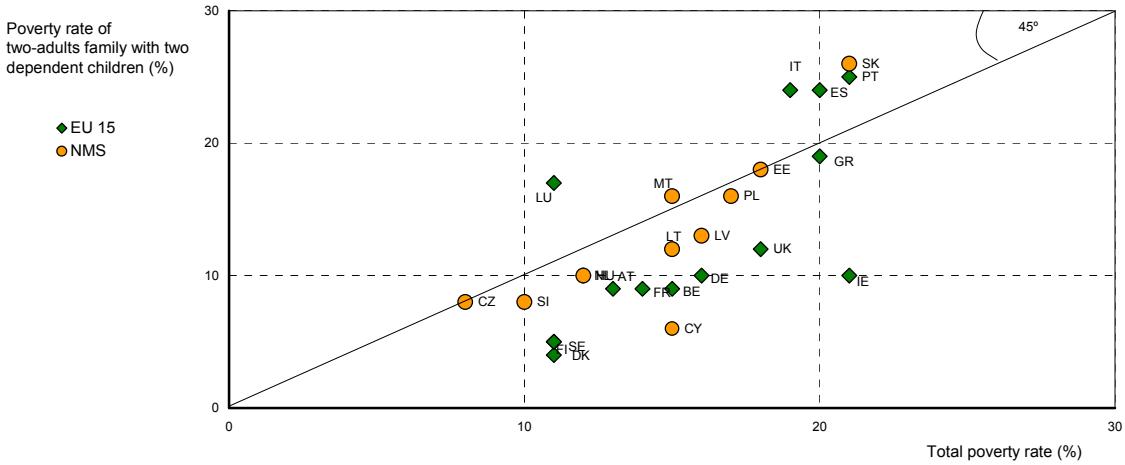


Fig. 9d : two-adult households with three or more dependent children

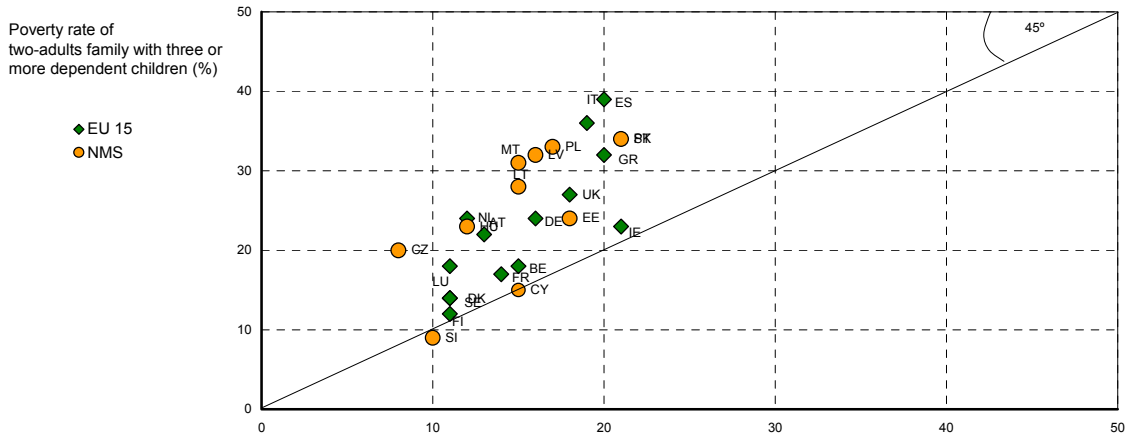


Fig. 9e : one-person households with no dependent children

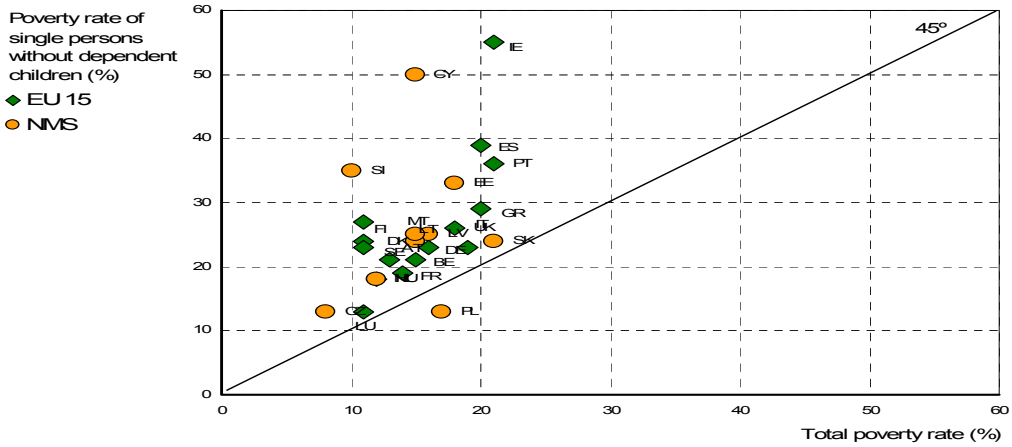
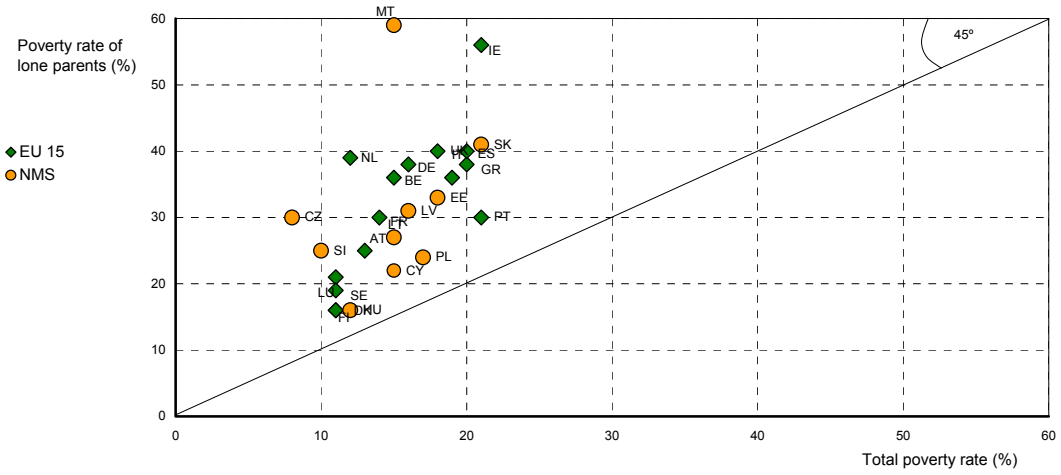


Fig. 9f : lone parents



Poverty rates by economic activity status (2004)

Fig. 10a: employees

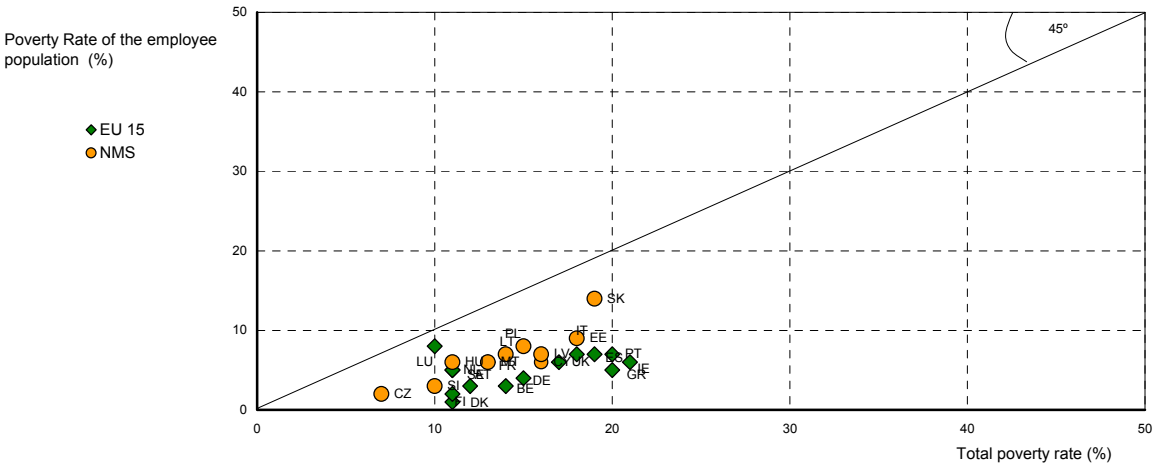


Fig. 10b: self-employed

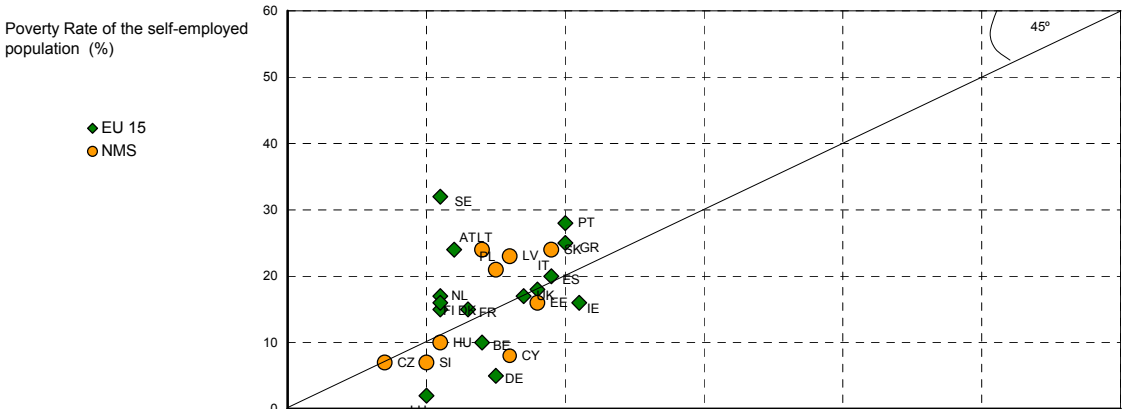


Fig. 10c: unemployed

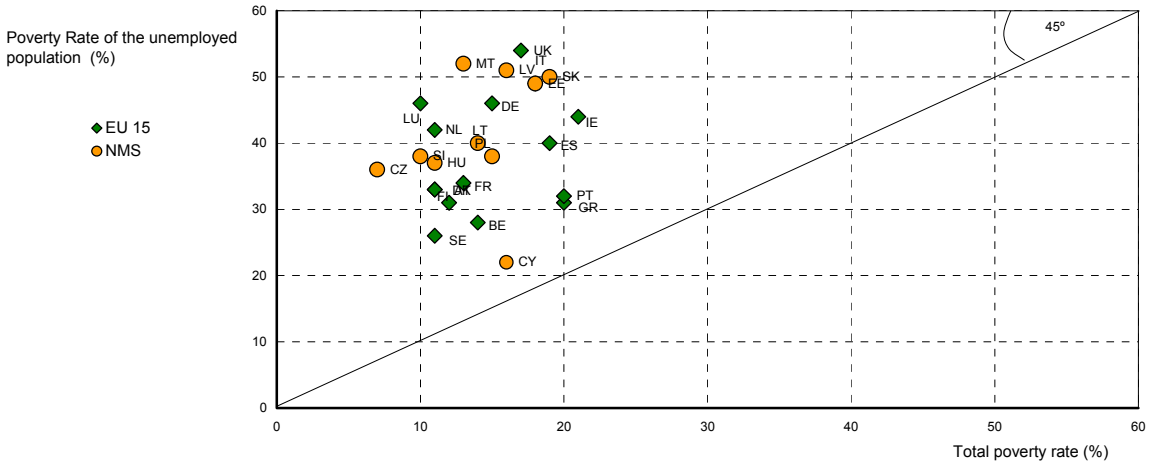


Fig. 10d: retired

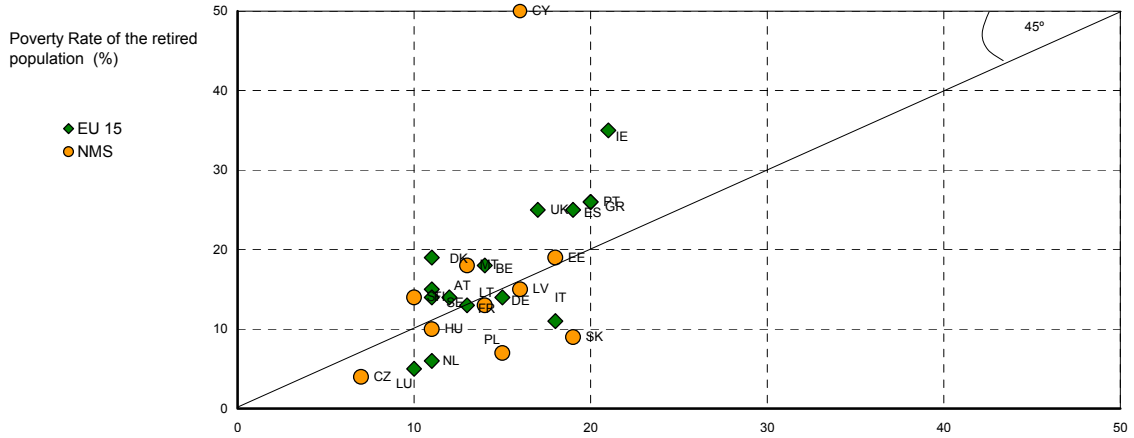
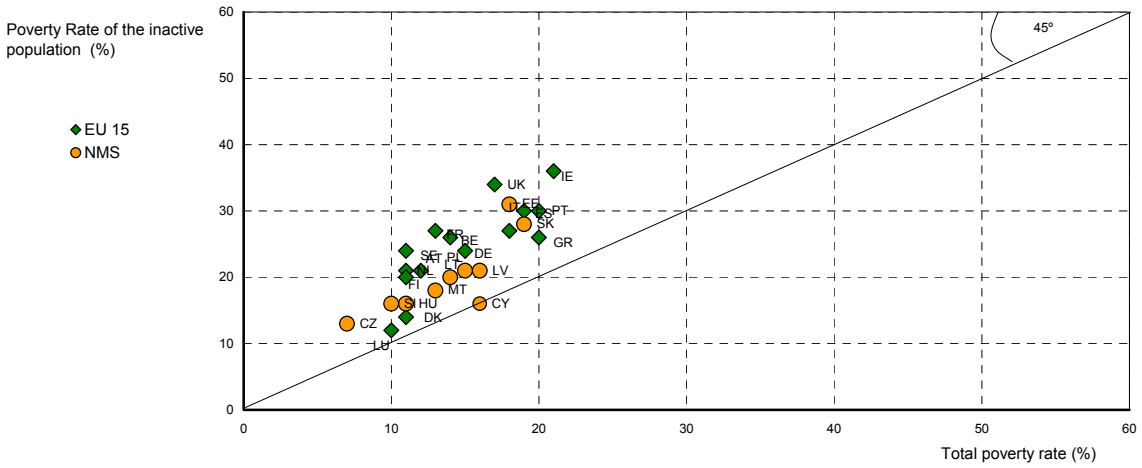
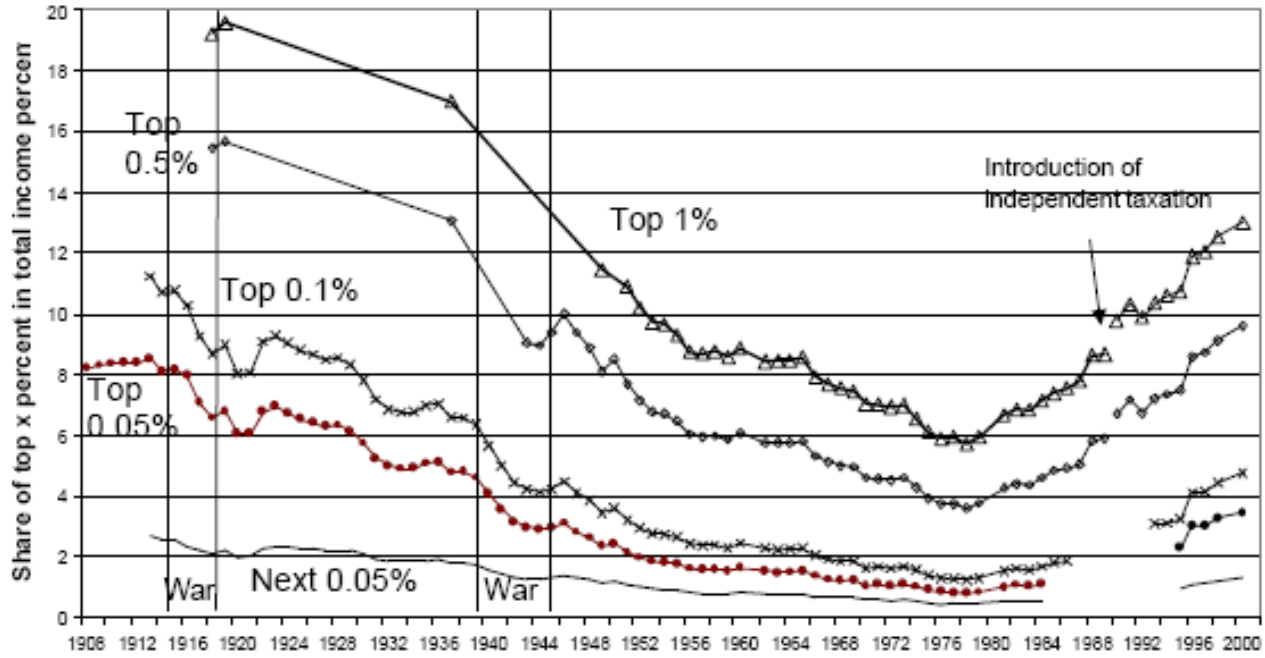


Fig. 10e: inactive



Appendix A: Auxiliary graphs and tables

Fig. A.1. Shares of total personal income of top percentile groups in the UK 1908-2000



Source: Atkinson 2003

Table A.1. Poverty rates and the number of the poor population

	Poverty ratio, using national thresholds (60% of median)	Poor population (1000s)
BE	15	1.563
CZ	8	817
DK	11	594
DE	16	13.203
EE	18	243
GR	20	2.212
ES	20	8.538
FR	14	8.705
IE	21	854
IT	19	11.053
CY	15	111
LV	16	370
LT	15	515
LU	11	50
HU	13	1.354
NL	12	1.954
AT	13	1.063
PL	17	6.491
PT	21	2.205
SI	10	200
SK	21	1.130
FI	11	575
SE	11	989
UK	18	10.722
Subtotal:		*75.514*
BG	15	1.167
HR	18	800
RO	17	3.686
TR	26	18.499
Total		*999.666*

Table A.2: Trends in poverty risk of the total population (subdivided by gender), using 60% of median income as the poverty line

	1995			1996			1997			1998			1999			2000			2001			2002			2003			2004		
Country	total	males	females	total	males	females	total	males	females	total	males	females	total	males	females	total	males	females	total	males	females	total	males	females	total	males	females	total	females	males
Belgium	16	15	17	15	14	17	14	13	15	14	12	15	13	11	14	13	12	14	13	12	15				15b[2]	14b[2]	16b[2]	15	16	14
Czech Republic																			8	7	8				8	7	9			
Denmark	10						10						10						10						12b[2]	11b[2]	12b[2]	11	11	11
Germany	15	13	16	14	12	16	12	11	13	11	10	12	11	10	12	10	10	11	11			15	13	18	15	13	17	16	18	13
Estonia																18	17	19	18	17	19	18	17	19	18	17	20			
Greece	22	21	22	21	21	21	21	21	22	21	20	22	21	20	21	20	19	20	20	19	22				21b[2]	20b[2]	22b[2]	20	21	19
Spain	19	19	19	18	18	18	20	20	21	18	18	18	19	18	19	18	17	19	19	17	20	19b[1]	18b[1]	21b[1]	19	18	20	20b[2]	21b[2]	19b[2]
France	15	15	16	15	14	16	15	14	16	15	14	15	15	15	16	16	15	16	13b[1]	12b[1]	13b[1]	12	12	13	12	12	13	14b[2]	14b[2]	13b[2]
Ireland	19	17	20	19	18	21	19	18	20	19	18	20	19	17	20	20	19	21	21	20	23				21b[2]	20b[2]	22b[2]	21	23	19
Italy	20	19	21	20	19	21	19	19	20	18	17	19	18	18	18	18	18	19	19	19	20							19b[2]	20b[2]	18b[2]
Cyprus																									15	14	17			
Latvia																16	17	16				16	16	16	16	16	17			
Lithuania																17	17	17	17	18	17	17	16	17	15	14	15			
Luxembourg	12	11	13	11	11	11	11	11	12	12	12	13	13	12	13	12	12	12	12	12	13				10b[2]	9b[2]	11b[2]	11	11	11
Hungary																11	11	12	11	11	12	10	9	10	12	12	12			
Malta																15	15	15												
Netherlands	11	11	12	12	11	12	10	10	11	10	10	10	11	10	11	11	10	11	11b[1]	11b[1]	12b[1]	11	11	12	12	12	12			
Austria	13	12	15	14	12	16	13	11	14	13	11	15	12	10	14	12	9	14	12	9	14				13b[2]	12b[2]	14b[2]	13	14	11
Poland																16	16	16	16	16	15	17	17	16	17	17	16			
Portugal	23	21	24	21	20	22	22	20	23	21	19	22	21	19	22	21	19	22	20	20	20	20			19			21b[2]	22b[2]	20b[2]
Slovenia																11	11	12	11	10	12	10	9	11	10	9	11			
Slovakia																									21	21	21	21	21	22
Finland				8	8	9	8	8	9	9	8	11	11	9	12	11	9	13	11b[1]	10b[1]	12b[1]	11	11	12	11	11	12	11b[2]	11b[2]	11b[2]
Sweden							8						8						9			11	10	12				11b[2]	12b[2]	10b[2]
United Kingdom	20	19	22	18	16	20	18	16	19	19	17	21	19	18	21	19	16	21	18b[1]	17b[1]	19b[1]	18	17	19	18	17	19			

Notes: The year in the first row refers to the survey year. [b] Break in the series; in the majority of EU15 countries the results reported under 2001 come from the last wave of the ECHP, and results beyond 2001 are either from national data sources or from EU-SILC.

[b1]: Break in the series, due to a switch from ECHP to another survey; [b2]: Break in the series, due to a switch to EU-SILC.

Table A.3: Relative Risk Ratio (RRR) of membership of Income Quintiles, by household type

(Income quintile thresholds defined using country-specific income distribution)

Countries / Household type groups	Income quintiles				
	1st	2nd	3rd	4th	5th
Austria					
One person household	1.55	1.00	0.86	0.78	0.79
2 adults, no dependent, both adults under 65	0.89	0.69	0.85	0.98	1.59
2 adults, no dependent, at least one adult 65	1.19	1.08	0.88	0.98	0.86
Other households without dependent	0.39	0.80	1.18	1.36	1.28
Single parent household, one or more dependent	1.79	1.56	0.83	0.45	0.36
2 adults, one dependent child	0.81	0.95	1.01	1.12	1.12
2 adults, two dependent children	0.96	1.42	1.02	0.85	0.75
2 adults, three or more dependent children	1.83	1.45	0.66	0.67	0.38
Other households with dependent children	0.76	1.05	1.40	1.13	0.66
Belgium					
One person household	1.43	1.27	0.83	0.75	0.75
2 adults, no dependent, both adults under 65	0.75	0.78	0.84	0.91	1.70
2 adults, no dependent, at least one adult 65	1.39	1.54	1.03	0.59	0.48
Other households without dependent	0.36	0.51	1.17	1.45	1.47
Single parent household, one or more dependent	2.19	1.38	0.73	0.52	0.24
2 adults, one dependent child	0.66	0.85	0.94	1.27	1.25
2 adults, two dependent children	0.63	0.78	1.13	1.43	0.99
2 adults, three or more dependent children	1.12	1.05	1.41	0.90	0.52
Other households with dependent children	1.15	1.00	1.07	1.11	0.68
Denmark					
One person household	1.73	0.98	0.68	0.54	0.37
2 adults, no dependent, both adults under 65	0.45	0.66	0.96	1.52	2.08
2 adults, no dependent, at least one adult 65	1.58	1.31	0.52	0.37	0.58
Other households without dependent	0.30	0.57	1.24	2.01	1.68
Single parent household, one or more dependent	1.74	1.42	0.57	0.32	0.11
2 adults, one dependent child	0.40	0.84	1.44	1.60	1.33
2 adults, two dependent children	0.39	1.22	1.73	1.27	0.88
2 adults, three or more dependent children	1.14	1.64	1.16	0.36	0.36
Other households with dependent children	0.67	1.17	1.47	1.17	0.75
Estonia					
One person household	2.00	1.41	0.54	0.52	0.56
2 adults, no dependent, both adults under 65	0.81	0.75	0.74	1.15	1.44
2 adults, no dependent, at least one adult 65	0.58	1.85	1.60	0.81	0.37
Other households without dependent	0.50	0.65	0.89	1.32	1.54
Single parent household, one or more dependent	2.06	1.38	0.97	0.39	0.30
2 adults, one dependent child	0.81	0.71	0.97	1.00	1.42
2 adults, two dependent children	0.82	0.74	1.17	1.16	1.10
2 adults, three or more dependent children	1.28	1.08	1.11	0.83	0.75
Other households with dependent children	0.60	0.71	1.33	1.47	0.93

Spain					
One person household	1.78	1.18	0.72	0.64	0.79
2 adults, no dependent, both adults under 65	0.64	0.56	0.72	1.07	1.88
2 adults, no dependent, at least one adult 65	1.49	1.34	1.07	0.71	0.50
Other households without dependent	0.56	0.87	1.14	1.27	1.09
Single parent household, one or more dependent	1.89	1.02	0.94	0.61	0.66
2 adults, one dependent child	0.73	0.82	0.93	1.18	1.27
2 adults, two dependent children	1.19	1.24	0.92	0.82	0.89
2 adults, three or more dependent children	1.74	1.09	0.90	0.66	0.72
Other households with dependent children	1.06	1.11	1.26	1.04	0.57
Finland					
One person household	2.39	0.98	0.72	0.47	0.36
2 adults, no dependent, both adults under 65	0.65	0.72	0.95	1.26	1.46
2 adults, no dependent, at least one adult 65	1.32	1.72	0.95	0.54	0.41
Other households without dependent	0.66	1.20	1.02	1.32	0.80
Single parent household, one or more dependent	1.96	1.65	0.70	0.39	0.21
2 adults, one dependent child	0.64	0.79	1.26	1.44	0.89
2 adults, two dependent children	0.73	1.10	1.47	1.09	0.60
2 adults, three or more dependent children	1.43	1.42	1.09	0.67	0.33
Other households with dependent children	0.85	1.15	1.37	1.07	0.53
France					
One person household	1.36	1.18	0.88	0.75	0.80
2 adults, no dependent, both adults under 65	0.65	0.62	0.90	1.28	1.59
2 adults, no dependent, at least one adult 65	1.12	1.12	0.92	0.77	1.07
Other households without dependent	0.71	0.85	0.76	1.33	1.39
Single parent household, one or more dependent	1.92	1.22	0.96	0.49	0.35
2 adults, one dependent child	0.71	0.85	1.17	1.18	1.10
2 adults, two dependent children	0.73	1.15	1.24	1.13	0.75
2 adults, three or more dependent children	1.34	1.35	1.02	0.68	0.57
Other households with dependent children	1.41	1.01	1.24	0.97	0.31
Greece					
One person household	1.52	1.06	0.96	0.83	0.71
2 adults, no dependent, both adults under 65	0.72	0.96	0.94	0.98	1.35
2 adults, no dependent, at least one adult 65	1.40	1.34	1.02	0.72	0.61
Other households without dependent	0.73	0.84	1.07	1.22	1.10
Single parent household, one or more dependent	1.72	1.33	0.55	0.95	0.56
2 adults, one dependent child	0.80	0.84	0.77	1.12	1.40
2 adults, two dependent children	0.95	0.97	1.03	1.04	1.00
2 adults, three or more dependent children	1.57	1.43	0.72	0.91	0.49
Other households with dependent children	1.18	1.09	1.16	0.77	0.83

Ireland					
One person household	2.72	1.15	0.52	0.44	0.47
2 adults, no dependent, both adults under 65	0.94	0.64	0.57	1.07	1.70
2 adults, no dependent, at least one adult 65	1.07	2.39	0.83	0.57	0.39
Other households without dependent	0.48	0.64	1.12	1.00	1.61
Single parent household, one or more dependent	2.82	1.45	0.75	0.22	0.13
2 adults, one dependent child	0.70	0.69	0.83	1.47	1.21
2 adults, two dependent children	0.51	0.87	1.26	1.30	0.97
2 adults, three or more dependent children	1.19	1.30	1.15	0.82	0.63
Other households with dependent children	0.57	0.83	1.45	1.31	0.76
Italy					
One person household	1.26	1.02	1.04	0.86	0.77
2 adults, no dependent, both adults under 65	0.64	0.73	0.96	1.18	1.58
2 adults, no dependent, at least one adult 65	0.85	1.23	1.11	0.95	0.86
Other households without dependent	0.64	0.74	0.96	1.40	1.34
Single parent household, one or more dependent	1.83	1.16	0.75	0.50	0.61
2 adults, one dependent child	0.88	1.01	0.97	1.10	1.06
2 adults, two dependent children	1.32	1.18	1.02	0.70	0.71
2 adults, three or more dependent children	1.92	1.34	0.64	0.42	0.50
Other households with dependent children	1.28	1.12	1.07	0.78	0.69
Luxembourg					
One person household	1.02	0.81	0.96	1.13	1.10
2 adults, no dependent, both adults under 65	0.79	0.74	0.70	1.10	1.78
2 adults, no dependent, at least one adult 65	1.02	1.05	1.08	0.95	0.89
Other households without dependent	0.57	0.83	1.44	1.12	1.00
Single parent household, one or more dependent	1.69	1.13	0.42	1.25	0.49
2 adults, one dependent child	0.80	0.81	1.06	1.14	1.21
2 adults, two dependent children	1.39	1.05	1.04	0.78	0.76
2 adults, three or more dependent children	1.38	1.25	0.83	0.95	0.55
Other households with dependent children	0.99	1.70	1.08	0.71	0.40
Portugal					
One person household	1.86	1.35	0.60	0.55	0.76
2 adults, no dependent, both adults under 65	0.93	0.70	0.81	1.16	1.35
2 adults, no dependent, at least one adult 65	1.46	1.41	0.82	0.63	0.76
Other households without dependent	0.63	0.84	1.19	1.11	1.17
Single parent household, one or more dependent	1.39	1.00	1.00	0.87	0.79
2 adults, one dependent child	0.70	0.78	1.04	1.19	1.24
2 adults, two dependent children	1.27	0.93	1.08	0.89	0.86
2 adults, three or more dependent children	1.66	0.97	0.74	0.90	0.81
Other households with dependent children	0.80	1.19	1.10	1.14	0.78

Sweden					
One person household	1.96	0.99	0.78	0.60	0.32
2 adults, no dependent, both adults under 65	0.41	0.49	0.69	1.46	2.19
2 adults, no dependent, at least one adult 65	0.81	1.55	1.06	0.79	0.83
Other households without dependent	0.27	0.75	1.38	1.52	1.36
Single parent household, one or more dependent	1.85	1.34	0.75	0.44	0.28
2 adults, one dependent child	0.56	0.65	1.29	1.37	1.31
2 adults, two dependent children	0.53	1.14	1.56	1.14	0.80
2 adults, three or more dependent children	0.97	1.80	1.09	0.58	0.52
Other households with dependent children	0.66	1.18	1.40	1.39	0.49

Table A.4: Relative Risk Ratio of membership of Income Quintiles, by employment status

(Income quintile thresholds defined using country-specific income distribution)

Countries / Employment status	Income quintiles				
	1st	2nd	3rd	4th	5th
Austria					
Employed	0.66	0.92	1.07	1.16	1.20
Unemployed	2.18	1.08	0.90	0.49	0.33
Student	1.30	1.02	0.91	0.91	0.84
Retired	1.13	1.04	0.93	0.91	0.99
Other inactive	1.78	1.25	0.89	0.67	0.38
Belgium					
Employed	0.42	0.61	1.00	1.37	1.57
Unemployed	2.15	1.21	0.96	0.44	0.31
Student	1.29	0.98	1.08	1.04	0.62
Retired	1.24	1.53	1.06	0.66	0.53
Other inactive	1.86	1.39	0.86	0.55	0.39
Denmark					
Employed	0.48	0.94	1.28	1.40	1.40
Unemployed	1.53	1.00	0.85	0.58	0.52
Student	1.78	0.85	0.70	0.54	0.44
Retired	1.76	1.13	0.50	0.38	0.46
Other inactive	1.29	1.28	0.80	0.69	0.58
Estonia					
Employed	0.53	0.62	1.01	1.27	1.49
Unemployed	2.35	0.95	0.76	0.48	0.47
Student	1.19	0.93	1.02	1.00	0.87
Retired	1.25	1.93	1.08	0.64	0.28
Other inactive	2.06	0.96	0.88	0.70	0.44
Spain					
Employed	0.56	0.74	0.92	1.19	1.48
Unemployed	1.61	1.21	1.01	0.80	0.48
Student	1.26	1.03	1.05	1.00	0.70
Retired	1.15	1.31	1.15	0.83	0.63
Other inactive	1.55	1.26	1.05	0.77	0.49
Finland					
Employed	0.44	0.82	1.18	1.37	1.54
Unemployed	2.01	0.99	0.65	0.59	0.25
Student	1.57	1.08	0.91	0.66	0.43
Retired	1.59	1.30	0.76	0.52	0.45
Other inactive	1.39	1.21	0.89	0.73	0.48

France					
Employed	0.54	0.93	1.12	1.26	1.19
Unemployed	1.89	1.04	0.79	0.62	0.61
Student	1.49	1.05	1.00	0.72	0.71
Retired	1.08	1.07	0.94	0.88	1.01
Other inactive	2.11	1.11	0.68	0.49	0.54
Greece					
Employed	0.67	0.79	0.95	1.15	1.36
Unemployed	1.48	1.20	1.07	0.87	0.49
Student	1.32	0.95	0.98	0.98	0.81
Retired	1.31	1.12	1.04	0.85	0.74
Other inactive	1.24	1.38	1.07	0.84	0.56
Ireland					
Employed	0.34	0.63	1.04	1.33	1.49
Unemployed	1.89	1.39	0.83	0.55	0.56
Student	1.20	1.03	1.26	0.85	0.70
Retired	1.59	1.68	0.78	0.63	0.52
Other inactive	1.99	1.49	0.90	0.55	0.32
Italy					
Employed	0.64	0.83	1.05	1.20	1.36
Unemployed	2.26	1.06	0.65	0.49	0.34
Student	1.27	1.10	0.95	0.76	0.87
Retired	0.75	1.10	1.12	1.11	0.96
Other inactive	1.52	1.19	0.90	0.72	0.57
Luxembourg					
Employed	0.86	0.85	0.96	1.09	1.27
Unemployed	2.73	0.94	0.68	0.47	0.26
Student	0.95	1.28	0.93	1.15	0.61
Retired	0.86	0.99	1.07	0.98	1.10
Other inactive	1.25	1.26	1.11	0.79	0.53
Portugal					
Employed	0.71	0.78	1.08	1.19	1.18
Unemployed	1.32	1.26	1.08	0.89	0.53
Student	1.04	0.97	0.97	0.97	1.05
Retired	1.26	1.35	0.88	0.69	0.88
Other inactive	1.77	1.29	0.80	0.72	0.54
Sweden					
Employed	0.52	0.82	1.13	1.28	1.44
Unemployed	1.46	1.14	0.88	0.86	0.49
Student	1.65	1.06	0.90	0.71	0.44
Retired	1.63	1.34	0.74	0.57	0.46
Other inactive	1.41	1.11	1.05	0.74	0.54

Appendix B: Data sources in use

In order to achieve consistency and international comparability of poverty statistics for the largest number of Member States, the EUROSTAT NewCronos database has been used as the main data source for the statistics on levels and trends of poverty presented in this report.

This database represents the most immediate source of up-to-date cross-country comparable statistical sources for both old and the new Member States of EU25. For the reference period 1994-2001, the European Community Household Panel (ECHP) is the primary source of data used for the calculation of poverty statistics for all EU15 countries. One exception is Sweden, where the national data source mentioned in Box B.1 has been used.

Given the need to update the data contents of the ECHP and improve timeliness of the availability of results from the survey, the ECHP was replaced by the EU-SILC (Community Statistics on Income and living Conditions). The EU-SILC survey was launched in 2003 on the basis of a 'gentleman's agreement' in six Member States (Belgium, Denmark, Greece, Ireland, Luxembourg, and Austria). Thus, for these six countries, the results reported under 2003 are generated using the first wave of EU-SILC database (survey year is 2003, and the income data refer to 2002).

Another five countries (Spain, France, Italy, Portugal and Finland) launched their EU-SILC survey in 2004, and Germany, the Netherlands and the UK have undertaken EU-SILC in 2005. The result from the 2004 surveys for Spain, France, Italy, Portugal and Finland are derived from their first wave of EU-SILC. Note here that the timetable for the implementation of the EU-SILC project is such that the first set of micro data and cross-sectional poverty statistics from EU-SILC for all the EU25 countries will only be available in December 2006.

Due to the differences of data sources in use, the poverty results presented in this report cannot be considered to be fully comparable across all 25 countries. However, in spite of this difference of data sources, Eurostat has made every effort to use harmonised methods to insure the maximum comparability between definitions and concepts used in the different countries, and thus poverty statistics presented in this report provide valuable comparative information on poverty at the EU25 level.

Note here that these datasets include only private households, and exclude population groups such as those living in sheltered housing and institutions providing nursing and living care. This exclusion may also affect international comparability of results presented in this report.

Box B.1: Data sources used in poverty statistics in EU25

Country	Source	Survey year	Income year
Belgium	ECHP	1995-2001	1994-2000
	EU-SILC	2003	2002
	EU-SILC	2004	2003
Czech Republic	Survey on Social Situation of the Household (SSD: Sociální Situace Domácností)	2001	2000
	Microcensus	2003	2002
Denmark	Law Model	1995,1997, 1999,2001	1994,1996, 1998,2000
	EU-SILC	2003	2002
	EU-SILC	2004	2003
Germany	ECHP (adapted Sozio-oekonomische Panel (GSOEP)	1995-2001	1994-2000
	GSOEP (Sozio-oekonomische Panel)	2002-2004	2001-2003
Estonia	Household Budget Survey (LEU: Leibkonna Eelarve Uuring)	2000-2003	2000-2003
Greece	ECHP	1995-2001	1994-2000
	EU-SILC	2003	2002
	EU-SILC	2004	2003
Spain	ECHP	1995-2001	1994-2000
	Household Budget Survey (ECPF: Encuesta Continua de Presupuestos Familiares)	2002-2003	2001-2002
	EU-SILC	2004	2003
France	ECHP	1995-2000	1994-1999
	Tax Survey (ERF: Enquête Revenu Fiscaux)	2001-2003	2000-2002
	EU-SILC	2004	2003
Ireland	ECHP	1995-2001	1994-2000
	EU-SILC	2003	2002
	EU-SILC	2004	2003
Italy	ECHP	1995-2001	1994-2000
	EU-SILC	2004	2003
Cyprus	Household Budget Survey (FES: Family Expenditure Survey)	2003	2003
Latvia	Household Budget Survey (MBP: Majsaimniecibu Budzetu Petijums)	2000	2000
	Household Budget Survey (MBP: Majsaimniecibu Budzetu Petijums)	2002-2003	2002-2003
Lithuania	Household Budget Survey (Namu ukiu biudzetu tyrimas)	2000-2003	2000-2003
Luxembourg	ECHP (adapt PSELL (Panel Socio-Economique Liewen zu Lëtzebuerg))	1995-2001	1994-2000
	EU-SILC	2003	2002
	EU-SILC	2004	2003
Hungary	Household Budget Survey (HKF: Háztartási Költségvetési Felvétel)	2000-2003	2000-2003
	TARKI Household Monitor Survey	2003	2003
Malta	Household Budget Survey	2000	2000
Netherlands	ECHP	1995-2000	1994-1999
	Income Panel Survey (IPO: Inkomenspanelonderzoek)	2000-2003	2000-2003
Austria	ECHP	1995-2001	1994-2000
	EU-SILC	2003	2002
	EU-SILC	2004	2003

Poland	Household Budget Survey (Badania Budżetów Gospodarstw Domowych)	2000-2003	2000-2003
Portugal	ECHP	1995-2001	1994-2000
	ECHP small sub-sample	2002-2003	2001-2002
	EU-SILC	2004	2003
Slovenia	Household Budget Survey (Anketa o porabi v gospodinjstvih)	2000-2003	2000-2003
Slovakia	Microcensus	2003	2002
	Extrapolation	2004	2003
Finland	ECHP	1995-2000	1994-1999
	Income Distribution Survey (Tulonjakotilasto)	2001-2003	2000-2002
	EU-SILC	2004	2003
Sweden	Income distribution survey (HEK: Hushållens ekonomi, formerly HINK: Hushållens Inkomstfördelningsundersökningen)	1997,1999, 2001	1997,1999, 2001
	Survey of Living Conditions (ULF: Undersökning av levnadsförhållanden)	2002	2002
	EU-SILC	2004	2003
UK	ECHP (adapted British Household Panel Survey (BHPS)	1995-2000	1994-1999
	Household Budget Survey (FRS: Family Resources Survey)	2000/01-2003/4	2000/01-2003/4

Note*:* The shaded cells highlight the 2003 and 2004 EU-SILC data.

2. ECONOMIC GROWTH AND INCOME INEQUALITIES IN EUROPEAN COUNTRIES 2000-2004[7]

Introduction

This chapter provides an analysis of inequalities and poverty in relation to economic growth, employment and social expenditure in European countries. First we review the main conclusions of the analytical literature on the relationship between growth and inequalities in general. Secondly, we recap the conclusions of our 2005 annual report on the macro level analysis of inequalities and poverty. In the third part we extend the analysis to examine changes in the variables included over time. The data for the analysis in this part of the chapter comes from the Eurostat NewCronos database and covers the widest possible range of countries. Where possible, we extend the analysis to the accession countries in addition to the current Member States. Data in the detail required are, unfortunately, not available for all of the countries for a long period of time. When trying to cover the widest possible range of countries and the longest possible period, there were inevitably limitations on the comparative analysis which could be undertaken and this part of the chapter focuses on the period between 1999 and 2004. Although our aim here is to analyse issues and relationships on the macro level and, while doing that, we operate also with economic developments, our analysis is not macro-economic. What we try to do is an attempt to explore the explore the relationships between some macro economic variables and changes in poverty/inequalities.

The fourth part of the analysis presents case studies of selected countries. There are two reasons for the inclusion of this section. First, as shown in the comparative chapter, a great many aspects of local circumstances (policy variables, welfare state measures, path dependencies and so on) shape the actual degree of inequalities. A more in-depth analysis of the underlying circumstances is, therefore, necessary to gain a more thorough understanding. Secondly, for individual countries, longer time series are available, allowing for a more in-depth analysis of longitudinal developments in inequality and poverty. The present draft includes case studies of four countries, Ireland, Hungary, Spain and Sweden, representing four different European regimes of inequalities, growth and welfare systems. The final section presents some conclusions.

[7] István György Tóth, Péter Hudomiet, Hedvig Horváth, Márton Medgyesi, with the assistance of Tamás Keller, Tarki.

Theoretical overview and empirical findings in the literature

Income distribution and poverty in general is determined by a broad set of factors like economic growth, the skills of the work force and imbalances in the demand for the labour (within the context of skill biased technology change), demographic developments (ageing, family formation, etc), the dynamics of domestic policy (electoral cycles, different social and economic policies) and a number of (residual) country-specific factors. While the list of the determinants is not in much dispute, the weights given to the individual explanatory factors described above vary greatly in the literature.

Despite a growing body of literature on the topic, the links between growth and inequalities are far from clear. So far as the growth and inequality relationship is concerned, the growth-effect-on-inequality and the inequality-effect-on-growth are both interesting to analyse. However, it is only the first that is considered in any detail here. The original formulation of the often quoted Kuznets curve (Kuznets [1995]) implies that a change in inequality is a result of the expansion of a high income modern sector of the economy at the expense of a low income traditional sector. This sectoral shift, which can be broken down into expansion and enrichment effects accompanying overall growth in the economy, is claimed to result in an inverted U shape of inequalities over time. The literature contains arguments for and against the relevance and explanatory power of this general relationship, (for reviews, see, for example Ferreira [1999], Arjona, Radaique and Pearson [2001]). Just to mention those against, some authors criticise the inevitability of the process (like Deininger and Squire, 1997 on the one hand and Atkinson, 1999 on the other), while others question the direction of causation (see Ravallion and Chen [1997], for example).

In the more recent theoretical literature, as Ravallion (2004) puts it, empirical findings on the relationship between inequality and economic growth show virtually zero correlation[8]. Economic growth may be accompanied by a reduction in inequality falls or an increase with equal probability (for surveys see Ravallion and Chen, 1997, Dollar and Kraay, 2002). The almost complete absence of a correlation may be due to measurement errors (in inequalities), the inability of the Gini coefficient to capture growth-induced inequalities and reductions, in poverty, a lack of capability of cross-sectional inequality measures to capture "churning" phenomena and the need to use absolute rather than relative Gini coefficients to measure inequality (Ravallion, 2004). However, while growth seems to be distribution neutral, the absolute poverty reducing effects of growth seem to be demonstrated by many studies (see

[8] This result may give rise to serious questions about the appropriateness of Kuznets curve to describe the inequality-growth relationships. Mention of the dangers of mixing cross-country data with explanations of a longitudinal nature seems warranted in the first place. Secondly the effect of growth on inequalities is best understood as part of a complex portfolio of possible explanations with a great many alternative factors which might be included.

Ravallion, 2004, World Bank 2005a and 2005b for recent examples), despite appearing to be distribution-neutral). The mechanism underlying this, however, needs to be clarified further, paying special attention to the role of various institutions channelling growth to societal developments.

A related issue is the relationship between growth, inequality and poverty (Bourguignon, 2003). The empirical literature on this is well documented, and there is no need to go into detail here. However, as both the increase in the openness of economies and the capacity of growth to reduce poverty depend very much on endowment effects, one additional factor deserves a little more attention. Although the relationship between inequality, growth and poverty is complicated, it seems to be the case that the effect of economic growth in reducing poverty depends very much on the initial extent of inequalities in a country. If growth, therefore, occurs in a very unequal society, the poverty reducing elasticity of growth seems to be smaller than in a society which is more equal (see, for example Cornia and Court, 2001). More precisely, as they put it, there is an "efficient inequality range", so that very low and very high degrees of initial inequality tend to impede growth prospects while inequalities in the middle income range seem to provide a favourable environment for growth. This latter inverted U shape of the inequality-growth relationship (which is different from the Kuznets curve) deserves further study in the future.

Income inequalities in the EU25

A CROSS SECTIONAL ACCOUNT

Recent research on cross-country differences in inequalities (based on the newly developed Laeken indicators and produced within the framework of the Open Method of Coordination[9]) presents six different country clusters based on simultaneous evaluation of levels economic development and degrees of inequality[10].

The six country groupings comprise three levels of inequality (unequal, moderately equal, equal) each combined with one of two regional groupings (EU15 and the new Member States - NMSs). An important finding is that there is a considerable degree of heterogeneity in both the level of GDP and inequalities. However, while the NMSs have a much lower GDP per head, even in PPS terms, there are, in general no significant differences between old and new Member States in terms of the variance of overall income inequalities and relative poverty.

[9] For a description and references, see Atkinson et al, 2002, 2005, European Commission 2004a, 2005a, 2006.

[10] See the SSO 2005 Annual report of the Network on social inclusion and income distribution.

The major conclusions from the 2005 study were as follows:

the extent of poverty and degree of inequality is shaped by a wide range of factors including the level of economic development, structural factors (employment levels) and social policy factors like the scale of social expenditure and the way that this spent in a given country.

there is a great deal of variation among European countries in terms of the mix of institutional factors (and not only in terms of the factors which are capable of being captured in the analysis). The specific circumstances prevailing in any country suggest a need for caution in interpreting the results, especially when drawing policy conclusions. The same policy measures may lead to different results in different countries because of differences in the national context.

Higher levels of GDP per head may help to alleviate poverty, but lower level of relative poverty do not necessarily result from higher GDP. In addition, higher social expenditure tends to be associated with lower levels of poverty, but the actual pattern of expenditure may have very different effects on relative poverty and inequalities.

These conclusions were, however, drawn from an analysis of a cross-sectional data which, as always, cannot necessarily be carried over to the interpretation of the effect of different patterns of development in particular countries. When, for example, it is conclude that higher levels of GDP (expenditure, employment, etc) is associated with lower levels of poverty (inequality, etc.) it is not safe to assume from this that an increase in GDP (expenditure, employment, etc.) in a certain country will automatically lead to a lower level of poverty (inequality) as well. We might get closer to an understanding of these types of relationship only when we analyse time series data for individual countries. This is done in the next section.

Changes in inequalities over time

Table 1 is taken from a recent overview of income distribution trends (Förster and D'Ercole, 2005) and summarises trends in income distribution in OECD countries. The countries covered include only a selection of EU25 ,Member States , while several other OECD countries are also included.

What can we see from these data?

There were various divergent trends in inequality in the period between the mid-1970s and the mid-1980s. Moderate and strong decline was evident in Greece, Finland and Sweden, while there was a strong increase in the UK.

The general trend in the period between the mid-1980s and the mid-1990s was characterised by increases in inequality. However, this period included the most significant period of the economic and social transition in the prospective NMSs.

The period between the mid-1990s and 2000 shows a mixed picture again. While in Finland and Sweden, there was a large increase in the Gini coefficient, for the other countries, there was either no change or a very small one.

Table 1. Overall trends in income inequality (mid 1970s to 2000): summary results for the entire population (based on Gini for individuals, equalivalised household incomes)

	Strong decline	Moderate decline	Small decline	No change	Small increase	Moderate increase	Strong increase
Mid-1970s to mid-1980s	Greece	Finland, Sweden	Canada		**Netherlands**	United States	United Kingdom
Mid-1980s to mid 1990s		**Spain**	Australia, Denmark	Austria, Canada, France, Greece, Ireland	Belgium, Germany, Luxembourg, Japan, Sweden	Czech Rep., Finland, Hungary, Netherlands, Norway, Portugal, United Kingdom, United States	Italy, Mexico, New Zealand, Turkey
Mid-1990s to 2000		Mexico, Turkey	France, Ireland, Poland	Australia, Czech Rep., Germany, Hungary, Italy, Luxembourg, Netherlands, New Zealand, Portugal, United States	Austria, Canada, Denmark, Greece, Japan, Norway, United Kingdom		Finland, Sweden

Source: Förster and D'Ercole 2005

Note: "Strong decline/increase" denotes a change in income inequality above +/- 12%; "moderate decline/increase" a change between 7 and 12%; "small decline/increase " a change between 2 and 7%; "No change" changes between +/- 2%. Results are based on the values of the Gini coefficient in four reference years which may vary among countries11. Current EU countries are in bold.

[11] 2000 data refer to the year 2000 in all countries except 1999 for Australia, Austria and Greece; 2001 for Germany, Luxembourg, New Zealand and Switzerland; and 2002 for the Czech Republic, Mexico and Turkey; "Mid-1990s" data refer to the year 1995 in all countries except 1993 for Austria; 1994 for Australia, Denmark, France, Germany, Greece, Ireland, Japan, Mexico and Turkey; and 1996 for the Czech Republic and New Zealand; "Mid-1980s" data refer to the year 1983 for Austria, Belgium, Denmark and Sweden; 1984 for Australia, France, Italy and Mexico; 1985 for Canada, Japan, the Netherlands, Spain and the United Kingdom; 1986 data for Finland, Luxembourg, New Zealand and Norway; 1987 for Ireland and Turkey; 1988 for Greece; and 1989 for the United States. For the Czech Republic, Hungary and Portugal, the period mid-1980s to mid-1990s refers to early to mid-90s.

For the first few years of the present decade, more harmonised data are available for the whole EU25. As a result of the development of indicators, new data on income inequalities have become available, which are presented in Table 2.

Table 2. Overall trends in income inequality in the EU25 countries, 2000 to 2004 (end period Ginis in brackets)[12]

---	--	-	0	+	++	+++
x>12%	12%<x>7%	7%<x>2%	0%	7%<x>2%	12%<x>7%	x>12%
Strong decline	Moderate decline	Small decline	No change	Small increase	Moderate increase	Strong increase
Belgium (26)		Estonia (34) Spain (31) Lithuania (29) Netherlands (26)	Greece (33) France(28) Luxembourg (26) Czech Republic (25) Slovenia (22)	Portugal (38) Latvia (36) United Kingdom (34) Ireland (32) Poland (31) Romania (30) Hungary (27) Finland (25) Bulgaria (26) Sweden (23)	Germany (28) Austria (26)	Italy (33) Denmark(24)

Source: Eurostat NewCronos database

The messages of Table 2. can be summarised as follows:

Trends in changes are not very clear and certainly not going in the same directions when all the European countries are taken together. However, there are slightly more countries where inequalities seemed to have increased than those experiencing a decline.

There are no signs of "path dependencies". That is, inequality increase occurred in countries with relatively high initial inequalities and in countries with relatively low level of initial inequalities and the same holds for the occurrence of inequality decreasing spells.

There can be no convergence of inequality levels be discerned, either. This follows partly from the above conclusion. However, it is not only the initial inequality that will not drive directions of change but neither the end-period variance in levels will be smaller than the variance observed initially.

It is not the group of the EU10 that produces relatively sizeable changes in inequalities in the observed period. Rather, relatively big increases (and decreases as well) could be observed in

[12] Begin period data refer to 2000, except for Czech Republic (2001) Denmark and Sweden (1999). End period data refer to 2004, except for Czech Republic, Estonia, Hungary, Latvia, Netherlands, Poland, Romania, Slovenia and the UK (2003). Income concepts and equivalence scales differ from the OECD study quoted in Table 1. Most important difference is the use of Laeken definitions and concepts in Table 2. Cross country differences in trends over time are not suspected to be large in this respect, however. Alternative estimate (TÁRKI) for Hungary shows higher Gini values (29 for 2000 and 2005 as well). This would move Hungary into the „no-change" cell.

EU15 countries. This directs our attention to assumptions about the emergence of new division across Europe in terms of inequality developments, in addition to the EU10-EU15 divisions.

An analysis of growth and inequality spells in EU25 (2000-2004)

In the 2005 Annual report of the SSO, we tried to explain **levels** of poverty and inequality in terms of **levels** of economic development, employment and social expenditures. The concern here is to extend the analysis in the following directions:

The data are updated and the most recent data are used for each of the countries.

Rather than drawing conclusion from a cross-sectional data an analysis of changes over specific periods of time is presented for the various countries

Rather than including all the (not too many) data points in a regression equation, a less sophisticated, but perhaps easier-to-understand, method is used, namely that of simply classifying and interpreting the coincidence of the variables over particular periods.

The latter two points require here a bit more explanation and some remarks about the methods of international comparisons. When Kuznets carried out his famous analysis, he had cross section data for various countries at various stages of their economic developments. Many analysts interpreting his curve assumed that country "A" having a "lower level" position at date t_0 can be expected to move to a position taken by country "B" at a "higher level" of development at date t_0. However, this assumption of linear development paths is clearly an oversimplification (at least) and represents a fallacious mixing up cross section differences with time series trends. Therefore, to carry out a careful analysis of the relationship between economic growth and inequalities necessitates longitudinal data for each and every countries (data for countries "A" and "B", for both dates at t_0 and t_1. The dataset we use from Eurostat is a big step forward in this direction, but the current length of the inequality data series allows still a partial and short term analysis only. This type of optimising for the number of countries and the length of periods resulted in a nineteen country dataset for a four year period. Nevertheless, we try to categorise spells of movements from periods t_0 to t_1 for a set of countries for whom we have data for both the beginning and of the end of the periods for this grouping. We hope later a longer period of data will be available for a greater number of European countries.

Attempts are made to explain changes in inequality (measured as shifts in the Gini coefficient and in relative poverty) in terms of changes in GDP, the employment rate, and social protection expenditure. The period analysed covers the years 1999 to 2003 and it is assumed that explanatory factors have an effect with a one year time lag (changes in GDP, employment rate and social expenditures between 1999 to 2002 are compared to changes of Gini between 2000

and 2003). Changes in the different variables were classified into seven ranges (applying different thresholds for each separately). These are described in Table 3.

Table 3. Significant changes in the variables examined

	Gini	Poverty	GDP		Total employment rate – Employed persons aged 15-64		Total employment rate of older workers – Employed persons aged 55-64		Social protection benefits in the % of GDP	
	00/03	00/03	99/02	00/03	99/02	00/03	99/02	00/03	99/02	00/03
Belgium	–	+	0	0	0	0	+	+	+	++
Czech Republic			0	++	0	0	+	++	0	0
Denmark			--	--	0	0	+	+	0	+
Germany	++	+++	--	--	0	0	0	+	0	0
Estonia	–	0	++	++	0	++	+	++		–
Greece	+	0	++	+++	+	+	0	+	0	0
Spain	0	0	+	++	+++	++	++	0	0	0
France	0	--	0	0	++	0	+++	+++	0	+
Ireland	0	0	+++	++	++	0	+	+	++	+++
Italy	0		--	--	++	++	0	+	0	0
Cyprus			+	0		++		0		
Latvia	+	0	++	++	++	++	++	+++		--
Lithuania	–	–	++	++	–	+	0	++		--
Luxembourg	+	–	+	+++	++	0	+	++	+	+++

The Change in Gini	
+/–	5,1–10% change in Gini
++/--	10,1–15% change in Gini
+++/---	More than 15% change in Gini
The Change In Poverty	
+/–	10% < x > 20% change in Poverty
++/--	20,1% < x > 30% change in Poverty
+++/---	x> 30,1% change in Poverty
The Change in GDP	
+/–	t > x >2t change in GDP
++/--	2t <x> 4t change in GDP
+++/---	x> 4t change in GDP
t (threshold) = GDP 1998 would change with two numeral	

Table 3. Significant changes in the variables examined (continued)

	Gini	Poverty	GDP		Total employment rate – Employed persons aged 15-64		Total employment rate of older workers – Employed persons aged 55-64		Social protection benefits as a % of GDP			
	00/03	00/03	99/02	00/03	99/02	00/03	99/02	00/03	99/02	00/03		
Hungary	0	0	++	++	0	+	+++	+++	0	+	**Change in Employment Rate 15-64**	
Malta			–	--		0		++	0	++	+/-	2-4% change
Netherlands	–	0	0	0	++	+	++	++	0	0	++/--	4-8% change
Austria	++	0	--	--	0	0	0	+	0	0	+++/---	More than 8% change
Poland	0	0	0	0	---	--	--	–		+	**Change in Employment Rate 55-64**	
Portugal		0	0	--	+	0	0	0	++	+++	+/-	5-10% change
Slovenia	0	0	0	+	0	0	++	0	0	0	++/--	10,01-20% change
Slovakia			++	++	–	0	0	++	0	–	+++/---	More than 20,01% change
Finland	+	0	0	0	+	+	+++	++	0	++	**Change in Social Protection Benefit**	
Sweden			–	–	+	0	+	+	0	0	+/-	5,1-10% change
United Kingdom	+	0	+	+	0	0	+	+	0	0	++/--	10,1-15% change
Bulgaria	0	0	+	+		++		+++			+++/---	More than 15% change
Croatia			+	++							**In all Variable**	
Romania	0	0	+	++	---	---	---	---			0	No Significant Change
Turkey			--	--		--		–			empty cell	Lack of Data

Table 4. Classification of EU Member States and candidate countries by level of inequality

Clusters according to the Gini coefficient, Data 2003			
	EU15	NMS	CC
Unequal countries (x>31,9)	Greece	Estonia	Turkey
	United Kingdom	Latvia	
	Portugal*		
Moderately-equal countries (31.9<x>27,9)	Belgium	Hungary (TARKI Data)	Croatia
	Germany	Lithuania	Romania
	Spain	Poland	
	Ireland	Slovakia	
	Luxembourg	Malta*	
	Italy*		
Equal countries (x<27,9)	Denmark	Czech Republic	Bulgaria
	France	Hungary	
	Netherlands	Slovenia	
	Austria	Cyprus	
	Finland		
	Sweden*		

Notes:

Source of Gini coefficient: EUROSTAT NewCronos Database, download 9 June 2006.

Data: All data refer to 2003, except for Sweden (2002); Italy (2001); Portugal (2001); Malta (2000)

Between 2000 and 2003, a marked increase in income inequalities and relative poverty is evident in Germany and Austria. For the other countries, the change was negligible or marginal. At the same time, GDP showed much more volatility. (Note that it is the relative change in GDP which is recorded and classified here – for example, a change in the position of a country relative to the EU25 average is defined to be significant if it exceeds 2 percentage points either up or down. Note that this adjusts for changes in the overall EU25 average.) An increase in relative GDP can be observed in Greece and Luxembourg but also in the Czech Republic, Estonia, Spain, Ireland Latvia, Lithuania, Hungary, Slovakia and Croatia, resulting in some convergence of GDP levels between old and new Members States. Those losing out in relative terms over this period included Denmark, Germany, Italy, Malta, Austria, Portugal and Turkey.

A reduction in employment rates occurred in Poland, Romania and Turkey (countries with low overall employment rates). The other countries showed either no change or some rise (especially in Estonia, Spain, Italy, Cyprus, Latvia and Bulgaria). The share of social protection expenditure in GDP increased most especially in Ireland, Luxembourg and Portugal, but it also increased in Belgium, Malta and Finland.

The combined changes in inequality and relative poverty, which are here regarded as dependent variables, on the one hand, and the relative GDP change, employment change and change in social expenditure are presented in two dimensional form in Figures 1 to 9. The most important conclusion is that no clear pattern of the interaction between GDP and inequality can be

observed. Although there are examples of GDP growth being associated with an increase in inequality (Greece, Ireland, Hungary) there are also counter examples of it being associated with a reduction (Spain, Bulgaria, Belgium and the Netherlands).

The association between the relative poverty rate and GDP growth also seems puzzling (Fig. 2.). GDP growth is associated both with increased relative poverty (Ireland, Hungary) and a decrease (UK and Lithuania, for example). When, however, there was a reduction in relative GDP, there is no example of poverty declining. The most striking result is that of Germany, where a relative reduction in GDP is accompanied by a large increase in relative poverty.

Changes in the Gini coefficient and the poverty rate are not always in the same direction, however. As it is shown in Fig. 3, in certain cases a large increase in the Gini coefficient is accompanied (as can be expected) with a large increase in relative poverty (as, for example, in the case of Germany), but it also goes together with a decline in poverty (as in Luxemburg). The same type of contradiction holds for declining inequalities, which can go together with both declining (France and Lithuania) and increasing (Netherlands, Belgium) relative poverty rates.

When (absolute) growth rates in GDP (rather than relative changes in relative levels) are compared to changes in inequality (Fig. 4) and relative poverty (Fig. 5), a diverse picture emerges once again. A high GDP growth rate may be accompanied by a relatively large fall in the Gini coefficient (in Estonia, for example, annual average growth of over 7% was accompanied by a 5% fall in the Gini) or by an increase in inequality. However, again it should be emphasised that the largest increase in inequality were associated with the lowest rates of GDP growth.

The same holds for comparisons of relative poverty. The only generalisation that can be made in this regard concerns the variance of changes on poverty with GDP growth: the higher the growth of GDP, the smaller the variation in changes in (relative) rates of poverty between countries. Conversely, countries with relative low rates of GDP growth had more widely differing patterns of change in poverty rates.

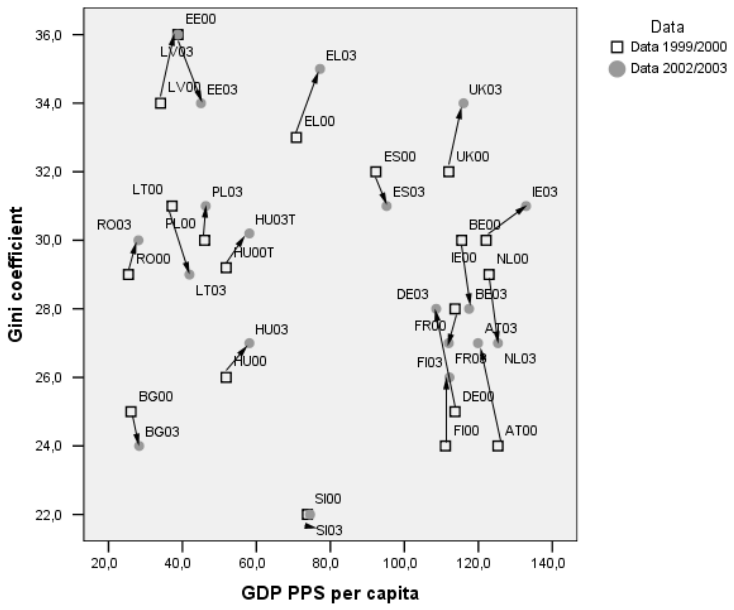
Comparisons of changes in the Gini coefficient and in relative poverty rates with changes in overall employment rates also shows a mixed picture. While there were large falls in the employment rate in Romania and Poland, which both showed increases in the Gini coefficient, there were also countries with an increase in the Gini where the employment rate rose (Greece, for example) and countries where increasing employment was accompanied by a falling Gini (like the Netherlands) (Fig. 6).

Similarly, the relationship between employment growth and the poverty rate also shows a varying picture (Fig. 7). The large increase in the German poverty rate was in the context of no change in employment. Rising poverty can be associated with growth, no change or a fall in the

employment rate (Spain, Germany and Poland, respectively). However, it is rare that a fall in employment is accompanied by a decline in poverty (the only example is Lithuania in this period).

In stochastic terms, as also pointed out in our 2005 report, there is a negative correlation between social expenditure (as a percentage of GDP) and poverty rates. This, however, does not seem in general to hold over time when changes in social expenditure are compared with change in the poverty rate. On the contrary, increases in social expenditure seem to coincide more with increasing inequality and poverty rates at least in the short-term (Fig. 8 and 9). We do not, however, know from these data what the result of not increasing social expenditure in a period of growing inequality would have been. At the same time, there is again no example of falling social protection expenditures AND falling inequality and poverty rates.

Fig. 1. The change in Gini coefficient (2000-2003) and the change in GDP PPS per capita (1999-2002)



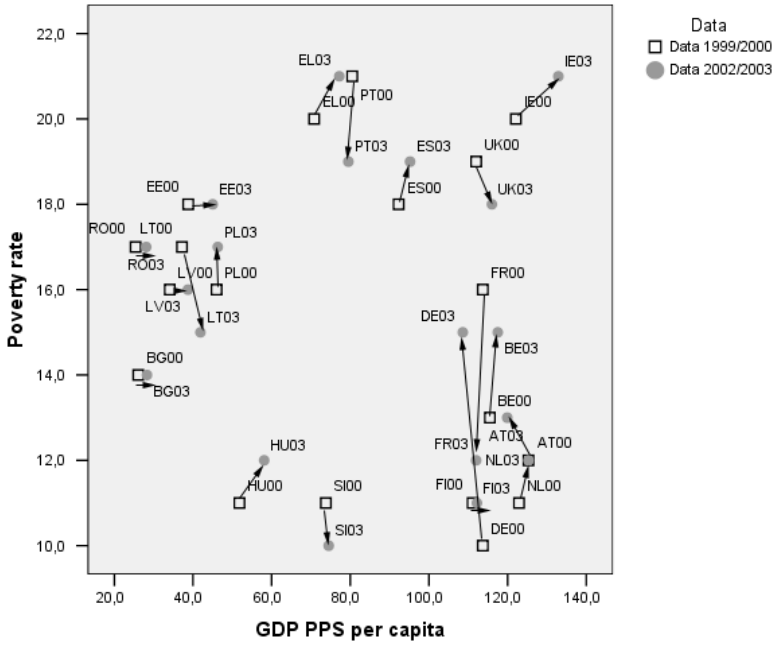
Notes:

Source: EUROSTAT NewCronos Database, download: 9th of June 2006.

Average GDP PPS per capita in the EU25=100. Data: 1999-2002.

Gini coefficient. Data: 2000-2003. HU00T – Hungarian data from TARKI, 2000. HU03T – Hungarian data from TARKI, 2003.

Fig. 2.The change in the Poverty rate (2000-2003) and the change in GDP PPS per capita (1999-2002)

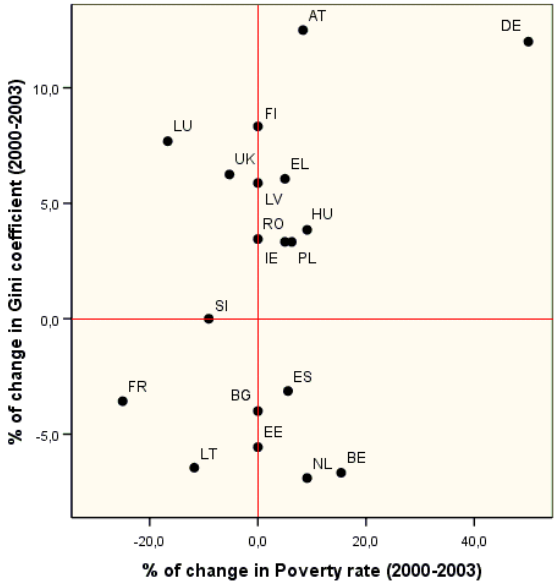


Notes: Average GDP PPS per capita in the EU25=100. Data: 1999-2002.

Poverty rate: the share of persons with an equivalised disposable income below 60% of the national median equivalised disposable income. Data: 2000-2003.

Source: EUROSTAT NewCronos Database, download: 9th of June 2006.

Fig. 3. The % change in the Gini coefficient (2000-2003) and the % change in the Poverty rate (2000-2003) in European countries

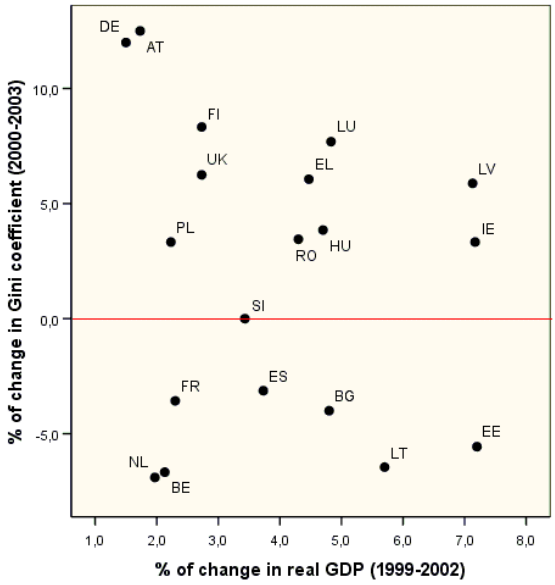


Notes: Change in Poverty rate: ((Poverty rate 2003/ Poverty rate 2000) *100) – 100

Change in Gini coefficient: ((Gini 2003/Gini 2000) *100) – 100

Source: EUROSTAT NewCronos Database, download: 9th of June 2006.

Fig. 4. The % change in real GDP (1999-2002) and the % change in the Gini coefficient (2000-2003)

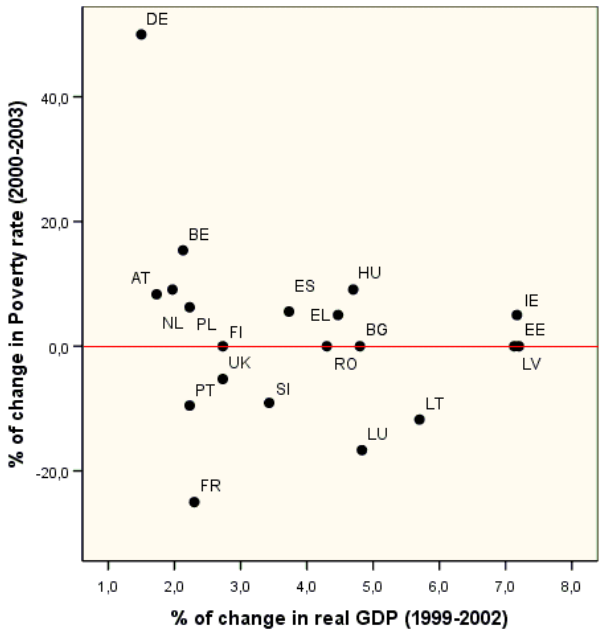


Notes: Change in GDP: The average annual GDP growth rates in percentage terms between 1999-2002.

Change in Gini coefficient: ((Gini 2003/Gini 2000) *100) – 100

Source: EUROSTAT NewCronos Database, download: 9th of June 2006.

Fig. 5. The % change in real GDP (1999-2002) and the % change in the Poverty rate (2000-2003)

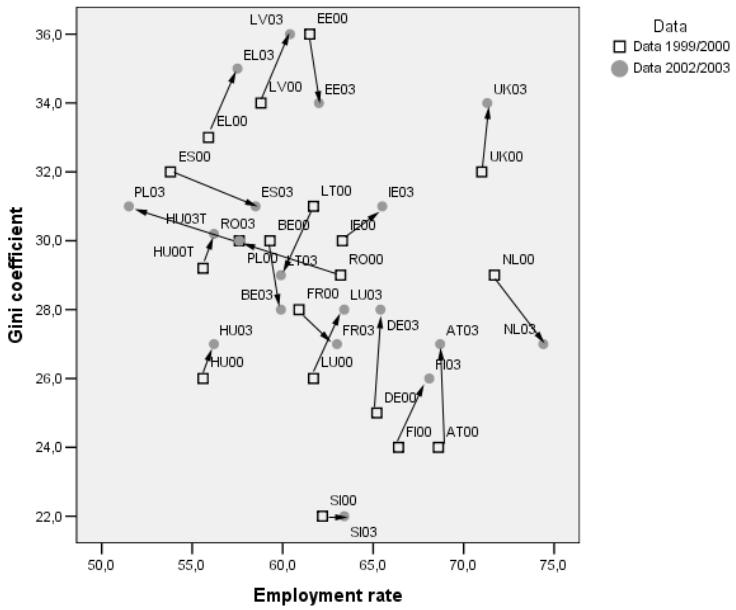


Notes:Change in GDP: The average of annual GDP growth rates in percentage, between 1999-2002.

Change in Poverty rate: ((Poverty rate 2003/ Poverty rate 2000) *100) – 100

Source: EUROSTAT NewCronos Database, download: 9th of June 2006.

Fig. 6. The change in Gini coefficient (2000-2003) and the change in Employment rate (1999-2002)

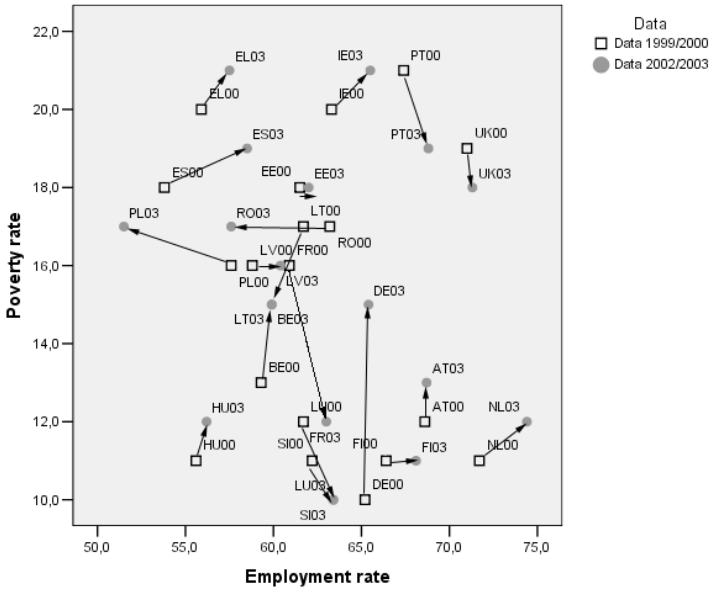


Notes: Employment rate: employed persons aged 15-64 as a share of the total population of the same age group. Data: 1999-2002.

Gini coefficient. Data: 2000-2003. HU00T – Hungarian data from TARKI, 2000. HU03T – Hungarian data from TARKI, 2003.

Source: EUROSTAT NewCronos Database, download: 9th of June 2006.

Fig. 7. The change in Poverty rate (2000-2003) and the change in Employment rate (1999-2002)

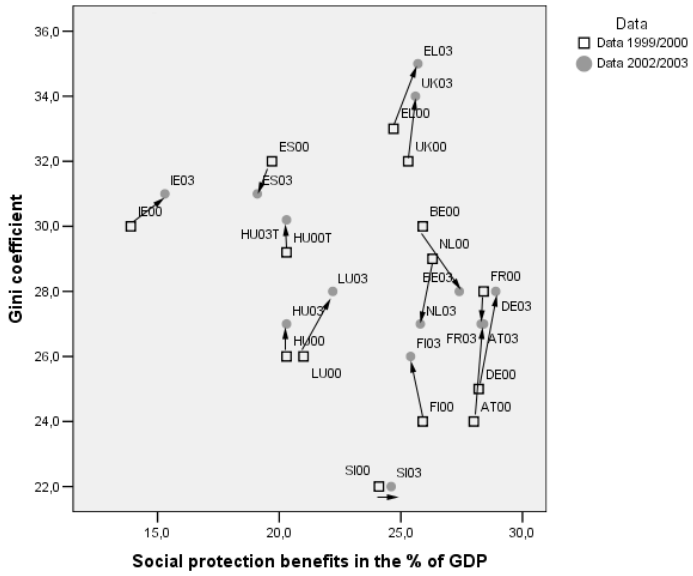


Notes: Employment rate: employed persons aged 15-64 as a share of the total population of the same age group. Data: 1999-2002.

Poverty rate: the share of persons with an equivalised disposable income below the 60% of the national median equivalised disposable income. Data: 2000-2003.

Source: EUROSTAT NewCronos Database, download: 9th of June 2006.

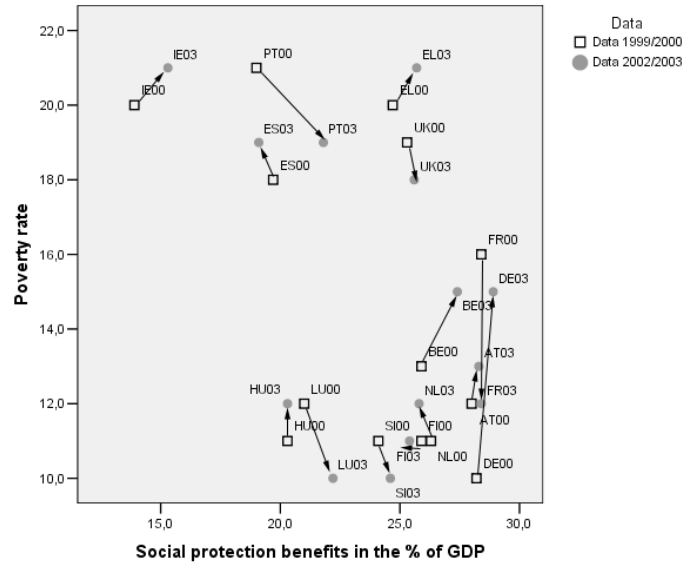
Fig. 8. The change in Gini coefficient (2000-2003) and the change Social protection benefits in the % of GDP (1999-2002)



Notes: Gini coefficient. Data: 2000-2003. HU00T – Hungarian data from TARKI, 2000. HU03T – Hungarian data from TARKI, 2003.

Source: EUROSTAT NewCronos Database, download: 9th of June 2006.

Fig. 9. The change in the Poverty rate (2000-2003) and the change in Social protection benefits as a % of GDP (1999-2002)



Notes: Gini coefficient. Data: 2000-2003. HU00T – Hungarian data from TARKI, 2000. HU03T – Hungarian data from TARKI, 2003.

Source: EUROSTAT NewCronos Database, download: 9th of June 2006.

Summary

To summarize our findings from the analysis so far, the following conclusions emerge:

From the analysis of overall trends in inequality, slightly more countries were seen to experience an increase in inequality than a decline. No sign of "path dependencies" was evident nor was any convergence of inequality observable over the EU29 as a whole (the 25 Member States plus the four candidate countries). Within this period, there were no large differences between EU15 countries and NMSs. Furthermore, the most marked changes could be observed among the "old" member states, symbolising to some extent the end of the turbulent transition periods of the New Member States.

An increase in GDP may result in increasing or decreasing inequalities and relative poverty rates (depending, most likely, on the social policies followed). However, there is no example of a reduction in GDP in relative terms being accompanied by a decline in poverty or inequality.

Changes in employment rates may result in either poverty increases or decreases, depending, it can be assumed, on the functioning of the labour market and unemployment policies. However, there is no example of a fall in employment resulting in a fall in poverty. A rise in employment, therefore, seems to be a precondition for alleviating poverty but it does not seem to be a sufficient condition.

Short-term increases in social expenditure can be associated with an increase, no change or a decline in poverty and inequality. However, no country experienced a decline poverty cannot and a reduction in social expenditure.

From the analysis, therefore, it follows that the distributional effects of growth may vary greatly, depending on the nature of growth itself (which sectors drive it, how it affect employment, etc) and the nature of social welfare system (the extent and structure of social expenditure as well as perhaps the social and labour market legislation in place). This accords with the results of recent studies suggesting that the performance of various European social models differ in terms of efficiency and equity (Boeri, 2002; Sapir, 2005).

The next step of the analysis is to examine the experience in five different countries that have different welfare regimes and other institutional features.

3. DECOMPOSITION OF INEQUALITIES IN HOUSEHOLD INCOME IN THE EU[13]

Introduction

This paper investigates inter-country differences in the effect of age, education and employment on the distribution of household incomes by applying static and dynamic decomposition analysis. The main aim is to provide a cross-country comparison of the overall effect of age, education and employment on the distribution of household incomes. The effects of these factors are largely mediated by the labour market. The effect of education and age on the distribution of wage has been extensively studied by social scientists, a major result being that higher educated people earn more than those with less education, which –according to human capital theory– reflects their higher productivity. Evidence shows that earnings generally rise with age until the years immediately preceding retirement, when it reaches a peak and then either remains unchanged or even declines. According to human capital theory, earnings of workers with a given level of education increase as they get older because the experience acquired through working makes them more productive.

Age-earnings profiles tend to differ according to the level of education: Higher educated people enjoy not only higher starting salaries but also more rapid wage increases and so a steeper age-earnings profile, which tends to decline less after reaching a peak than for the lower educated. It is often argued that increasing inequality of earnings in developed countries is a result of technological change which uniformly increases the productivity of higher educated workers relative to the lower educated. If in the short-run the supply of educated people fails to match the increase in the demand, the premium for education will increase. Sudden technological changes might also cause a change in the steepness of the age-earnings profile, in that the education of younger people may be more adapted to requirements of new technology than the education and skills of older workers. In such cases demand will grow more for the young who are well educated and less for the older which will result in a less steep age-earnings profile.

It should be kept in mind that the analysis here is conducted on the basis of data on net household income rather than wages. This enables the influence of the labour market to be examined along with effects of redistribution through the tax and benefit system. Redistribution affects the distribution of household income in multiple ways. As incomes are

[13] Márton Medgyesi, István György Tóth, Tárki

measured here net of direct taxes, the equalizing effect of these taxes is already taken into account. On the other hand, social transfers are an important income source for a large proportion of households. For example, income differences between those in employment and the retired reflect average pension levels relative to average earnings.

It should also be emphasised that the analysis is carried out in terms of the characteristics of the head of households (as defined below) rather than for households as such. This simplifies the analysis but it needs to be kept firmly in mind that the characteristics of the household head – specifically, their age, education level and employment status – do not necessarily reflect those of other members of the household. The fact that, for example, the head has a low level of education does not necessarily mean that other members have a similarly low level - though this may be the case in many instances – or if they are unemployed that other members are also not working, The results need to be interpreted with this in mind.

In the following, the overall effects of the age, education level and employment status of he heads of households on the distribution of household disposable income are compared across countries. The next section explains the methodology adopted and describes the data used in the analysis before the results are presented.

Decomposition methodology and data

The approach adopted is, first, to group population according to a given characteristic - specifically, age, education and employment status - , and then to distinguish income dispersion between these groups attributable to this characteristic, from dispersion within the groups (which is assumed to be independent of the characteristic in question). Some inequality indices are additively decomposable, which means that they can be written as the sum of two components: a weighted sum of within-group inequalities and between-group inequality, that is the inequality which would be observed if incomes of all individuals were replaced by their respective group means. A convenient family of additively decomposable inequality indices is the Generalized Entropy family[14], which comprises well-known inequality indices such as the Theil statistic[15], the mean log deviation[16] (MLD), and the square of the coefficient of variation[17].

[14] Any inequality index that satisfies properties of weak principle of transfers, mean independence, population homogeneity and additive decomposability is a member of the Generalized Entropy family of indices (Shorrocks 1980).

15 The Theil index is defined as Theil=$(1/n)\Sigma i(yi/\mu)\ln(yi/\mu)$, where n is population size, i:=1…..n, yi az income of person i and μ, mean income (Burniaux et al. 1998).

16 The mean log deviation index (MLD) is defined MLD=$(1/n)\Sigma i\ln(\mu/yi)$, where n is population size, i:=1…..n, yi az income of person i and μ, mean income (Burniaux et al. 1998).

17 The squared coefficient of variation is SCV=$var(yi)/\mu 2$, where var means variance.

The concern is to investigate the effect of a given variable on the distribution of incomes. The relevant question to consider in this regard can be formulated in two ways. The first is how much inequality would be observed if age (or education or employment) were the only source of income dispersion. The second is by how much would income inequality fall if, starting from the actual distribution, income dispersion due to age (or education, employment etc.) were eliminated by making age group means identical while preserving within-group inequality. Shorrocks (1980) argues for the decomposition of indices such as the Theil statistic and the MLD index, because in these cases answers to the two formulations coincide[18]. The MLD index is selected here to perform the calculations. In this case, decomposition weights are simply population shares of different groups; the within group component is, therefore, the sum of within group MLD indices weighted by the population shares of the respective groups[19]. The same methodology has been used by a number of authors to investigate the effect of various individual or household attributes on income inequality (for example, Jenkins, 1995). Since the sum of between group and within group inequalities equals total measured inequalities, we can express the various components in percentage terms. In chapter 3 we compare the percentage of within group inequalities among European countries using age, education and employment of the household head as grouping variables.

In addition to this static decomposition, a decomposition of intertemporal change of inequality was also carried out following the methodology used in *Mookherjee-Shorrocks* [1982][20]. This method decomposes the change in inequality in three components. The first is a "pure" effect of inequality increase, that is, the effect attributable to increase in within group components. The second component is the effect of structural change due to change in relative population shares

[18] If in the second approach we eliminate between-group dispersion by equalizing group means we also change the decomposition weights (if they are mean dependent) and thus within-group inequality. Thus by the second approach we only arrive at the same between-group effect if the decomposition weights do not depend on the group means, like in the case of the Theil or the MLD indices.

[19] Formally, Let v_k be the share of k subgroups in total population, $v_k = n_k/n$, and let λ_k be the ratio of average incomes of a k subgroup to the average incomes of the total population, $\lambda_k = \mu_k/\mu$, and let θ_k be the share of k subpopulation from total incomes in the population, $\theta_k = v_k\lambda_k$. Total inequality as measured by MLD index, can be decomposed as a sum of two components:

$MLD = \Sigma_k v_k MLD_k + \Sigma_k v_k \log(1/\lambda_k)$.

The first part of the right hand side is for “within group” inequalities: it denotes weighted average of inequalities within the subgroups. The second part of the expression denotes "between group inequalities": that part of inequalities that would be measured, should we replace each individual income in a subgroup by the average of the subgroup.

[20] The change in the MLD index between two time periods, t and $t + 1$ can be written, following *Jenkins* [1995] and

$\Delta MLD \equiv MLD_{(t+1)} - MLD_{(t)}$

$\cong \Sigma_k \underline{v}_k \Delta MLD_{(k)} + \Sigma_k \underline{MLD}_{(k)} \Delta v_k - \Sigma_k \underline{[\lambda_k - \log(\lambda_k)]} \Delta v_k + \Sigma_k \underline{(\theta_k - v_k)} \Delta \log(\mu_k)$.

[A component] [B component] [C component] [D component],

of the various subgroups, while the third component measures the effect of change in relative mean incomes of the various subgroups. For a clearer understanding of decompositions by various dimensions, it is useful to show changes in *relative* terms: the change of inequality between the two periods as a percent of the value measured in period.

The data used are from the EU Statistics on Income and Living Conditions (EU-SILC) for the year 2004, which has a cross-sectional sample size of 121000 households in the 13 countries covered. We compare these data to the European Community Household Panel (ECHP), year 2000 in the case of countries where both surveys have been carried out. It is important to keep in mind that the two surveys differ to some extent in their methodologies[21] thus results regarding changes should be interpreted with caution. The analysis is carried out on the distribution of equivalised[22] household income. Variables used for grouping in the decomposition analysis are based on the attributes of the (assumed) head of the household in which respondents live. Since no household head is defined in EU-SILC, this is taken to be the oldest man of active age (between 18 and 64 years). If there is no active age man, then the oldest active age woman is taken as the household head instead. If there are no active age members in the household, the oldest man of 65 or older is taken as the household head, or the oldest woman if there is no man. The same definition of household head has been applied to ECHP database. For simplicity of the analysis, attributes of the household head are assumed to apply to all household members. The qualifications to the findings, which this implies have been emphasised above.

Extent and evolution of inequalities in European countries

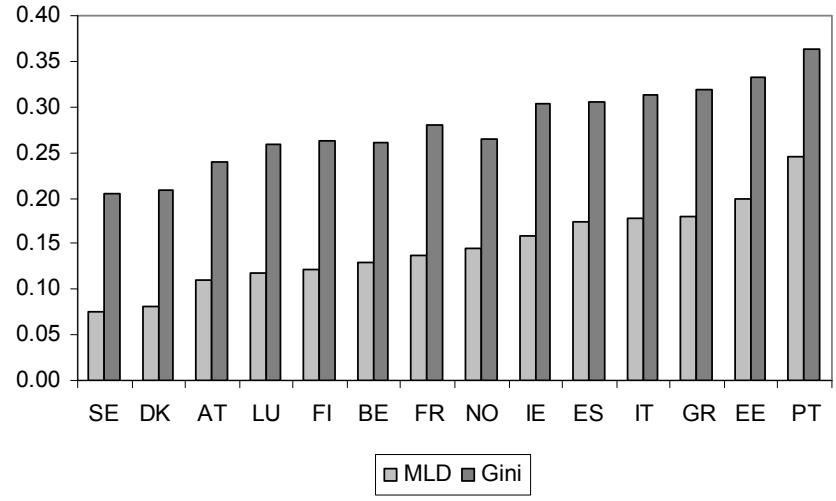
The first chart shows the ranking of the countries for which data are available by the MLD inequality index. This shows a familiar pattern: Sweden and Denmark exhibit the lowest inequality, while Portugal, Estonia, Greece, Italy, Spain and Ireland are the most unequal. As the MLD index is more sensitive to income changes at the bottom of the income scale than further up, values of the Gini-coefficient, which is a more commonly used measure of inequality, is also plotted.[23] This is less sensitive to income changes at the bottom or the top of the distribution. The ranking of countries according to the Gini-index is the same except, that France and Norway change places.

[21] On the difference between the methodologies of the surveys see Eurostat (2005).

[22] The OECD II equivalence scale is used. First household member older than 14 years of age equals one consumption unit. Additional houshold members older than 14 years of age count as 0,5 consumption unit, while household members younger than 14 equal 0,3 consumption unit.

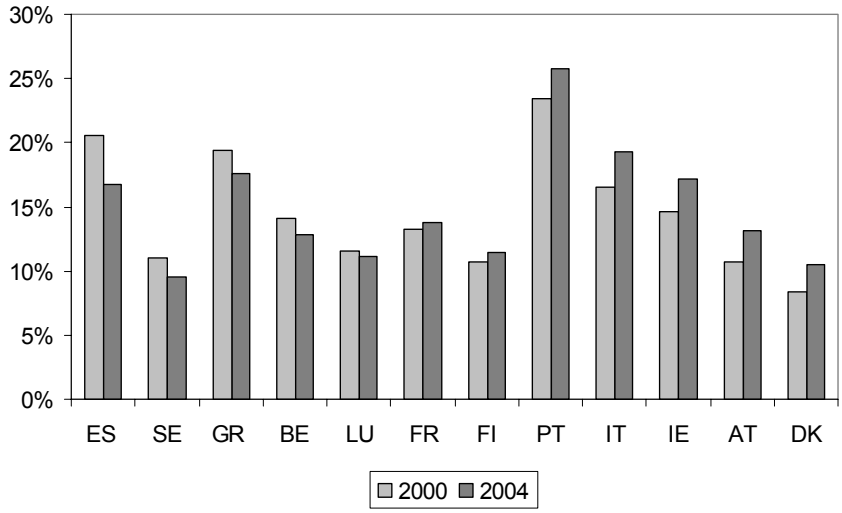
[23] $Gini=\{(2/\mu n^2)\Sigma_i y_i * i\}-\{(n+1)/n)\}$, where n is population size, $i:=1.....n$, y_i is income of person i and μ is mean income.

Fig. 1. Inequality according to the MLD and Gini-indexes in 2004



Recent changes in the income distribution were investigated by the comparison of inequality indices between 2000 and 2004. Measuring inequality changes by the MLD index shows that during the first years of the millennium the most important increase in inequality has occurred in low or middle inequality countries Denmark and Austria, where the value of the index has grown by more than 20%. In Italy and Ireland, which already had considerable inequality at the beginning of this period the MLD index has grown by 16-17%. Moderate increase in inequality has occurred in Portugal and Finland where the MLD index has grown by a rate close to ten percent. In France and Luxembourg inequality has not changed during this period. In four countries inequality has decreased: in Belgium, Greece and Sweden the value of the index has decreased by approximately 10%, while in Spain the decrease has been even more important.

Fig. 2. MLD indices in 2000 and 2004



Note: countries are ordered according to the percentage change in the MLD index.

Results of static decomposition analysis

The grouping variables considered in the analysis are age, education and employment of the household head.

DECOMPOSITION BY AGE OF HOUSEHOLD HEAD

Respondents are classified into four groups according to the age of the head of the household in which they live. The age groups chosen are: 18-34, 35-49, 50-64, and 65 or older. The following chart shows the share of between group inequality in total inequality[24]. The chart shows that the age grouping accounts for only a small percentage of total inequality in most of the countries. In 2004 the between-group component is under 4% in all countries apart from the Nordic ones plus Ireland. It is in the low income-inequality countries, Denmark and Sweden, that the age of the household head explains the largest part of household income dispersion. In these two countries, the between-group component is 9-11% of total inequality, while in the other two Nordic countries and Ireland it is between 4,5%. It can be seen that the percentage of inequality that can be attributed to between age-group dispersion is even increasing between 2000 and 2004 in Finland and Denmark.

Fig. 3. The share of between-group inequality in total inequality, by the age of the household head

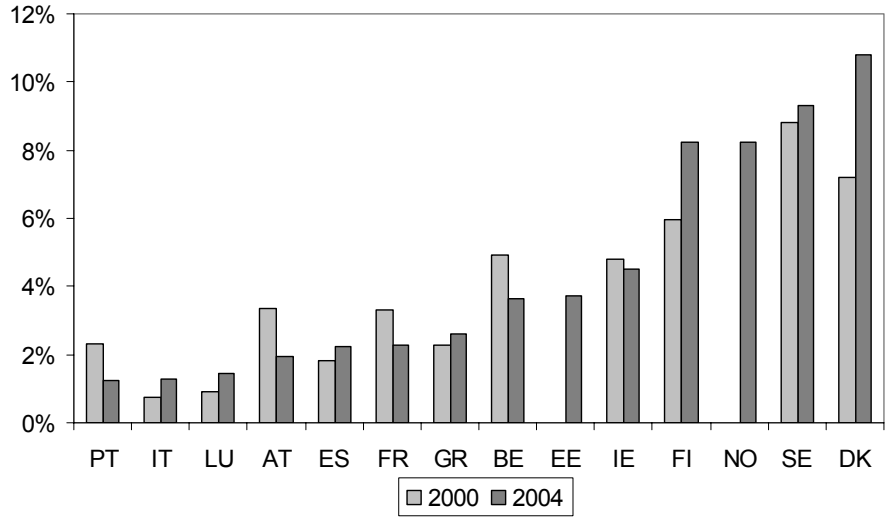


Table 1b in the Annex shows details of the age-decomposition of household income inequality in 2004. As described above, decomposition is based on the population shares of different groups, within-group inequality and relative incomes of the sub-groups. As regards the population structure according to the age of the household head, it is evident that differences between countries are relatively small. Sweden, Denmark and France have the largest share of

[24] The remaining part of inequality is accounted for by inequality within groups.

population living in elderly households (15-16%), while this is only 9% for Ireland. The percentage of those living with a young household head (18-34) is related to the age structure of the population, the age when young people tend to leave the parental home and form a new household, and, underlying the latter, the age of marriage and fertility rates among the young. The share of those living in young households is the smallest in Greece, Italy and Luxembourg (16-18%), while the largest percentages are recorded in Estonia and Norway (25-26%).

The second component of the decomposition – which is obviously closely related to between-group inequality - is relative incomes of different subgroups. Mean incomes relative to overall mean are generally highest in those households where the head is between 50 and 64 years of age, reflecting (among other factors) the age-earnings profile. In Nordic countries, where the between age-group component of inequality is the most important, the incomes of the near-retirement households exceed considerably that of young households. In Denmark, Finland, Sweden and Norway, mean income is around 30% higher in the case of those who live in households with a head aged 50-64 than for those living in households where the head is aged 18-34. By contrast, in high inequality countries, such as Estonia and Spain, the difference is below 5%. Mean income of the elderly is 15-20% lower than the national average in most of the countries. Income of the elderly is highest in Luxembourg and France, where it is only 2-3% below the national average. Also in Austria and Italy, mean income of the elderly is only slightly lower than the overall mean. The other extreme country is Ireland where –perhaps because of very rapid growth over the past decade – mean income in elderly-headed households is only 67% of the national average.

The third component of the decomposition is within-group inequality. Inequality among those living in elderly households is generally smaller than inequality in the overall population. The largest difference is in Estonia where the MLD index for the elderly population is only 96 compared to 246 for the entire population, but the pattern is similar in most of the countries. Only three countries show the opposite pattern, Austria –where inequality among those living in elderly-headed households is more than 40% greater than in the overall population– and France and Portugal.

Inequality among households headed by a young person aged 18-34 is significantly greater than in the overall population in Estonia, Sweden and Italy and significantly lower in Greece, Ireland, Portugal , while elsewhere it is relatively similar.

DECOMPOSITION BY EDUCATION OF HOUSEHOLD HEAD

The following chart shows the share of total inequality “explained” by the education level of the household head. The maximum level of education attained is divided into three categories:

primary and lower secondary education, upper secondary and tertiary. The chart indicates considerable differences between countries in the relative importance of the education of the household head. In Portugal, Greece and Luxembourg, it accounts for around 20% of total inequality while in Sweden and Austria, only 5%. Interestingly, there are low- and high-inequality countries at both ends of the ranking, though with slightly more high-inequality countries at the top end – ie the education level of the household head being more important as a factor underlying inequality – than at the bottom. In the case of Portugal and Luxembourg we see an important decrease in the share of between-group inequality, which does not affect their position in the ranking of countries. In the case of France, on the other hand, the decrease is such that it's position in the ranking of countries is also affected.

Fig. 4. The share of between-group inequality in total inequality, by household head's education

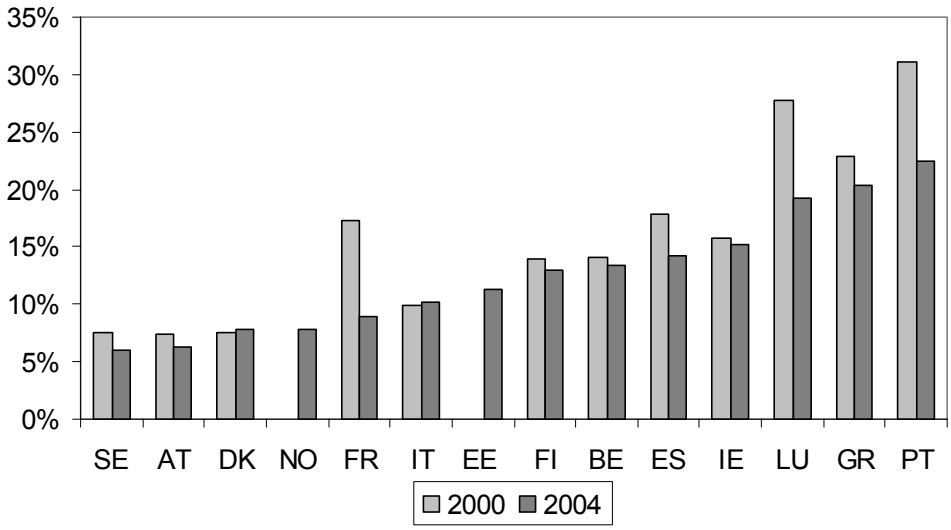


Table 2b in the Annex shows details of the decomposition according to the education level of the household head in 2004. The proportion of the population with different education levels varies considerably across countries. In Norway, Estonia and Sweden the percentage of those living in households where the head has only primary or lower secondary education is around one fifth, while in Spain, in Italy and especially in Portugal is well above 50%. The proportion is also just over a quarter in Spain, Ireland, Italy and Luxembourg. At the same time, almost 30% of the population live in households headed by a person with tertiary education in Belgium , Finland and Norway, as opposed to 10% in Italy and Portugal.

Differences in income between households with different education levels are largest in countries with a large proportion of people living in households where the head's education is low, such as Portugal, Greece and Italy. In Portugal, the mean income of those living in households where the head has tertiary education is twice as high as the mean income for the overall population. Conversely, income differences between education groups are relatively

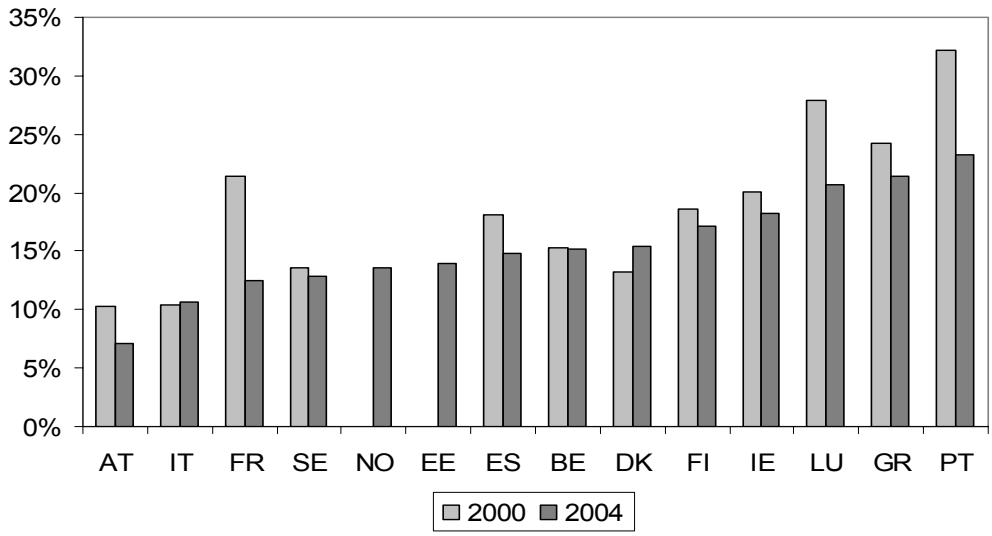
small in countries where education levels are comparatively high. In Sweden and Denmark, mean income of households with tertiary education is only 40%higher than the average for households with primary or lower secondary education education. The differences in Denmark, Finland and Austria are only slightly higher.

These differences between countries partly reflect a high wage premium to education in labour markets where the supply of well-educated labour is relatively scarce and low wage premium where it is more abundant. Contradicting this relationship, income differences by education level are also relatively wide in Estonia, which has a relatively well -educated population. It might be that the rapid economic growth over the past decade led to greater increase in demand for educated labor than could be matched on the supply side. It is also the case, of course, that in countries with well-developed social welfare systems, such as the Nordic countries, the extent of income redistribution is also important in reducing differences in disposable income.

The combined effect of household heads age and education

In order to examine the relationship between age, education and income, households can be grouped by age and education combined, with three age group (18-34 years, 35-64 years, 65 years or more) and three education categories (the same as above) being distinguished. The following chart shows the proportion of overall inequality accounted for by mean income differences between the age-education groups. It is evident that the ranking of countries is similar to that shown above where only the education level of the household head was taken into account. Inequality between the groups distinguished accounts for the largest share of overall inequality in Portugal, Greece Luxembourg, and Ireland, as before, and the smallest share in Austria Italy, France and Sweden. The main feature in relation to the previous ranking is that Denmark moves up in the ranking as a result of the age of the head of household being a relatively important factor underlying inequality between households. Countries where important intertemporal changes occur in the between-group component of inequality are the same as countries where the between-group component for education alone has changed: France, Luxembourg and Portugal.

Fig. 5. The share of between-group inequality in overall inequality, by household head's combined age and education



DECOMPOSITION OF INEQUALITY ACCORDING TO EMPLOYMENT STATUS OF HOUSEHOLD HEAD

The employment status of household heads is classified into three groups: employed full-time or part-time, unemployed or inactive (not retired) and retired. As the following chart shows there are three groups of countriesin the ranking by between-group component in inequality. The is a first group with Ireland, where differences in the employment status of the head accounts for 19% of overall inequality, Esxtonia and Belgium, where it accounts for around 15% . By contrast, employment status accounts for under 5% of inequality in Portugal, Italy, Greece, Finland and Austria. The Nordic countries occupy an intermediate position between these two groups, with the employment status of the household head explaining approximately 10% of the overall inequality. Regarding intertemporal changes in between-group inequality it seems that in Ireland and Belgium the share of between-group component of inequality was increasing during the four years following the Millennium. Smaller increase can bet detected in the case of Finland and a smaller decrease in the case of Denmark.

Fig. 6. The share of between-group inequality in overall inequality, by household head's employment status

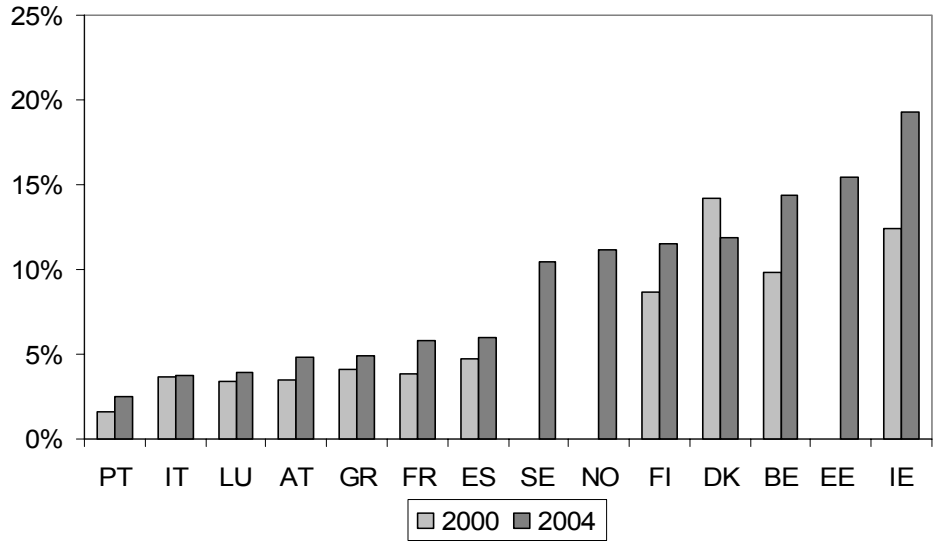


Table 3b. in the Annex gives details of the decomposition for the year 2004. The share of population in each work status category differs between countries reflecting differences in employment rates, age structure, patterns of cohabitation and other factors. The share of those living in households where the head is working is highest in Luxembourg, Norway, Portugal and Ireland, in each of which the proportion is 70% or higher. By contrast, in Italy only 63% live in households where the head is working and the figure is only slightly higher in Belgium, Finland and France. The proportion of people living in households where the head is unemployed or inactive (but not retired) is largest in Ireland (22%), Spain and Finland (both 18%) and smallest in Austria (9%). The proportion living in households where the head is retired is largest Italy, Austria and France (22-23%%) and smallest in Ireland (8%)..

The relative income of those in households where the head is employed is always higher than 100% (ie always greater than the average of all households). Highest ratios are found in Ireland, Estonia and Belgium where the mean income of such households is more than 10% higher than the mean for the overall population. Those living in households where the head is not working (or retired) have generally the lowest relative income. Their relative income is tho lowest in the above three countries (under 70% of the average), while in Finland, Sweden and Spain, where their relative income is highest, it is still more than 20% less than the average. For households where the head is retired, relative income is equal or slightly above the average in Austria, France, Italy, Luxembourg, while in the other countries, it is below, most especially in Estonia where it is only 67% and in Ireland where it is 81% of the national mean.

Results of dynamic decomposition analysis

We investigated the role of different explanatory factors in the evolution of income inequality by dynamic decomposition analysis. As detailed in the methodological section of the paper this method decomposes the change in the MLD index in three terms: the effect of changes in between group inequality, the effect of change in the population structure and the effect of the change of within group inequality. Our main interest is the percentage of change in overall inequality explained by change of between group inequality, where grouping variables are age, education and employment of the head of household. The detailed results are displayed in the Annex. In case of France and Luxembourg no significant change in inequality occurred, thus determinants of change are not commented.

As we have seen before, between 2000 and 2004 the most important changes in inequality have been detected in Austria and Denmark. In Austria change in inequality between age groups does not play a role in the increase of inequalities. Inequality between groups with different education levels has changed in a way that even lowers overall inequality. If we consider the combined age and education grouping, it can also be seen that the change in between group inequality lowers overall inequality. The effect of employment on the overall increase of inequality in Austria is also moderate. Thus in Austria overall inequality increase has been driven by growing within-group inequality and changes in the population structure rather than an increase in between group inequality. In Denmark, growing between age-group inequalities account for 25% of the increase in overall inequality. Changes in inequalities between households with different education level has no important effect, but the combined effect of age and schooling – obviously driven by the age effect – is also inequality enhancing. The change in inequality between employment groups has a moderate inequality reducing effect.

According to our results inequality has increased also in Italy and Ireland. In Italy age does not play a role in the increase in inequalities but the change in income differences between education-groups (and the combined effect of age and education) is moderately inequality enhancing. Inequality between employment groups has a moderate inequality reducing effect. In Ireland the effect of a change in inequality between the employed/inactive/retired is very important, it explains 47% of the increase in overall inequality. The change in between age-group inequality has no effect, while change in inequality according to education level has a moderate inequality reducing effect.

Portugal and Finland have experienced a slight increase in overall inequality during the period considered. In Portugal the important decrease in between education levels inequality was counterbalanced by a strong increase in within group inequalities and the change in population

structure had an inequality enhancing effect as well. In Finland growing inequalities between age-groups explain 35% of the increase in inequalities. Schooling or employment have only a moderate effect.

Inequality has been declining in Greece, Belgium, Sweden and Spain. Overall inequalities in Greece have been moderately declining. Decreasing inequalities between groups with different education levels has contributed significantly to this decrease: it explains 45% of the change in overall inequality. Age and employment have no important effect. In Belgium change in between group inequalities according to age and education explain around 15% of the decrease in overall inequality. In Sweden change in between group inequalities according to schooling and employment explain around 10% of the decrease in overall inequalities. In Spain the 35% of the overall decrease in inequality is accounted for by the decrease in inequalities between education groups.

The following table summarises our results of decomposition of inequality changes. It shows that changes in income differences according to education were a driving force of inequality change for seven out of the twelve countries considered. In each of the cases this had an inequality reducing effect. The change in between age-group inequality contributed to inequality change in four cases, mainly with inequality increasing effect. The change in between employment-group inequality had significant effect in only two cases. Differences in important drivinig forces between country groups can also be seen. In the case of Nordic countries Denmark and Finland, where age is an important explanatory factor of inequality, change in age-related inequalities have an important effect on overall inequality change. Similarly, in Mediterranean countries, where education is important in explaining income differences at one point of time it is also an important driving force of intertemporal changes in inequality.

Table 1. The role of explanatory factors in inequality change

Change in overall inequality	Age	Education	Employment
Important increase (AT, DK, IT, IE)	DK(++)	AT(-), IE(-)	IE(++), DK(-)
Moderate increase (PT, FI)	FI(++), PT(+)	PT(--)	
No change (FR, LU)			
Small decrease (BE, GR, SE)	BE(-)	GR(--), BE(-), SE(-)	
Important decrease (ES)		ES(--)	

Note: meaning of signs in parentheses are the following. ++/--: strong inequality increasing/decreasing effect (contribution to inequality change is more than 25%), +/- moderate inequality increasing/decreasing effect (contribution to inequality change is between 10 and 25%).

Conclusion

The concern here has been to investigate the effect of the age, education and employment of the heads of households on the degree of inequality of household disposable income, using the MLD index as a measure of the latter. In terms of country groupings, the results indicate that in the Nordic countries with relative low inequality, the age of the household head is more important in explaining income inequality than elsewhere, mainly due to considerable differences in average incomes between those close to retirement (50-64 years) and younger people aged 18-34. On the other hand, education accounts for smaller share of overall inequality in these countries than others, reflecting their relatively well educated population and modest income differences between those with different education levels. Income differences by employment status of the head of household are relatively important in Sweden but less so in the other countries.

The southern European countries, with a relatively high degree of inequality, in many cases display opposite characteristics to the Nordic ones. The age of the household head is relatively unimportant in explaining inequality of household incomes, while their education level accounts for a significant share of overall income inequality, especially in the case of Greece and Portugal. As these countries are also those with a relatively poorly educated labour force, this may reflect an inadequate supply of highly educated workers relative to demand and accordingly these being able to command relatively high wages. The employment status of the head of household is not very important in determining income inequality in these countries.

In Ireland, where income inequality is also high, education and employment are important in explaining inequality. The age of heads of households also accounts for a relatively large share of overall inequality mainly because the average income of the elderly is much lower than that in younger age groups. The elderly therefore seem to have been left behind as real income has risen rapidly over the past decade. The employment status of the head of household is also an important factor underlying inequalities, which also reflects low incomes of the retired but also relatively low level of unemployment benefits. Education is also important, despite the relatively large proportion with tertiary education.

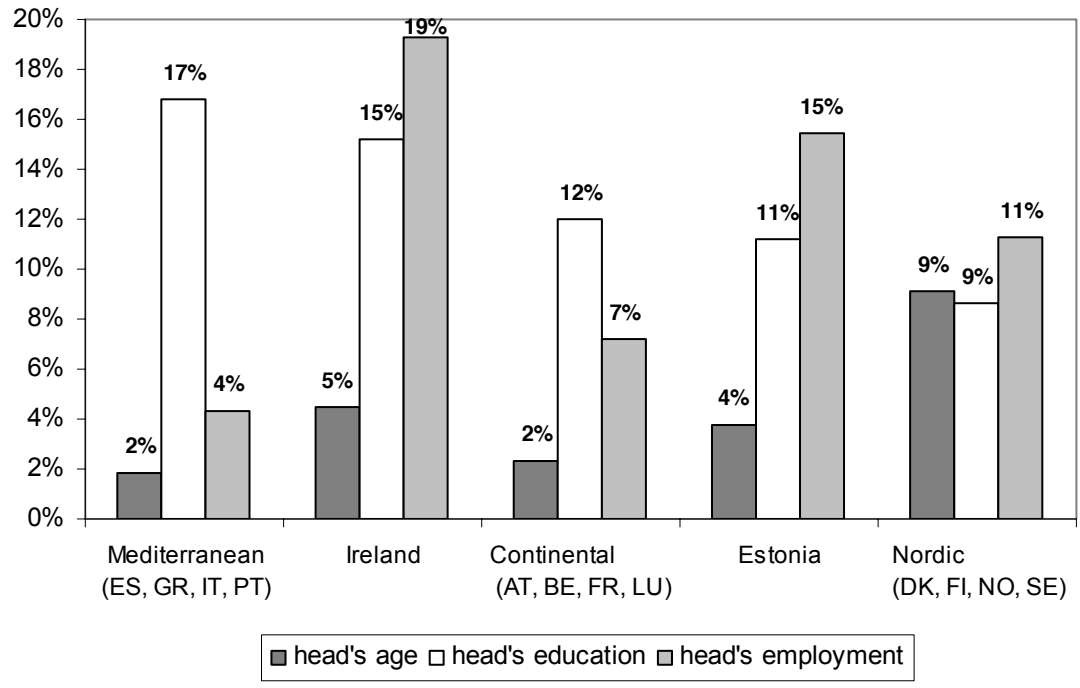
In the case of Austria, on the other hand, none of the explanatory factors considered seems important in explaining income dispersion. For. Belgium, on the other hand, with a similar degree of income inequality, the education level of heads of households and, even more, their employment status, seem to be important factors.

The following figure summarises our results of static decomposition of inequalities groups by countries. In Mediterranean countries education is an important factor in explaining inequalities, while age and employment are not important. In continental countries education is

the most important among the factors studied, but it is less important than in the case of Mediterranean countries, while employment is more important. In the case of the Nordic countries the three factors are equally important determinants. Age of household head plays the most important role in case of Nordic countries. Ireland and Estonia are not members of any of the groups considered. In these countries employment is the most important determinant of inequality among the factors studies but education clearly plays an important role as well.

As we have seen in our decomposition of inequality changes education is the factor, which plays an important role in inequality changes for the biggest number of countries. Changes in income differences according to education unanimously had an inequality reducing impact between 2000 and 2004 in these countries. Education played a role in inequality change in all Mediterranen countries where –as we have seen – education is an important determinant of inequalities at a specific point in time. Age and especially employment had more rarely an effect on change of inequality.

Fig. 7. Percent of inequalities explained by various dimensions in different country groups in 2004



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Annex

Table 1a.Decomposition of MLD by age of household head, 2000

	Population share (%)				Relative means (%)				Within-group inequality (1000*MLD)				
	18/34	35/49	50/64	65/max	18/34	35/49	50/64	65/max	18/34	35/49	50/64	65/max	Total pop
Austria	21	40	28	10	95	99	111	83	96	102	103	130	107
Belgium	18	41	27	15	105	96	114	78	139	86	191	161	142
Denmark	25	34	26	14	94	106	110	78	94	46	74	133	84
Spain	18	38	34	10	106	93	109	85	200	205	207	175	206
Finland	22	36	30	12	90	108	106	78	128	87	109	70	107
France	22	38	27	13	89	99	114	91	115	105	172	129	133
Greece	15	34	36	14	103	105	102	79	177	176	198	212	194
Ireland	24	39	29	8	94	102	111	68	113	153	142	148	147
Italy	14	37	37	11	96	99	105	90	199	170	159	120	166
Luxembourg	22	39	27	11	103	97	105	91	130	115	114	82	116
Portugal	19	38	34	9	96	99	110	75	191	234	244	233	235
Sweden	27	32	25	16	86	101	122	87	129	82	113	67	110

Table 1b.Decomposition of MLD by age of household head, 2004

	Population share (%)				Relative means (%)				Within-group inequality (1000*MLD)				
	18/34	35/49	50/64	65/max	18/34	35/49	50/64	65/max	18/34	35/49	50/64	65/max	Total pop
Austria	20	40	28	12	93	98	111	93	130	97	148	187	131
Belgium	21	38	26	14	99	101	110	80	129	121	139	98	129
Denmark	23	36	26	15	85	103	121	80	109	84	99	82	105
Estonia	26	35	25	13	110	100	105	70	296	248	232	96	246
Spain	22	36	29	13	107	100	104	80	163	182	154	135	168
Finland	22	35	28	14	89	100	119	80	97	83	150	80	114
France	23	36	26	15	91	98	113	97	124	110	173	144	138
Greece	18	36	32	14	97	105	105	79	138	176	185	171	176
Ireland	20	38	33	9	97	100	110	67	139	162	193	121	172
Italy	16	37	33	13	96	96	110	91	221	194	194	136	193
Luxembourg	18	42	29	11	93	97	109	98	111	117	108	85	111
Norway	25	37	25	13	87	103	119	79	119	118	115	90	124
Portugal	21	36	30	12	96	99	110	84	207	257	280	266	258
Sweden	23	35	26	16	88	101	120	83	129	70	82	69	96

Table 2a.Decomposition of MLD by education of household head, 2000

	Population share (%)			Relative means (%)			Within group inequality (1000*MLD)			
	primary	secondary	tertiary	primary	secondary	tertiary	primary	secondary	tertiary	Total population
Austria	18	74	8	79	102	131	93	97	137	107
Belgium	33	33	34	77	96	126	100	152	113	142
Denmark	20	52	28	84	98	116	76	74	82	84
Spain	63	15	23	86	107	151	162	165	192	206
Finland	28	42	29	85	91	128	96	90	91	107
France	67	9	23	85	109	139	95	135	140	133
Greece	53	29	18	75	109	158	155	153	129	194
Ireland	53	33	14	82	107	149	116	123	147	147
Italy	59	31	10	85	115	140	157	134	149	166
Luxembourg	40	39	21	77	99	148	81	86	80	116
Portugal	82	8	10	80	143	234	166	156	134	235
Sweden	22	48	29	87	94	120	75	82	156	110

Table 2b.Decomposition of MLD by education of household head, 2004

	Population share (%)			Relative means (%)			Within group inequality (1000*MLD)			
	primary	secondary	tertiary	primary	secondary	tertiary	primary	secondary	tertiary	Total population
Austria	24	59	17	83	100	125	143	104	159	131
Belgium	34	37	29	80	97	127	117	107	111	129
Denmark	29	47	24	85	99	120	86	87	110	105
Estonia	18	58	24	68	93	139	182	208	268	246
Spain	55	20	25	82	106	135	137	148	148	168
Finland	29	43	28	83	94	128	84	101	112	114
France	23	53	23	87	93	129	121	113	149	138
Greece	49	32	19	77	103	153	147	135	127	176
Ireland	48	28	24	81	96	142	148	114	180	172
Italy	59	32	10	85	110	157	175	160	201	193
Luxembourg	38	41	21	81	98	139	84	93	92	111
Norway	15	58	27	78	96	120	79	117	121	124
Portugal	77	12	11	81	127	206	199	218	188	258
Sweden	21	54	25	85	99	116	92	77	117	96

Table3a. Decomposition of MLD by employment status of household head, 2000

	Population share (%)			Relative means (%)			Within group inequality (1000*MLD)			
	employed	inactive	retired	employed	inactive	retired	employed	inactive	retired	Total population
Austria	73	8	19	103	74	99	97	132	120	107
Belgium	69	10	22	110	68	82	118	130	158	142
Denmark	74	8	18	108	71	78	60	108	101	84
Spain	71	19	10	108	76	85	206	199	123	206
Finland	70	8	22	108	73	84	92	181	84	107
France	70	10	20	105	74	96	115	190	135	133
Greece	70	10	20	108	74	87	176	222	201	194
Ireland	73	19	8	110	68	80	125	124	157	147
Italy	68	11	22	105	72	98	159	273	100	166
Luxembourg	74	4	22	104	73	90	116	153	78	116
Portugal	75	10	14	105	81	90	231	240	229	235

Table3b. Decomposition of MLD by employment status of household head, 2004

	Population share (%)			Relative means (%)			Within group inequality (1000*MLD)			
	employed	inactive	retired	employed	inactive	retired	employed	inactive	retired	Total population
Austria	69	9	23	104	68	100	112	131	162	131
Belgium	64	16	20	113	67	86	104	141	105	129
Denmark	68	15	17	110	73	84	86	123	89	105
Estonia	67	17	15	117	61	67	203	330	90	246
Spain	68	18	14	109	77	86	158	175	133	168
Finland	65	18	17	111	76	83	100	122	83	114
France	65	14	21	106	72	100	114	195	136	138
Greece	69	13	18	108	73	90	166	167	171	176
Ireland	70	22	8	115	60	81	143	115	165	172
Italy	63	15	22	106	74	102	185	265	130	193
Luxembourg	74	13	13	103	77	103	106	129	91	111
Norway	72	16	13	110	72	80	110	131	92	124
Portugal	72	12	16	105	73	97	241	294	263	258
Sweden	68	15	17	109	77	84	80	124	74	96

Table 4a. Decomposition of inequality change according to age of household head

	delta MLD	% of change due to changes in within group inequality	% of change due to changes in population structure	% of change due to changes in between group inequality
Austria	24	100	5	-5
Belgium	-13	88	-5	17
Denmark	21	77	-2	25
Spain	-38	98	1	1
Finland	7	70	-5	35
France	5	114	11	-25
Greece	-18	94	7	-1
Ireland	25	91	10	-1
Italy	27	97	-1	5
Luxembourg	-4	108	6	-13
Portugal	23	116	-4	-12
Sweden	-14	82	14	5

Table 4b. Decomposition of inequality change according to schooling of household head

	delta MLD	% of change due to changes in within group inequality	% of change due to changes in population structure	% of change due to changes in between group inequality
Austria	24	78	39	-16
Belgium	-13	83	4	13
Denmark	17	94	0	6
Spain	-40	70	-5	35
Finland	8	101	-7	6
France	4	202	101	-203
Greece	-19	51	4	45
Ireland	27	73	41	-14
Italy	27	89	-1	12
Luxembourg	-3	-192	18	273
Portugal	22	171	27	-98
Sweden	-15	64	23	13

Table 4c. Decomposition of inequality change according to age&schooling of household head

	delta MLD	% of change due to changes in within group inequality	% of change due to changes in population structure	% of change due to changes in between group inequality
Austria	24	92	36	-28
Belgium	-13	89	7	4
Denmark	17	82	-7	25
Spain	-40	68	-1	33
Finland	8	109	10	-20
France	4	302	94	-295
Greece	-19	44	8	49
Ireland	27	72	47	-19
Italy	27	88	0	12
Luxembourg	-3	-155	21	235
Portugal	22	179	22	-101
Sweden	-15	60	28	12

Table 4d. Decomposition of inequality change according to employment of household head

	delta MLD	% of change due to changes in within group inequality	% of change due to changes in population structure	% of change due to changes in between group inequality
Austria	24	83	8	9
Belgium	-13	143	-36	-7
Denmark	21	84	27	-12
Spain	-39	95	6	0
Finland	8	-35	124	11
France	6	-4	96	8
Greece	-18	106	-7	1
Ireland	27	45	8	47
Italy	27	83	25	-8
Luxembourg	-3	237	-241	105
Portugal	23	85	5	10

4. SELECTED CASE STUDIES OF CHANGES IN INCOME DISTRIBUTION

The analysis in the previous chapter examined the factors underlying relative poverty rates and inequalities in income distribution and changes in these over time. The concern here is to throw further light on these and other factors by considering recent developments in four EU Member States in more detail than is possible on the basis of the macro approach adopted above.

The four countries In question are Ireland, Sweden, Spain and Hungary, which have experienced very different economic and social developments over recent years and the detailed study of which accordingly may provide additional insights into key issues – in particular, the effect of economic growth and differing rates of net job creation on the distribution of income.

Ireland

Ireland is the first cohesion country[25] whose GDP per head has reached and surpassed the EU average level. Table A1 (in the Appendix) shows the path of this index during the past decade. Between 1995 and 2000 the Irish economy grew at around 10% annually, and 5% since 2000. Nowadays the level of GDP per head in Ireland is one of the highest in Europe. This rapid expansion was mainly due to foreign-owned, export-oriented multinational firms in the chemical, pharmaceutical and electronic machinery industries (for a more detailed see e.g. Murphy [2000]) Meanwhile the employment rate rapidly increased in the past decade, and the unemployment rate decreased from 16.8% in 1986 to 4.4% in 2005[26]. Because of the progressing economic performance, it is a question of great interest whether it has been accompanied by widening or narrowing of earnings and income inequalities.

Ireland inherited a modest social welfare system from the UK at the time of its independence in 1922, and followed the Anglo-Saxon model in the years after (see Callan-Nolan [1997]). Different indicators show that in the last 30 years Ireland has been characterised by a high and rather stable degree of income and earnings inequality, while this latter also showed some favourable patterns.

Barrett et al. [2000] investigate the evolution of wage inequalities between 1987 and 1997. They report rapidly increasing wage inequality between 1987 and 1994 but a slowdown of this process between 1994 and 1997. They also examined – by means of Mincer-type regressions – the returns to education during the same period. They found that only the return on university education increased between 1987 and 1994, and then mainly among older workers. Between

[25] The cohesion countries are Ireland, Greece, Portugal and Spain.

[26] According to EUROSTAT.

1994 and 1997, when the Irish economy grew rapidly, the return on education (and earnings inequalities) seems not to have changed. According to the authors, in many countries like the UK and the US, the increasing demand for skilled labor and the increase in the return to education are the major factors underlying widening inequalities. Barrett et al. [2000] concluded that in Ireland an important reason for the return to education and earnings inequalities remaining unchanged – despite the increasing demand for skilled labor – was the large inflow of skilled workers into the Irish labour market in the 1990s.

Nolan-Russel [2001] reports on the recent trends in gender wage gap. The female-male hourly wage ratio has risen from 80.1% in 1987 to 84.5% in 1997. According to EUROSTAT this ratio has increased further to 85% in 2002. Besides these ratios, what is more meaningful is that part of the wage gap that we cannot explain by different individual characteristics therefore we attribute it (at least partially) to discrimination. Nolan-Russel [2001] say that in the '90s the unexplained part of the gap severely reduced (from around 50 to 26%), that means that the difference among men and woman are mainly due to difference in their important individual characteristics, especially more years out-of-the labor market and less experience.

As we mentioned above, regarding the distribution of total household disposable income, Ireland was characterized by relatively high and stable inequalities. In 2004, the Gini coefficient[27] for the population as a whole was around 0.32, (see Table A2) which is higher than the EU average (0.3), but very similar to the coefficients in the southern European cohesion countries as well as in the UK.

The P90/P10 index[28] (Table A3) and the other indicators of income distribution (like S80/S20, see Table A4) are also in line with the Gini coefficient. In 2004, just like in 1995, the ratio of the average disposable income of the top to bottom quintiles (S80/S20) stood at about 5, which is among the highest in Europe. Table A5 shows the OECD estimates of the change in income distribution after 1987. While the S80/S20 index remained unchanged, the shares of both quintiles declined as the share of the middle income groups increased. Moreover, Nolan-Maitre [2000] have shown that it were mainly the upper-middle income groups (6-8 deciles) whose income increased the most in the '990s (see Table 5. below). However, these changes are not major ones, and it might be the case that they do not represent any long-run transformation in the distribution of income. Furthermore, as Table A5 shows, during the 1990s the share of earnings of the bottom quintile rose significantly, but this increase is not evident in the disposable income of households.

[27] The Gini coefficient is defined as the area between the Lorenz curve of incomes and the 45°-line, taken as a ratio of the whole triangle. The coefficient ranges between 0 (perfect equality) and 1 (perfect inequality).

[28] The P90/P10 decile ratio is calculated as the ratio of the upper bound value of the ninth income decile to the upper bound value of the first income decile.

Table 5: Decile Shares in Equivalised Disposable Income Among Households, (%)

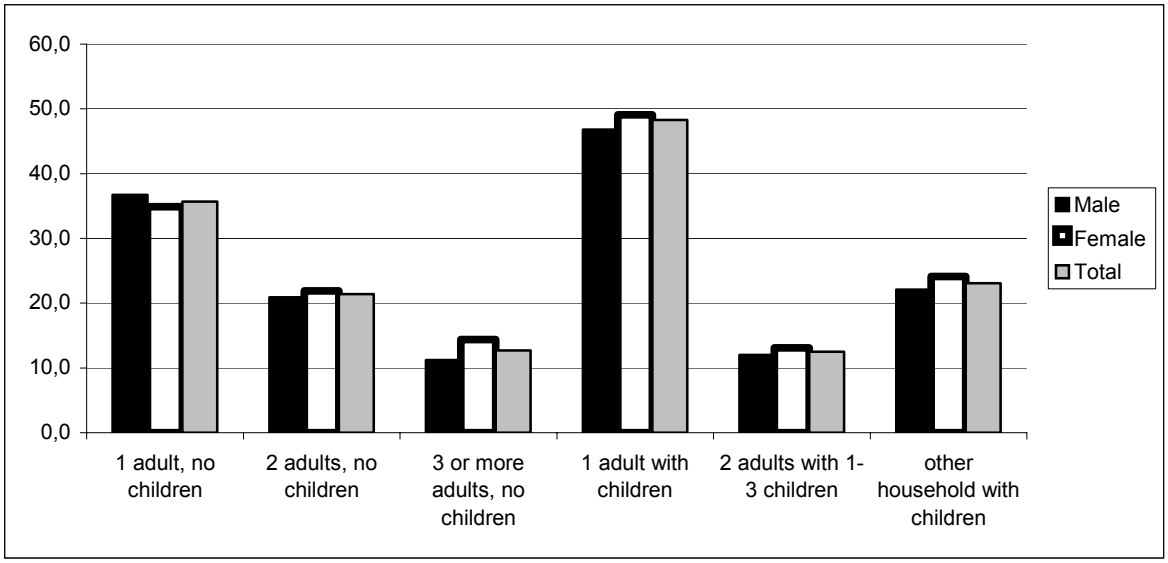
	1987	1994	1997
Bottom quintile	7.7	8.4	8.1
3-5 deciles	19.8	18.7	18.7
6-8 deciles	30.8	31.4	32.2
Top quintile	41.7	41.4	41.1
S80/S20	5.4	4.9	5.1

Source: Own calculation after Nolan-Maitre [2000]

So far as the risk of social exclusion is concerned, different thresholds are used to determine the relative number of people with income below a critical level. The most commonly used threshold indicates that almost a one-fifth of the population had income below 60% of the national median and therefore were at risk of poverty in 2004. (see Table A6) It is also evident from this table that social transfers reduce the proportion in poverty by slightly more than the EU average, but leave the poverty rate well above the average.

Data from the Central Statistics Office of Ireland (henceforth CSO [2005]) enable a breakdown by type of household to be made. Fig. 10 show that members of lone parent households (with a poverty rate of 48%), and those living alone (36%) are most at risk.

Fig. 10: The effect of household composition on poverty rate (households where the equivalised income is less than 60% of median at an individualised level, after social transfers, 2004)



Source: CSO[2005]

In the CSO study also includes different indicators of deprivation. They report that among households at risk of poverty, households with children had higher deprivation rates than those without. Lone parent households experienced the greatest deprivation, almost two-thirds of

those at risk of poverty experiencing deprivation according to at least one of the eight basic indicators used.

Sweden

To many people, Sweden is one of the most equal societies in Europe where, in addition, the average standard of living is also perceived to be exceptionally high in international terms. Cohen et al. [2002, p. viii] assert that at the beginning of the twentieth century the extent of Swedish inequality was not at all different from that of other European countries and so raises the question whether this equality has been attained by the different fundamentals of the society or by the special institutes, i.e. the so called Scandinavian type welfare state reforms. Roine-Waldenström [2006] argues that it is due to the egalitarian society as most of the reduction in inequalities occurred before the 1950s, the expansion of welfare state reforms. The authors claim that the reduction of income inequalities were first due to the fall in capital incomes of the richest and to the wage compression favouring the less rich.

In the first part of the '90s Sweden went through a severe economic recession. Between 1991-1993 the real GDP growth was negative, the unemployment rose from 1.6 to 8.2%, and got stuck at around 8% until 1997, when Swedish labor participation started to increase again, and the unemployment rate decreased to around 4%. Holmlund [2003] found that the major factors for the severe recession and the amazing recovery were mainly domestic and foreign origin macroeconomic shocks. But how did the inequalities change in this economic circumstance? After several decades of wage compression wage inequality in Sweden started to increase in the mid 1980s. The increase was only modest – from 2,21 P90/P10 ratio to 2,26 – between 1986 and 1995, but accelerated after that, and by the year 2000 the attained 2,38.

One important aspect of the wage distribution is inequality by education level. During the recession years the return on different levels of education unevenly reduced according to the Mincer-type OLS estimates of Gustavsson [2004] from the period 1992-2001. In Table 7 we can see that in the whole period, after controlling for potential experience, gender and immigrant status,[29] the university wage premium started to increase after 1997, while the gymnasium wage premium remained unchanged. In line with the international trends, the expansion of university students reduced the wage premium of the skilled in the '70s. The modest increase in the '80s, according to Gustavsson [2004], can also be fairly explained by changes in relative labor supply of the higher educated. In contrast, he found that the main trends in the past 15 years was rather due to changes in labor demand, that on the whole caused widening earning inequalities among those with different levels of education.

[29] Among population of age between 20 and 64.

Table 6: Return on different levels of education (percentage difference compared to primary school) in Sweden, 1992-2001*

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
2-year gymnasium (~vocational)	4.8	5.2	5.1	4.4	3.7	3.4	4.0	4.4	4.1	3.7
3-year gymnasium	14.1	15.0	15.0	13.9	12.9	12.0	13.1	13.9	13.3	13.2
Some university (one or two years)	17.9	19.1	18.6	17.8	16.9	17.4	20.2	22.5	22.8	23.6
University	32.3	34.4	33.7	32.6	32.1	32.4	34.5	37.0	37.1	38.3
Doctorate	49.0	53.1	50.9	49.8	49.9	50.8	52.0	58.3	58.7	59.6

Source: Gustavsson [2004]

* OLS log(wage) equations; after controlling for potential experience, its square, gender and immigrant status

Another important aspect of labor market inequality is gender inequality in employment and wages. Sweden is famous for its gender equality measured in employment gap. Although the difference of the employment rates of men and women is steadily around 3%[30] and in international comparison Swedish women have the largest, 86% probability of labor force participation , the Swedish gender (log)wage gap[31] is not by far among the lowest with its 25 per cent (Mandel-Semyonov [2005]). Authors claim that this is implied by the fact that woman employment is enhanced by the state, hence women are more likely to be employed in low-wage social and public sector jobs (e.g. teachers, nurses).[32] This kind of inequality is not necessary undesirable (in case that women choose these kind of jobs to maximize their utility reflecting their preferences, in order to accommodate work and family/maternity, which is the case according to Mandel-Semyonov [2005]). On the contrary, however, if women are forced into this choice (if they have no other choice because of childbearing or if there exists labor market discrimination against them), it is a field where the state might intervene. This latter is the reason for introducing parental leave with daddy's months in Sweden. (See Andersson-Duvander [2005])

Table 7: Inequality of the distribution of household disposable income in Sweden, 1980s-2004

		Capital gains included				Capital gains excluded			
	Mid '80s	1991	1995	2000	2004	1991	1995	2000	2004
Gini coefficient	19.8	22,6	22,7	29,4	25,8	20.8	21.3	24.0	23.1
P90/P10	2.4	2.49	2.50	2.86	2.75	2.45	2.46	2.69	2.68
S80/S20	3.38	3.09	3,17	4,15	3,63	2.88	2.95	3.34	3.24

Source: OECD [2005], SCB [2006a]

[30] 75 vs. 71.8% in favor of men. (SCB [2006b])

[31] Among population of age between 25 and 60, after controlling for age, education, marrital status and weekly working hours.

[32] Surprisingly, the secret of the low employment gap in Sweden does not lie in part-time but rather in the above mentioned low-wage though full time employment. Part-time employment ratio is not that much higher in the Nordic country (16% among total population and 25% among women aged between 15 and 64) than in the EU (11.6% among total population and 18.8% among women aged between 15 and 64). (EUROSTAT-LFS [2003])

Table 7 shows the basic tendencies of inequalities in household disposable income in Sweden during the past twenty years. The effects became clearly evident in the second half of the decade, and by 2000, the inequality indices had grown near to those of continental Europe. As it can be seen the increase in inequality is much slower when capital gains are excluded, thus it seems that the temporary increase in inequalities at the end of the '90s (see Table 6) was mostly caused by profitable investments. (Roine–Waldenström [2006])

Table 8: Relative disposable income in Sweden, by age groups

	Age 0–17	Age 18–25	Age 26–40	Age 41–50	Age 50–65	Age 66–75	Age 76–
2000	98.3	91.7	99.1	111.8	125.3	88.3	68.6
Change 1983–1995	–2.2	–10.5	–4.7	0.8	7.7	5.8	8.8
Change 1995–2000	2.9	0.7	1.4	–2.8	2.9	–5.0	–7.5

Source: OECD [2006]

Through unemployment and reduced family allowances, it was the relatively young, active population, and indirectly their dependent children, who were struck by the recession the most in the first ten years. Table 7 shows that the relative income of the young decreased substantially from 1983–1995 and this decline passed through onto the elderly by 2000. (These changes in the relative incomes can not be explained by the changes in the population shares of the age groups. [OECD, 2005]) The relative improvement in the situation of the young is due to the recovery of the labor market[33] and the active and harmonized family and gender policy of the state.

According to data, the Swedish state plays the biggest role in the income redistribution among EU25 countries, taking the before and after social transfer poverty rates into account. According to EUROSTAT, the before transfer poverty rate in Sweden was 43%[34] in 2004 (30% with pensions), which is among the highest in Europe, while the after transfer poverty rate was only 11%. The two-earner model is encouraged not just to make it possible for women to accommodate childbearing and career, as mentioned above, but it is also a priority not to let into poverty a divorced mother and her child; in other words, to secure financial independence for both of the parents. This policy is partly apparent from the data of Table 9: the poverty rate, measured as the percentage of population below the 50% of the median income, is a bit lower for singles with child than for singles without child, though if we raise the threshold to 60% of the median, this turns to a serious disadvantage for single child bearers.[35] There is little difference between the poverty rates of cohabiting couples with no, one or two children, and if we assess the poverty threshold as 50% of the median income, even bearing three children

[33] While the unemployment rate was 1.6% in 1990, it evolved to 7.7 by 1995. It fell back to 4.7 per cent by 2000 and stagnates (fluctuates somewhere around) ever since. In 2004, it was 5.5 per cent. (SCB [2006b])

[34] %age of the population with less then 60% of the median income.

[35] These data also tell us about the recession of the last decade of the twentieth century, as poverty rates of singles with child caught up with and passed those of without child in the late '90s.

seems to make no significant difference. If the threshold is 60%, however, even the Swedish poverty rates of three-child couples jumps up, which in 2004 meant that one fifth of large families dispose of less than 60% of the median income. From Table 9, we can also see that childbearers, particularly couples with three or more children were struck the most (beyond average) by the recession of the '90s. It might be true that the incomes of this latter group increased the most (a bit beyond average) in the past 5 years but neither this increase can offset their threateningly growing poverty rate of 12.2%.

Table 9: Poverty rate (percentage of population above 20 years of age below the 50 and 60% of the median income) in Sweden, 1991-2004

	Below 50%				Below 60%			
	1991	1995	2000	2004	1991	1995	2000	2004
Total population	3.1	3.6	4.4	4.2	7.1	6.5	8.5	8.5
Single without child	5.8	6.4	7.6	7.3	13.5	10.4	15.1	14.7
Single with child	5.1	5.3	8.3	6.9	11.1	12.2	15.8	20
Cohabiting without child	1.8	2.2	2.5	2.4	3.9	4.4	4.7	4.6
Cohabiting with 1 child	1.7	2.5	2.6	3.9	3.1	5	5	6.6
Cohabiting with 2 children	2.2	2	3	2.8	4.3	5.4	6.1	5.4
Cohabiting with 3 or more children	4.7	5.6	5	6.4	10.2	11.4	11.3	12.2
Population above 65 years of age	3.3	1.8	3.8	2.8	12.3	5.1	11	8.3

Source: SCB [2006a]

The two-earner model is encouraged not just to make it possible for women to accommodate childbearing and career, as mentioned above, but it is also a priority not to let into poverty a divorced mother and her child; in other words, to secure financial independence for both of the parents. This policy is partly apparent from the data of Table 9: the poverty rate, measured as the percentage of population below the 60% of the median income (after social transfers), is a bit lower for singles with child than for the total number of singles. There is little difference between the poverty rates of cohabiting couples with one or two children. From Table 9, we can also see that childbearers, particularly couples with three or more children were struck the most (beyond average) by the recession of the '90s. It might be true that the incomes of this latter group increased the most (a bit beyond average) in the past 5 years but neither this increase can offset their threateningly growing poverty rate of 14%.

Table 10: The share of persons with an equivalised disposable income below 60% of the national median equivalised disposable income (after social transfers) in Sweden, %

	1997	1999	2001	2002	2004
Total population	8	8	9	..	..
Single	..	..	21	25	23
Single with dependent child	..	..	13	22	19
Cohabiting under 65 years of age			4	2	6
Cohabiting at least one over 65 years of age			6	5	6
Cohabiting with 1 child	..	..	5	5	8
Cohabiting with 2 children	..	..	4	4	5
Cohabiting with 3 or more children	..	..	8	12	14
One adult above 65 years of age	..	..	27	27	24
Population above 65 years of age	..	..	16	15	14

Note: In 2002, there was a break in series.

Source: EUROSTAT

In Table 8 we have already seen that in 2000 population above 65 years of age disposed of only 70-90% of the median income. A piece of bad news appears again in Table 9: the poverty rates defined above are approximately twice as much higher than among the total population. In addition, single people of this age group are the social group among whom the poverty ratio is the highest in Swedish society.

Although in Table 8 we saw that in 2000 population above 65 years of age disposed of only 70-90% of the median income, the good news is that poverty rates defined above are not anymore significantly higher than among the total population and also, this is the only social group whose disposable income has been continuously rising during the past one and the half decade.

Spain

Spain is a Mediterranean country where, stereotypically, the participation rate in the labour force has been historically low reflecting traditional values and the role expected of women of taking care of the family. Things have changed dramatically over the past decades of EU membership, however, as GDP per head in Spain has coinverged towards the EU average and employment has risen markedly. Participation in the labour force and employment rates have both increased along with growth rates of GDP (see Table 12 and 13).

Table 12: Growth of real GDP in Spain, 1997-2005 (%)

1997	1998	1999	2000	2001	2002	2003	2004	2005
3.9	4.5	4.7	5.0	3.6	2.7	3.0	3.2	3.5

Source: EUROSTAT

The cohesion country inherited a greatly regulated economy from the Franco era and the industrial crisis after the oil price explosion called the attention to the need of accession to the European Community (legal predecessor of European Union). Structural reforms required and supported by the Community resulted in peak economic growth in the '80s, until Spain experienced a recession around 1992. The recovery restarted with the reforms of the Aznar administration and up until now, the country has managed to make up quite a big part of its leeway from the Union. This closing-up process was not only due to EU-subsidies; luckily, those and the increasing labor demand induced by the inflow of FDI coincided with a great volume of labor force reserves. Henceforth, Spain experienced a miraculous growth in employment and however, it used to be the country bearing the largest unemployment, it was successful to cut this back. So that in 2005 the latter index was just above the EU-average (8.8 %).

Table 13: Employment and unemployment rates in Spain, 1995-2005 (%)

		1995	2000	2005
Total	Employment rate	46.9	56.3	63.3
	Unemployment rate	18.4	11.1	9.2
Women	Employment rate	31.7	41.3	51.2
	Unemployment rate	24.6	16	12.2
Men	Employment rate	62.5	71.2	75.2
	Unemployment rate	14.8	7.9	7.0

Source: EUROSTAT

The total employment rate equals exactly with the EU-average, which, on the one hand is good news, as it signals somewhat the competitiveness of the country, while on the other hand it is bad news, as severe (but also improving) inequalities hide behind this satisfying and dynamically increasing index.

Table 14: Labour participation rate by education and gender in Spain, 2002 (%)

	Less than secondary school	Secondary school	Tertiary education	Total
Men	83.5	90.9	91.9	72.6
Women	42.3	67.6	83.1	44.4

Source: de la Rica et al. [2006], EUROSTAT

Table 13 points at two of these at once: gender and education. Although the educational gap alone is not very serious[36] as we can see from the data of men, it is magnified by the gender dimension: the participation rate of the least educated women is hardly larger than half of the most educated or half of the men with the same education. The gender employment gap is 8-9 percent wider than the EU-average, and however the great change in the total level must be acknowledged, it must be admitted as well that the gender gap has not narrowed significantly so far. (In 1994 the female and male employment rates were 30.7 vs. 61.8 percent, while in 2005 they happened to be 51.2 vs.75.2 percent.[37]) This phenomenon might be related to traditional gender and family roles and at the same time to education as well. The question whether this extremely low rate of employment of low educated women reflects the preferences of these people or it tells us about the scarce opportunities, or possibly about discrimination needs further analysis. The fact that gender inequality also reflects in wages suggests – in a

[36] The huge increase in Spanish employment shows that the growth is driven by labor intensive industries and we must also call the attention to the fact that Spain is one of the countries where the participation rate among the lower educated is the highest (around 50 percent). However, this is good news, it can result in serious problems: if Spain does not improve the level of education among the population in parallel, with labor costs increasing along with the development, substitution between labor and capital may start leaving masses without job.

[37] The slowly decreasing gender gap data suggest that female employment grew at a higher rate than that of men. This may be due to a structural realignment along the develpment among sectors (e.g. towards light industries typically employing female labor force, or health and education – typically low-wage sectors). This fact, however, together with the significant gender wage gap, might suggest a considerable occupational segregation between sexes.

non-decreasing way – that it is not only the differing preferences of women which cause such a big inequity.[38]

As far as the inequality of the wage distribution is concerned the evolution followed an inverted U-shape form in the past two decades. Between 1980 and 1995 inequalities of wages were increasing and the major driving force was the increase of returns to education (Pereira and Martins [2004]). Researchers attribute growing returns to education to technological development in all sectors of the economy. Fast technological development brought about a depreciation of existing stock of human capital, and the demand for skilled labour with up-to-date knowledge increased. In the short run even increasing supply of educated labour was not able to match growing demand and therefore technological development was accompanied by rapidly rising returns to education and increase in unemployment of the unskilled. From the middle of the nineties inequalities have slightly started to fall (Budria, S. – Moro-Egido [2004], Izquierdo-Lacuesta [2006]). Extensive labor market regulations and wage compression in the middle of the wage distribution have had their impact. Returns to education have decreased and the depreciation of out-of-date human capital have continued. (Izquierdo-Lacuesta [2006]). Researchers interpret this process as consequence of rapidly increasing supply of educated labor which even exceeded the rate of growth of demand for skilled labor (Budria, S. – Moro-Egido [2004]).

Thus tendencies of increasing wage inequality between 1980 and 1995 turned somewhat back from the middle of the nineties until 2002. No such change has taken place in the evolution of inequality of household disposable income. Inequalities in household DPI were decreasing from 1980 to 1995 (Jimeno et al. [2000]) and continued to fall afterwards. The quintile share of disposable income fell gradually but continuously from its 1997 value of 6.5 to 5.1 by 2004. (EUROSTAT). This can be regarded partly as the evidence of within-family wage inequalities, and is partly supposed to be due to the articulation of a welfare state close to meeting European standards at that time (increased social expenditure, e.g. unemployment benefits) (Jimeno et al. [2000], Oliver-Alonso [2001]).

Discussing inequality some words about poverty should definitely be raised. Especially as the unpleasant news is that however inequalities have eased somewhat, this has not passed through to poverty yet, moreover the last data from 2004 raise the possibility of a new upward movement. The poverty rate (shown in Table 15) stagnates; the ratio of population below the 60 percent of the median income stabilized around 20 percent.

[38] Gender pay gap given as the difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees followed the path below:

1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
10	13	14	14	16	14	15	17	21	18	15

The population consists of all paid employees aged 16-64 that are 'at work 15+ hours per week'.

Source: EUROSTAT

Table 15: Poverty rate (percentage of population below the 60 percent of the median income) in Spain, 1995-2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total (before public transfers)	27	26	27	25	23	22	23	22	22	25
Total (after public transfers)	19	18	20	18	19	18	19	19	19	20
...-15	24	23	26	24	25	25	26	21	19	24
16-24	22	22	25	21	23	20	20	20	21	19
25-49	17	16	19	17	17	14	15	15	14	16
50-64	18	17	18	16	17	17	17	17	16	17
65-...	16	14	16	15	16	19	22	28	28	30
Single	15	12	12	12	14	20	31	38	34	39
single parent with dependent children	37	32	29	38	53	57	42	32	24	40
two adults+1 child	14	14	15	15	15	16	18	12	12	14
two adults+2 child	17	17	21	19	20	20	23	19	14	24
Two adults+ at least 3 child	31	34	31	30	32	35	34	38	35	39
households with dependent children	22	21	24	21	22	21	22	19	18	23

Source: EUROSTAT

Having a look at the two kinds of total poverty rates in the first two rows of Table 15, we capture evidence on the role of welfare measures. We can see that redistributive transfers reduce poverty substantially, though the degree is intensively decreasing. The decrease might signal the inefficiency of the transfers (it is not the most in need who benefit from them) or a new wave of general draw back of the welfare system.

Poverty rates by different dimensions show a quite typical picture: the young the old and large families are the masses significantly above the average poverty rate. What is striking is that it is almost exactly these groups whose situation draws a negative tendency. The case of the elderly seems evident in the light of the above mentioned depreciating human capital and being aware of the crisis of almost all pension systems. The situation of the young (children under 15) and the big families hang together and call the attention to a targeted family policy.

HUNGARY

To understand the relationship between growth and inequalities in Hungary, there is a need to adopt a long-term perspective. Starting from the beginning of the 1960s, the share of GDP going to households, that is, per capita disposable income, showed a rapid increase in real terms between 1962 and 1972 (Fig. 11). Since it was considered possible to protect the economy from the effects of the downturn in the world economy from 1973 on, structural adjustments were delayed, allowing real incomes to grow further between 1972 and 1982 and even up to 1987, when recession began. Growth was maintained at the expense of a serious build-up in foreign indebtedness and macroeconomic imbalances were already significant when political reforms started in 1989-90.As a consequence, the unavoidable recession (Kornai [1994]) resulting from structural adjustment, the collapse of trade and the implementation of institutional reforms was deeper than expected. The first freely elected government in 1990

chose a combined strategy of radicalism and gradualism. Radical strategies in economic restructuring (relatively fast privatisation policies, stringent bankruptcy laws and fairly quick withdrawal of the state from economic intervention) were accompanied by gradual and sometimes hesitant social policy reforms (slow adjustment of pensions and health policies, the extension of social benefits to a rapidly growing number of people rather than concentrating them on the most needy). An austerity package to correct macroeconomic imbalances had to wait until 1995, implemented by the (then) socialist government. (Bokros and Dethier [1998]). This package, comprising currency devaluation and some real and symbolic social expenditure cuts, however, led to a reduction in inflation t, resulting in a further sharp decline in real incomes in the mid-1990s. As economic stagnation (rather than a contraction) had already begun in 1993, this austerity package opened the way to relatively strong economic growth between 1998 and 2001. This was further boosted by pro-growth and pro-employment policies of the (then) conservative government. In terms of social policy, this period was characterised by tax-based incentives rather than cash handouts, a strengthening of state pension and health policies rather than further privatisation and cuts in social expenditure.

In general, trends in income dispersion (as measured by the ratio of the per capita income of the top decile to the bottom) can be divided into distinct periods. Between 1962 and 1982, there was a declining general trend in income inequality, with a temporary jump in 1972. (perhaps attributable to some short-lived economic reforms at the end of the 1960s) This trend may be a result of economic growth, accompanied by continuous efforts of communist governments to present their success in achieving basic commitments to equality. However, this must be understood within the context of supply shortages, the relatively small role of money in social inequalities, a high level of benefits and services provided in kind, with all sorts of rationing having questionable and controversial effects on overall inequality. As mounting foreign debt imposed pressure on the governments around 1980, some economic liberalisation started at that time. New forms of private incentives were allowed (while not affecting the basic economic structure), a gradual withdrawal of in-kind provisions started and these together led to an increasing trend in inequality between 1982 and 1987. A relatively large widening of income dispersion took place between 1987 and 1992, followed by a smaller increase between 1992 and 1996 and a levelling off between 1996 and 2001.

It is also interesting to look at changes in inequality, employment and real incomes over different periods (Fig. 12.). The changes in the activity rate and in real income show a very similar pattern. Increasing employment is always paralleled by growing real income and vice versa. The actual rate of increase or decrease may be different but the general direction is the same. Analysis of trends in income distribution, however, requires more consideration. There are periods, when real incomes and activity rates both increased but income dispersion

narrowed (between 1962–1967 and 1972–1977). In other periods employment, real incomes and inequalities all rose (1967–1972 and 1996–2001), and there is a period of declining inequality and employment in the context of a general (though slowing) increase in real incomes. However, between 1982 and 2001, the trends seem to be more clear-cut: the larger the reduction in employment and real incomes, the greater the increase in income inequality, while recovery of real income and employment growth was accompanied by a moderation of increases in income inequality.

Fig. 11. Employment, real incomes and dispersion of incomes, 1962-2001, %

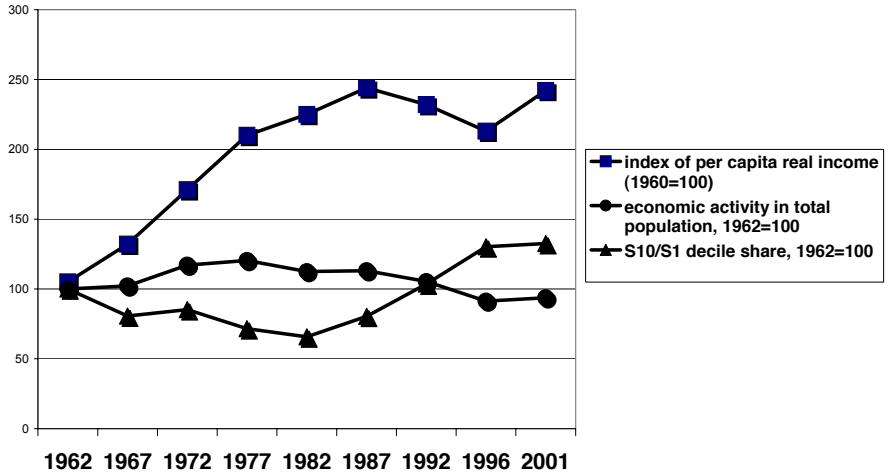
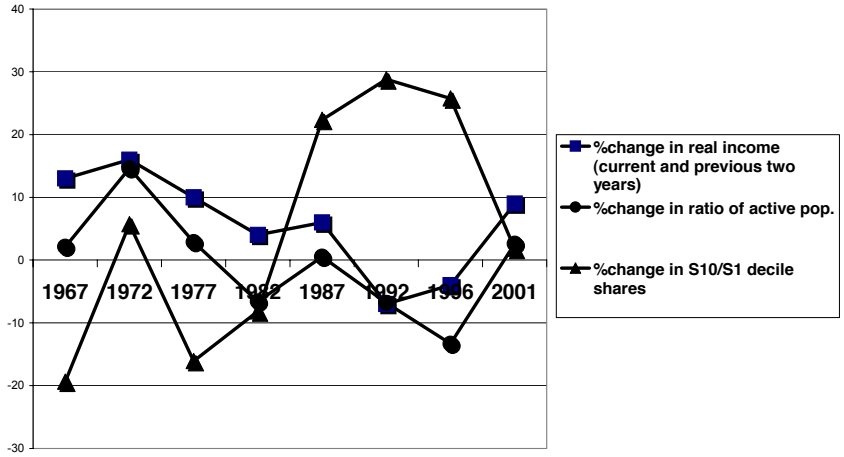


Fig. 12. Change in employment, real incomes and dispersion of incomes, 1962-2001, 1962=100



Source: for employment and real incomes: Statistical Yearbook for inequality: 1962-1982: Atkinson-Micklewright ([1992. Table HI1]), 1987: CSO Income Survey, 1992 and 1996: Hungarian Household Panel (B), 2001: TÁRKI Household Monitor, own computations

Table 6. Selective inequality measures of personal distribution of per capita household incomes in Hungary 1987-2005

	1987	1992	1996	2000	2003	2005
Selected inequality measures						
P10	61	60	48	51	49	51
P90	173	183	191	193	192	192
P90/P10	2.81	3.07	3.95	3.78	3.90	3.78
S1	4.5	3.8	3.2	3.3	3.2	3.3
S5+S6	17.9	17.4	17.5	17.3	17.1	17.1
S10	20.9	22.7	24.3	24.8	25.7	25.1
S10/S1	4.6	6.0	7.5	7.6	8.1	7.6
Robin Hood index	17.0	18.5	20.7	21.2	21.8	21.4
Gini	0.244	0.266	0.300	0.306	0.316	0.308
Memo: overall average, Fts	5262	9587	17627	32517	53900	63117
N	56459	5538	4972	5253	5909	5209

Source: 1987: KSH Income distribution survey. 1992, 1996: HHP (B), 2000, 2003, 2005: TÁRKI Household Monitor surveys. Between 1992 and 2005: date refers to year of fieldwork. Reference period for incomes: April of previous year to March of current year between 1992 and 2000, October-September in 2003 and 2005.

From examining the various inequality measures, several periods of the long Hungarian transition can be distinguished.

From 1982 to 1987, all measures of inequality measures showed a widening dispersion. The ratio of the top decile of per capita household income to the bottom increased from 3.8 to 4.6, followed by a further and larger increase to 6.0 by 1992 (Table 6). This latter period is very important in the history of the Hungarian transition. The introduction of new company laws and the installation of a completely new tax system in 1988 marked a real take off of the competitive market economy. “Spontaneous” privatisation and management buyouts between 1987 and 1990 were followed by a larger scale, government initiated and (to the extent possible) state controlled privatisation process starting from 1991, with massive sell-outs of the remains of state enterprises (resulting in a large inflow of FDI into the country during the 1990s). The price for the increase in efficiency was massive job destruction throughout the economy: over a quarter of all jobs were lost in just a few years between 1987 and 1992.

The widening of income dispersion (despite government efforts to spread the costs of the transition over the whole of society) continued between 1992 and 1996, with a further increase in the ratio between the top and bottom deciles of per capita income (to 7.5) and in the Gini coefficient (from 26.6% in 1992 to 30% in 1996). The widening of income dispersion and the increase in the poverty rate in this period can partly be linked to the austerity package the government introduced in early 1995. Currency devaluation ,and cuts in social expenditure led to a sharp deterioration in the relative position of the poorest sections of society (the bottom decile, P10, declining from 60% to 48% of the median, see Table 1), while the relative position

of the top decile improved (P90 up to 183% of the median in 1992 and to 191% by 1996 from 173% in 1987) .

While, in general, substantial changes have occurred in many respects in the country, overall inequality measures have shown slight changes only between the mid-1990s and 2005. As estimates from alternative income surveys show, the ratio of the top to the bottom decile of per capita income was maintained at 7.5 in 2005.

Conclusion

The purpose of the case studies presented here is to complement the general analysis of inequalities in income distribution across Europe.

In Ireland, where formerly income inequality was among the highest in Europe, the high rate of economic growth since the mnid-1990s has been accompanied by little change in inequality. A key question now is whether greater attention will be paid to social issues and to reducing inequality and, if so, whether this will adversely affect economic performance.[39]

Hungary is a case of rapid transition from a centrally planned economy to a market economy. During this transition income inequality increased significantly. A first period witnessed a dramatic transition in the labour market (a fall in employment rates and polarisation of employment possibilities), a second period a radical revaluation of skills and competencies. As a result, the returns to higher education increased and this, together with a differential expansion of the education system, led to a revaluation of educational attainment levels in terms of the income gained from different occupations. In addition, the social benefit system had an important effect in different periods on income inequalities.

[39] The possibility of the reverse relationship, i.e. social equality having a positive effect on economic performance, and there being an endogenous relationship between the two rather than a trade-off might also be an interesting topic to research.

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Appendix

Table A1: GDP per capita index compared to the EU-25 average, 1997-2005

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Hungary	49.5	50.7	51.8	54.0	56.9	59.1	60.1	60.9	61.4
Ireland	111.7	116.3	122.1	126.3	128.5	132.3	133.7	135.8	137.5
Spain	87.0	88.6	92.3	92.3	93.2	95.2	97.4	97.7	98.6
Sweden	114.6	113.6	118.0	119.0	115.2	113.6	115.6	116.8	114.4
EU-25	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: EUROSTAT

Table A2: Gini coefficients, 1995-2004, %

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Hungary	..	..	..	..	..	26	25	24	27	..
Ireland	33	..	33	34	32	30	29	..	31	32
Spain	34	34	35	34	33	32	33	31	31	31
Sweden	..	..	21	..	22	..	24	23	..	23
EU-25	..	..	..	29	29	29	29	..	29	30

Source: EUROSTAT

Table A3: P90/P10 ratios, Mid 70s-2000

	Absolute levels in 2000	Changes in the absolute values		
		Mid-70s to Mid 80s	Mid-80s to Mid 90s	Mid-90s to 2000
Hungary	3.6	..	0.3	0.1
Ireland	4.4	..	-0.1	0.3
Spain	..	..	-0.8	..
Sweden	2.8	-0.2	-0.2	0.3

Source: Förster-d'Ercole [2005]

Table A4: S80/S20 ratios, 1995-2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Hungary	..	..	..	..	..	3,3	3,1	3,0	3,3	..
Ireland	5.1	5.1	5.0	5.2	4.9	4.7	4.5	..	5.1	5.0
Spain	5.9	6.0	6.5	5.9	5.7	5.4	5.5	5.1	5.1	5.1
Sweden	..	..	3.0	..	3.0	..	3.4	3.3	..	3.3
EU-25	..	..	..	4.6	4.6	4.5	4.5	..	4.6	4.8

Source: EUROSTAT

Table A5: Changes in income share ratios in earnings and in disposable income, Mid 80s-2000

	Earnings			Disposable income		
	Bottom quintile	Six middle deciles	Top quintile	Bottom quintile	Six middle deciles	Top quintile
Hungary, 2000	3.9	50.0	46.1	8.9	52.6	38.5
change, 1984-1994	..	..	..	..	..	..
change, 1994-2000	0.7	0.2	-0.9	0.2	0.3	-0.5
Ireland, 2000	3.1	57.4	39.5	7.5	56.2	36.2
change, 1987-1994	0.0	0.3	-0.3	0.7	0.5	-1.2
change, 1994-2000	1.3	3.8	-5.1	-0.2	3.5	-3.2
Sweden, 2000	5.0	56.0	39.1	9.8	56.2	34.1
change, 1983-1995	-0.3	-1.4	1.6	1.2	-1.6	0.4
change, 1995-2000	-0.3	-0.6	0.9	-0.8	-1.1	1.9

Source: Förster-d'Ercole [2005] except Hungary. Hungarian Data are from TARKI Hungarian Household Panel (1995) and Household Monitor (2000) surveys.

Table A6: Poverty rate (population with equivalised income of less than 60% of the median, before and after social transfers, 1995-2004)

	Before transfers*			After transfers		
	2004	2000	1995	2004	2000	1995
Hungary	17	17	..	12	11	..
Ireland	33	31	34	21	20	19
Spain	25	22	27	20	18	19
Sweden	30	..	..	11	..	..
EU-25	26	23	..	16	16	..

Source: EUROSTAT

For Hungary most recent data are from 2003.

* Before all other transfers than pensions

5. THE EFFECT OF TAXES AND BENEFITS ON INCOME DISTRIBUTION IN THE EU[40]

One of the main ways in which governments can influence income distribution is through the system of cash benefits and personal taxes. Taxes tend to be progressive in the sense that people with higher incomes pay a higher proportion in tax. Benefits may be targeted on the poor, or even if flat rate will narrow the proportional difference between the incomes of the rich and the poor. When benefits are paid to people in particular circumstances these tend to be those that are correlated with low income or greater needs (such as childhood, disability, unemployment etc). As was pointed out in the Annual Report of the Social Inclusion and Income Distribution Network for 2005 (Chapter 6), the scale of this redistribution varies significantly across countries, depending not only on the extent of social security arrangements and the total personal tax burden but also on how benefits are targeted and the progressivity of the tax and contribution systems.

The intention is to extend the analysis included in the 2005 Report to examine in more detail, first, the distribution of income before taxes and benefits for the EU15 Member States (since the EUROMOD model of household income on which the analysis is based at present covers only these countries). Selected results are also provided for Hungary and Poland using national tax-benefit models.[41] Secondly, the effect of taxes and benefits in transferring income to and from households with varying levels of original is analysed to bring out the nature of the redistributive process in different countries.

Variations in the distribution of original income

The distribution of in pre-tax and pre-benefit income (here referred to as "original" income) and the extent of inequality between households in these terms varies across countries in the EU as much as taxes and benefits[42]. Measured using the Gini co-efficient the EU-15 countries with the lowest original income inequality in 2001 are the Netherlands (0.39), Sweden (0.44) and Austria (0.44). See Figure 6.1, where the original income Gini is indicated by a blue square. The countries with the greatest original income inequality are Ireland (0.52), Portugal (0.51) and

[40] Holly Sutherland, Horacio Levy and Alari Paulus, Institute for Social and Economic Research, University of Essex

[41] Simulations for Hungary and Poland were undertaken, respectively, by Tarki using the microsimulation model TARSZIM2005 (developed by TARKI for the Hungarian Ministry of Finance and Ministry of Social Affaires) and by Olivier Bargain using the Polish microsimulation model, SIMPL (described in Bargain, Morawski, Myck and Socha (2006)).

[42] Estimates of the distribution of original income and of the incidence of benefits and taxes on income of differing levels presented here are derived, as noted above, from the EUROMOD model of household income described in the annex.

the UK (0.50). (These calculations ignore cases of zero household income which are quite prevalent, especially among the elderly in countries with pension systems mainly organised through the public sector, and here counted as benefits rather than original incomes. The 2005 report considered the role of public pensions in some detail. In this report we consider further how to assess inequality of incomes, taking account of those starting with no original income at all.)

Throughout the analysis, "original income" refers to income before taxes are deducted or cash benefits added. It includes earnings from employment, income from self-employment, income from capital, private pension income and transfers from other households (such as alimony and child maintenance). "Gross income" is original income plus cash benefits and "disposable income" is gross income less taxes. "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. "Benefits" include all the main cash benefits and public pensions received by households.

Variations in the equalising effects of taxes and benefits

In order for countries with high inequality before taxes and benefits to achieve low inequality of disposable income, the tax and benefit systems must "work harder" than in countries that start with low inequality. Figure 6.1 shows the contribution of first, benefits and secondly, taxes to reducing inequality, measured as the lowering of the Gini coefficient. Gross income inequality – that is, income after taking account of benefits – is always substantially lower than original income inequality due to benefits having an equalising effect on incomes. Benefits have the most powerful effect in France and Luxembourg (with Ginis falling by 0.18 and 0.17 respectively) and the weakest effect in this respect in Portugal and the Netherlands (with both Ginis falling by 0.10). The contribution of income taxes (and social contributions) to reducing inequality measured in this way is in every country smaller than the contribution of benefits, but is always positive (se Figure 6.2). Taxes contribute most in Belgium and Denmark (0.07 reduction in Gini in both cases) and least in Italy and Greece (0.04 in each case). Taken together, taxes and benefits reduce the Gini coefficient by most in Luxembourg (0.23), France (0.23), Denmark (0.23) and Finland (0.22) and least in the four Southern countries – Italy, Portugal, Spain and Greece with Gini reductions of between 0.14 and 0.16 – and the Netherlands (0.16).

The end result is that the inequality in household disposable income is, according to EUROMOD, highest in Greece, Italy and Portugal and lowest in Austria, Denmark and Sweden.[43] There is little positive or negative correlation between the extent of original income inequality and the reduction in inequality resulting from taxes and/or benefits.

However, these calculations have made use of the Gini coefficient in a particular way. Other assumptions or methods might produce different results. In particular, any observations with zero (or negative) incomes have been excluded at each stage. The prevalence of these is likely to be much larger for original incomes than for income with benefits and pensions added in. If we had calculated the Gini including the zeros then its value would have been larger. Whether it is uniformly larger across countries is a matter for further investigation. The second issue is the order in which we calculate the effects of benefits and taxes. We have effectively assumed a natural order: that benefits are added first and taxes deducted in a second stage. This has the effect of inflating the inequality reducing properties of benefits relative to taxes. Both these issues are considered in the box below.

Using the Gini coefficient to measure the effects of taxes and benefits on inequality

The treatment of zero and negative incomes

The Gini coefficient can take into account zero and negative incomes unlike the most inequality measures. However, there are still some issues to consider in using the Gini to assess the inequality-reducing properties of tax and benefit systems which might lead analysts to exclude such observations.

First, zeros might not correspond to "real" zero incomes: incomes might be mis-reported or assigned to zero by data providers due to missing values. These are arguments for excluding the zero and negative observations from the calculation.

Secondly, when other inequality measures are used in parallel, which are not defined for zero incomes (e.g. logarithmic measures), it is often convenient to avoid different sample sizes according to the inequality measure used. This is not relevant for the present analysis.

An alternative to the inclusion of zeros is to use bottom-coding. This refers to assigning a standardised low positive value to the observations below chosen threshold.

When using original income, the prevalence of zeros is greater. In this case the sample size could be still limited, e.g. to the working-age population.

The order of the decomposition

The order of the decomposition matters. It is quite natural to add benefits first and then deduct taxes due to the fact that some taxes are levied on benefits. On the other hand there are few examples of benefits which depend on the income net of taxes. If one deducts taxes before adding benefits then taxes would appear to be more redistributive than they would otherwise. A way to avoid the ordering

[43] It should be emphasised here that the estimates presented here are derived from EUROMOD (version C9) and relate to 2001. They may, therefore, differ from those presented elsewhere in this report which are based in some cases on different sources. The concern here is not so much with the estimates of income inequality in different countries *per se* but on the effect of benefits and taxes on these.

issue while measuring the effect of taxes and benefits is by comparing disposable income to the case where respective instruments (taxes or benefits) are "switched off". See Immervoll et al., 2006 for an example.

Since the use of the Gini coefficient may be misleading in summarising the relative effects of taxes and benefits across countries on income inequality we also examine the effect of taxes and benefits on another commonly-used indicator of income inequality: the quintile share ratio. Similar issues apply, since of the bottom quintile group contains many zero incomes the ratio will be very high and hence the indicator will be very sensitive to the extent of zero incomes. For example the quintile share ratio for original income in Ireland calculated in this way is of the order of 600, whereas for most other countries it is around 50 to 100 whereas the values for disposable income are of the order of 3 or 4.

Another approach is to rank households by a constant income measure (here using disposable income) and calculate the share of original, gross and disposable income for the same groups (bottom and top quintile groups) each time. This is shown in Figure 6.3. Ireland is still the outlier with a quintile share ratio of more than 35 for original income. The UK has the next highest value, followed by Denmark, Belgium, Portugal and Finland. Benefits reduce the ratios of income shares to between 3.2 (in Austria and Sweden) and 6.1 (in Italy and Portugal). Almost all of the effect is through benefits, except in Poland where there is a small additional effect through taxes. The size of the inequality reduction can be seen more clearly in Figure 6.4 where Ireland and the UK stand out and the smallest reduction is in Austria and Poland.

The Gini (excluding zeros and re-ranking at each stage) and the quintile share ratio (including zeros and ranking by disposable income at each stage) show different results for the inequality reducing properties of taxes and benefits. A ranking of countries by the size of the (absolute) reduction in inequality using the two measures is quite different: for example France has the second lowest reduction using the quintile share ratio but the second highest using the Gini. The UK has the second largest reduction using the quintile share ratio and the 7th from bottom (of 16 countries) using the Gini.

Clearly, care must be taken in selecting ways of measuring the contribution of taxes and benefits to inequality reduction, and careful interpretation is also needed.

So far we have considered taxes and benefits as aggregates. Of course, the tax and benefit systems are different in each country. First of all the overall size of the systems, in terms of expenditure or receipts in relation to gross incomes, varies. Secondly, the shares of each income component vary according to income quantile, and the patterns of the variation are not the same across countries. We consider each aspect in turn.

Among the EU-15 countries benefits (including public pensions) make up between 26% (in France) and 15% (in the Netherlands) of gross income (see Figure 6.5). In both the New Member States (NMS) shown, Hungary and Poland, the proportion of income made up of benefits and pensions is higher than in France: 29% and 33% respectively. Taxes and contributions represent deductions from gross income of between 39% (in Denmark) and 17% (in Ireland). In the cases of these direct taxes the two NMS have tax burdens that are in the mid-range for the EU-15 countries: 19% for Hungary and 24% for Poland.

Countries with large tax and benefit systems will tend to be those that redistribute most, but this is not necessarily the case as the extent of redistribution also depends on the characteristics of the taxes and benefits: how progressive the taxes are and to what extent benefits are targeted – directly or indirectly – on those with low incomes will tend to have a significant influence on the results. Some indication is provided by Figures 6.6 and 6.7 which show the same information as Figure 6.5 but for the bottom and top quintiles of the national disposable income distributions respectively.

For the lowest income groups, that is those in the bottom quintile, social benefits and public pensions are not only more important than for those further up the income scale, as would be expected, but are also more variable across countries (Figure 6.6). The proportion of disposable income of households in the bottom quintile which is made up of income from social benefits and pensions ranges from a low of 44% in Greece to between 45% and 60% in the majority of countries, over 60% in the Nordic countries and Belgium, up to 70% in the UK and as high as 85% in Ireland. While Poland has the highest proportion of benefits and pensions on average, of the 17 countries considered, the proportion in the bottom quintile group is similar to that in a mid-range EU-15 country (51%), while the proportion in Hungary is similar to that in Denmark and the UK (67%).

The tax levied on this group, as also would be expected, is small, but it is not non-existent. It is particularly large in Denmark and Sweden and also Poland, where over 20% of the gross income of the poorest quintile group in each of these countries is deducted as taxes. Taxes represent much more of a burden, unsurprisingly, for those at the other end of the scale, for the 20% of households with the highest income levels (Figure 6.7). In this case, however, the variation across countries in the amount of tax paid is similar to that for households as a whole – ranging from 40-45% in Denmark and Sweden to around 25% in Ireland and Portugal. In both NMS countries considered, the direct tax burden on this high income group is relatively low (27%) compared with than in the EU-15 countries and is comparable with the tax burdens in Italy and the UK.

More surprisingly perhaps, even for households with this level of income, a significant share is made up of social benefits in a number of countries – just over 20% in Austria and just under

20% in France and Poland. At the other extreme, benefits account for only 2-3% of gross income of the top 20% of income recipients in the UK and Ireland, where social transfers are more deliberately concentrated on those in most need of income support.

Another perspective on the extent and nature of redistribution can be gained by considering the shares of total personal income in the different Member States received by households at varying points across the income distribution as a whole - or, more specifically, by examining the position of households in this regard by decile group of disposable income.

The effect of taxes and benefits means that the shares of disposable income are, of course, less unequal than shares of original (or gross) income. The size of this effect, however, varies between countries as does the incidence of benefits less taxes on each decile group of the distribution, as can be seen for each of the EU-15 Member States, Hungary and Poland in Figure 6.8. The countries with low redistribution – such as Greece, Italy and Portugal - tend to have share curves that are relatively similar for both original and disposable income. Those with more redistributive systems have curves for disposable income that are significantly flatter than those for original income –Denmark, Luxembourg and the UK, in particular. The curve for gross income is everywhere more flat than that for original income and less flat than disposable income. Taxes seem to have the most noticeable effect in the top decile group and particularly in Finland, Sweden, the UK and Poland. In Hungary taxes seem to be particularly effective at increasing the share of decile groups 2 to 4.

The effect of the tax-benefit system on shares can be seen more clearly in Figure 6.9 which plots the *change* in the share of incomes due to the tax-benefit system. Here, again, it is clear that benefits and pensions play a bigger role than taxes and contributions, except in the top decile group for some countries (Belgium, Austria and Portugal) and the 8th and 9th decile groups in Hungary. The break-even point, where taxes and benefits have no net effect in income shares, occurs between the 6th and 8th decile groups in all countries, except Poland where it is in the 9th decile group. In some countries the transfer from rich to poor is a gradual process across the income groups, with higher income households gradually receiving less of a share of the benefits less taxes. This would characterise the shape of the graphs for Belgium, Denmark, Germany, Ireland, the Netherlands, Finland, Sweden and the UK. However, a noticeable feature in many of these countries is that the change in share is smaller for the bottom decile group than it is for the next one up. Possible reasons for this include the fact that households with the very lowest of disposable incomes are those who do not qualify for benefits (or pensions), especially where these depend on characteristics or contributions rather than income. We return to the composition of benefits and taxes in the next section.

In another group of countries the increase in share is rather flat across the bottom and middle part of the distribution, with a large decrease in the top one or two decile groups. This

characterises the situation in the four Southern countries, France and especially Luxembourg and Poland. These are cases where pensions and other non means-tested benefits are typically received by people in households at all levels of income except the very top.

Differences in the composition of taxes and benefits

Taxes and benefits can each be decomposed and classified into broad types in order to understand the relative role of each type of instrument across countries. Since their nature and redistributive effects differ, it is useful to distinguish between public pensions, other non-means-tested benefits and means-tested benefits, and between income taxes and social contributions. Of course, contributions and contributory benefits, particularly pensions, do not simply have the function of redistributing between persons. They also re-distribute individual income over each person's lifecycle. However, it would be misleading to downplay or ignore them in this context as they do have some intra-personal redistribution role through their social protection function. We therefore distinguish public pensions although we do not make the distinction between contributory and non-contributory pensions and benefits explicitly. Instead, we identify those benefit components for which entitlement depends on an income (or assets) test: known as means-tested benefits. These are of interest because they might be expected to have a particularly strong effect on income inequality. The remainder of benefits, including those which depend on contributions or on particular household characteristics or contingencies apart from income (such as child, disability or unemployment benefits) and are not pensions are categorised as non-meanstested benefits, The typology is defined in more detail in the box and Annex 1 lists the components of each category by country.

Figures 6.10 to 6.12 show that countries with the largest benefit systems, in terms of overall expenditure on social transfers as a proportion of gross incomes, tend to have large public pension transfers. They also tend to have relatively large transfers of non-meanstested benefits, as is particularly the case in Denmark, Sweden, Finland and Austria (Figure 6.10).

France is one exception, in that some 12% of all benefit incomes, including public pensions, are means-tested which is higher than in all countries except two. These are: Ireland, where meanstested benefits account for 59% of total transfers, and the UK, where they account for 38%, substantially more than elsewhere in the EU15, emphasising the different nature of the social welfare system in these two countries than elsewhere.

Naturally, the role of means-testing is greatest in the bottom quintile group (by disposable income) and such benefits makes up 62% of all social transfers in Ireland and 56% in the UK. The country with the next largest proportion is Portugal, where they account for 28% of total

transfers. By contrast, means-tested benefits are of minimal importance in the other three Southern Member States (accounting for only 3% of transfers in Greece as well as in Austria.

Public pension income is defined to be restricted to those aged 65 or more and to benefits specifically intended to provide income during old age or to replace earnings during retirement. Any other pensions paid to younger people or other benefits paid to the elderly are included in one or other of the cash benefit categories rather than as pension income. We do not consider means tested old age schemes as pensions, unless they are an integral part of the pension system. If low pensions are topped up to reach a certain minimum, we count these supplements as pension income. This distinction can be somewhat arbitrary in practice. Other meanstested schemes for the elderly are included as meanstested benefits

Meanstested benefits are defined as all benefits that depend on an assessment of current income. It includes all benefits with an earnings or income test, even if the limit does not confine entitlement to the poor or near-poor. Thus it includes "affluence-tested" benefits as well as those targeted on the lowest incomes. Similarly, benefits that are more generous to people with low income than to people with high income are included in the means tested category, even if the "rich" are in principle eligible for some amount. So benefits with non means tested basic amounts plus means tested supplements are defined here as means-tested. In practice the distinction can be rather arbitrary since there are examples of benefits that are essentially universal, with relatively small means-tested top-ups. Or benefits that apply in a similar way to different groups with means-testing only operating in some variants (the Belgian child benefit is an example).

Non-meanstested benefits is a category containing all remaining benefits.

Elsewhere, they are much also less important than in Ireland or the UK, but not insignificant, especially in France, the Netherlands and but Sweden (where they account for 20-25% of transfers).

Non-meanstested benefits, on the other hand, account for a similar proportion of income for households in the bottom quintile as for households in general in Belgium, Germany, Spain, Italy and Austria, while in most other countries, the proportion is smaller. The main exception is Luxembourg where the proportion is larger for those in the bottom quintile than for those further up the income scale. Accordingly, non-means tested benefits play only a limited role in redistributing income to lower income households.

At the same time, non-meanstested benefits are a much less important source of household income for households in the top quintile in all countries (Figure 6.12), though transfers in the form of pensions are relatively important in France, Poland and Austria as well as in Italy and Spain.

So far as deductions from income are concerned, social contributions (which in most countries are a fixed proportion of income up to a maximum level) are more important than income taxes (which tend to more progressive in relation to income) in Greece, the Netherlands, Poland and France (Figure 6.10). It is not surprising perhaps that countries that have large pension and non

means-tested systems also tend to have high levels of social contribution, though not all non means-tested benefits, of course, are contributory.

For households in the bottom quintile, income taxes represent a significant deduction from income in Denmark, Sweden and Finland (around 20% in the first two and around 10% in the last), where many benefits are taxable and amount to around 5% of income in the UK and Italy (Figure 6.11). Social contributions represent a significant deduction from income in most other countries, amounting to 10% or more in Germany, Greece, France, Luxembourg, the Netherlands and Austria.

For households in the top quintile, income taxes are much more important than social contributions in all countries except France, reflecting the fact that in most countries an upper limit is set on payments of the latter (Figure 6.12).

Horizontal equity

As well as having an effect on inequality by level of income (vertical equity) taxes and benefits also have an effect on horizontal equity: the treatment of people at the same income level but with different circumstances. Her we consider an important particular case: the treatment of children and parents by the tax-benefit system. First we compare the size of child contingent benefits and tax concessions across the countries of the EU-15. We then explore how these incomes are distributed according to household income level. Finally, we address horizontal equity itself by asking to what extent the presence of children is compensated by the tax and benefit systems of the EU-15. In each case the effects are explored for young children (aged 0-5) and older children (aged 6-17) separately. On the one hand one might expect younger children to be supported to a greater extent because, to achieve horizontal equity with non-parents, parents either need compensation for not working to care for them, or help with child care costs. On the other hand, older children have consumption needs more like adults and we might expect them to be targeted with greater resources for this reason.

In all the analysis which follows we consider only the parts of the tax and benefit system that are due by virtue of presence of children. This can be more than benefits simply labelled as family benefits since some other benefits contain complements for children. It includes tax concessions as well as benefit payments. But it is typically less than all cash benefits paid to a household (which might include pensions and unemployment benefits and so on), and does not include non-cash benefits. On the one hand this allows us to focus on compensation intended for children. On the other it does ignore some policies that are intended to make employment consistent with caring responsibilities as well as others that are designed to support adults whether or not they have children.

In nearly all countries the net amount of child targeted cash support is higher for children aged 0-5 than for older children (comparing Figures 6.13 and 6.14). The exceptions are Belgium and France and in both cases the difference is small. The figures show the average per child payment (normalised as a proportion of national per capita income) through benefits together with an amount for tax that is positive if there are tax concessions acting like benefits or negative if more taxes are paid by virtue of the presence of children (typically this is explained by child targeted benefits being taxable). Countries are ranked by the net amounts (benefits and tax concessions less taxes paid) and the ranking is slightly different for the two age groups of children. For the younger age group (Figure 6.13) Luxembourg has the largest payments relative to per capita incomes in that country; and Spain the smallest. Tax concessions are relatively important in Luxembourg, France, Belgium, Italy and Spain. Tax deductions are important in Finland and Germany.

The average amount of support is substantially lower for older children in Luxembourg, Finland and Denmark. Generally we would expect the parents of older children to have higher earned incomes and to pay higher taxes. Where tax concessions increase in value with the marginal tax rate, they deliver more of the support for the older age group and this is apparently the case in Luxembourg and Spain. In Italy, however, the effect of tax concessions is lower for older children. In Austria the net effect of taxes is positive for younger children and negative for older children. In Finland and Germany the taxation of benefits has a smaller effect for older children than younger, and the effect is the other way around in Sweden.

These average effects may not be the same at different points in the income distribution, especially, although not exclusively, if they are delivered through taxes or meanstested benefits. In some countries support for children is targeted on children in low income households. This is particularly the case In Ireland, the UK and Germany (when the net effect of benefits less taxes is considered) and to some extent in Denmark, Portugal, Finland and France: see Figure 6.15 for children aged under 6.[44] In Austria, Belgium, the Netherlands, Greece and Sweden the effect is rather uniform by income. In Spain and to some extent in Luxembourg the value of the child support package increases with household income. In France children in the top decile group benefit substantially more than children in middle income households, mainly because of tax concessions while in Germany benefits are worth more to top income households but the net effect is reduced substantially by higher taxes.

The picture is somewhat different for older children (Figure 6.16). As we have seen the aggregate value of child targeted benefits and tax concessions is lower in most countries for

[44] The child contingent payment is calculated as an average per child in each decile group and then normalised by average per capita income across all deciles.

this older age group. The shape of the graphs is also different in some countries. Taxes are lower for children in the top decile group in Germany (compared with the case for younger children). Benefits are generally lower in Finland for the older age group and taxes play a larger role in the top decile group in reducing their net value, but a smaller role lower down the distribution. Benefits are more highly targeted on the bottom decile group in Ireland and taxes play more of a role in reducing the vale of benefits for the richest households in Sweden.

Overall, the picture is one of some diversity in the level of support, the way it is distributed by income and the age of the child, and whether it is delivered through benefits or the tax system. The next question to which we turn is whether this diversity leads to differences in the extent to which the extra needs of children are recognised by the tax and benefit systems.

Assessing the degree of horizontal equity is difficult because it requires us to be able to compare the effect of the system on households that are like in all respects except one. In reality households with children can differ from childless households in many ways, both directly and indirectly (eg through labour market behaviour). To provide a simple way of making comparisons we ask what if the households with children in the EUROMOD database were not to be recognised by the tax-benefit system, and what if their needs were also ignored. Our approach is to compare equivalised income for households with children with those for exactly the same household, assuming there were no children, but all other things remaining the same.[45]

Comparing equivalised disposable incomes with and without children involves making two distinct calculations. First, we take no account of children in the calculation of household needs. Then, we remove the income received by virtue of the presence of children. Its main components are the net transfers and tax concessions received because of the presence of children. Taking the children out of the needs assessment causes household equivalised income to rise. The amount if this increase for young children (0-5) is indicated by the green bar in Figure 6.17. Here equivalised incomes without children (in the 0-5 age group) are expressed relative to equivalised incomes with children, where these are set as =100 and calculated across all households. So a bar with height 104 indicates that the needs of children aged 0-5 as represented in the equivalence scale[46] are equivalent to 4% of total (national) household disposable income. Deducting the components of income due to the presence of children causes equivalised income to fall: indicated by the yellow bars.

The results of this exercise are highly dependent on the equivalence scale used, and should not be interpreted as absolute measures of need or the extent it is met. However, this approach is

[45] See Corak el al (2005) for more discussion.

[46] Here as elsewhere we use the modified OECD scale.

still of value because our focus is comparative and the extent to which having children makes households (financially) worse off varies with the tax and benefit system. Countries are ranked by the proportion of the needs (i.e. the green bars) covered by the child contingent incomes (i.e. the difference between the green and yellow bars) and this is shown by the line (against the righthand axis). The ranking is similar to that for the average payment, shown in Figure 6.13, which is not particularly surprising. The proportion of young children's extra needs that are met by the tax benefit system is more than six times higher in the most generous country, Luxembourg, than in the least, Spain.

An equivalent picture is shown for children aged 6-17 in Figure 6.18. This shows that on average child needs are much higher (partly because there are more children aged 6-17 than 0-5 and partly because the equivalence scale credits children aged 14 or more with a higher weight). On the other hand, the proportion of the needs that are met is lower and the ratio of the highest and lowest proportion of needs met (Austria and Spain) is lower: around 5:1.

Fig. 6.1 Income inequality (Gini coefficient) 2001

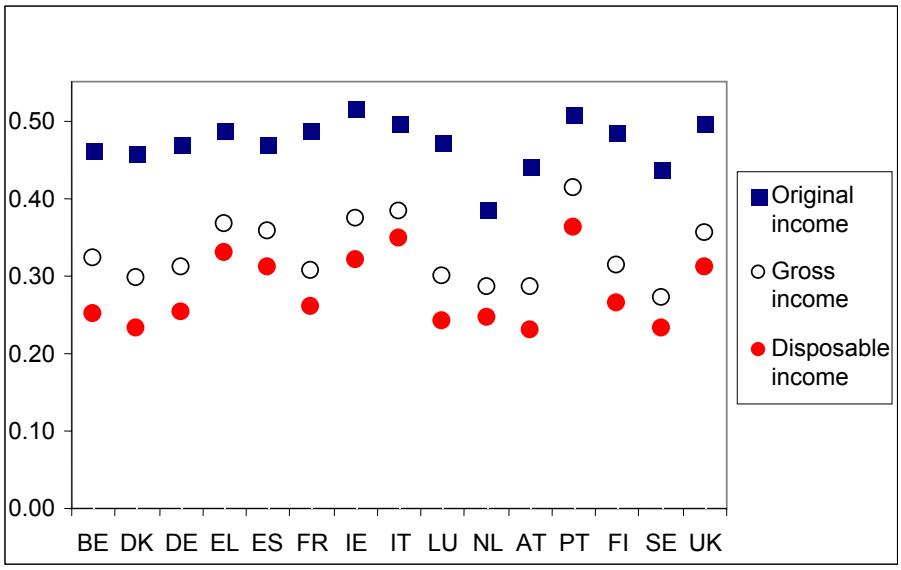


Fig. 6.2 Original income inequality reduction due to taxes and benefits 2001 (absolute changes in the Gini coefficient)

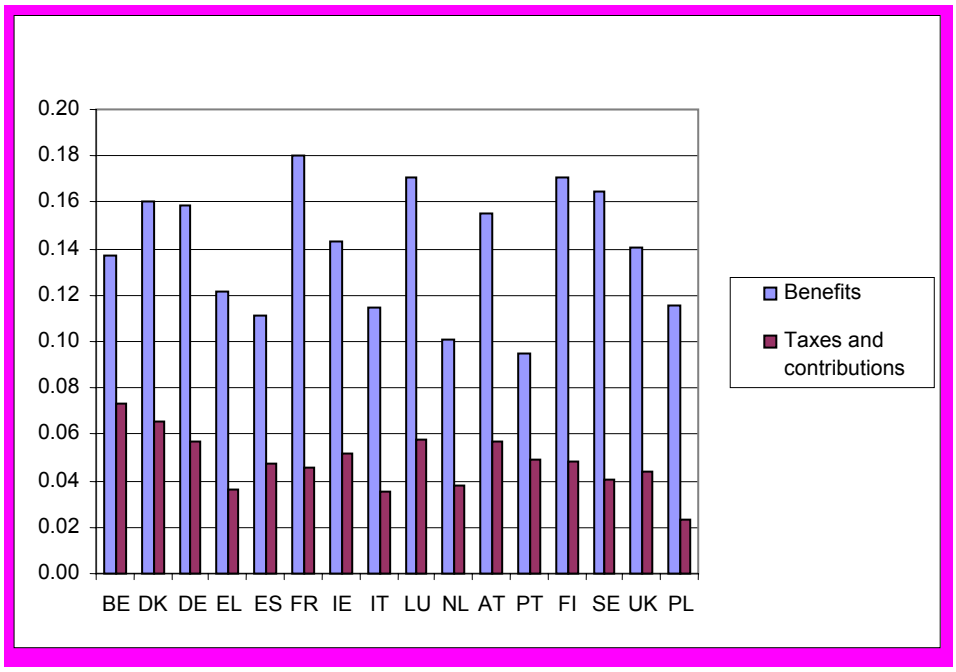


Fig. 6.3 Income inequality (S80/S20 ratio), 2001

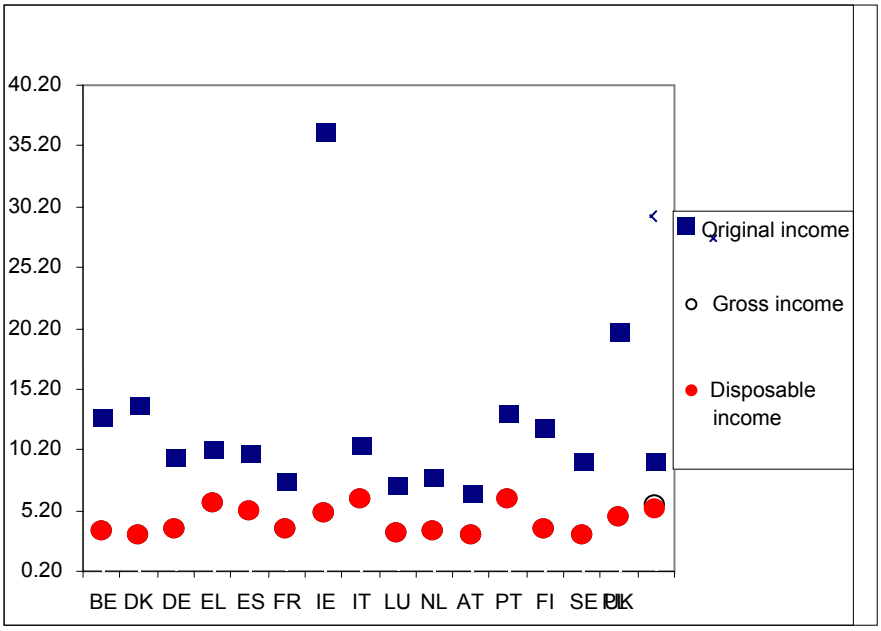


Fig. 6.4 Original income inequality reduction due to taxes and benefits, 2001 (changes in S80/S20 ratio)

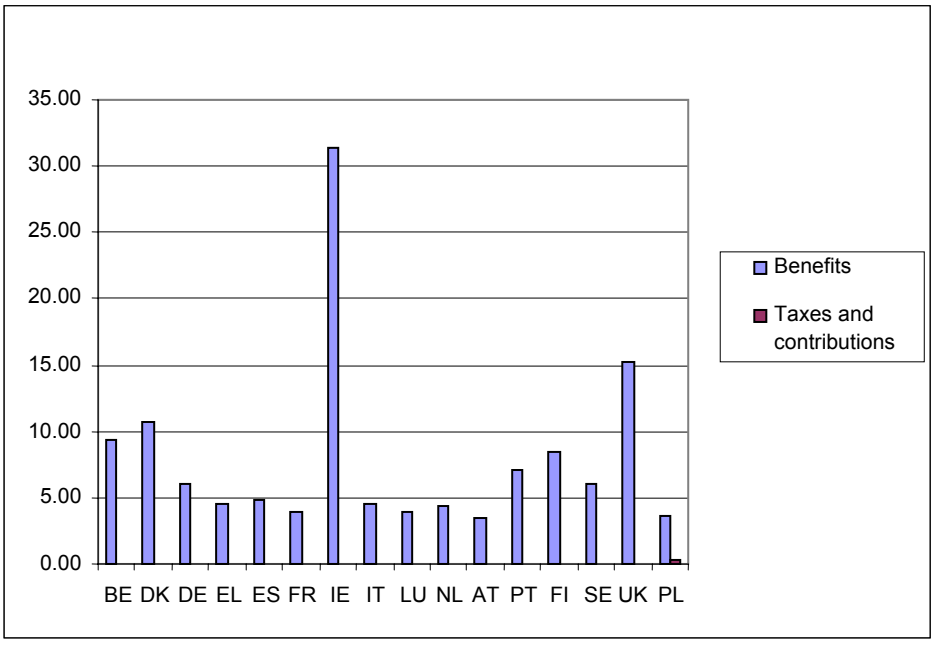


Fig. 6.5 Taxes and benefits as a proportion of gross incomes 2001: all households

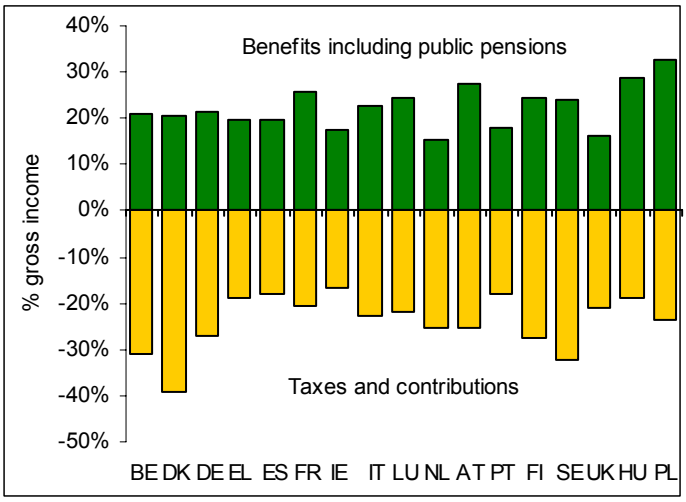


Fig. 6.6 Taxes and benefits as a proportion of gross incomes 2001: bottom quintile

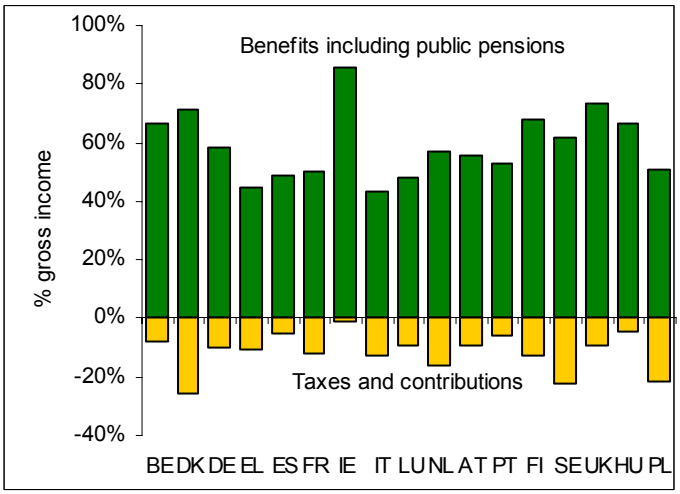


Fig. 6.7 Taxes and benefits as a proportion of gross incomes 2001: top quintile

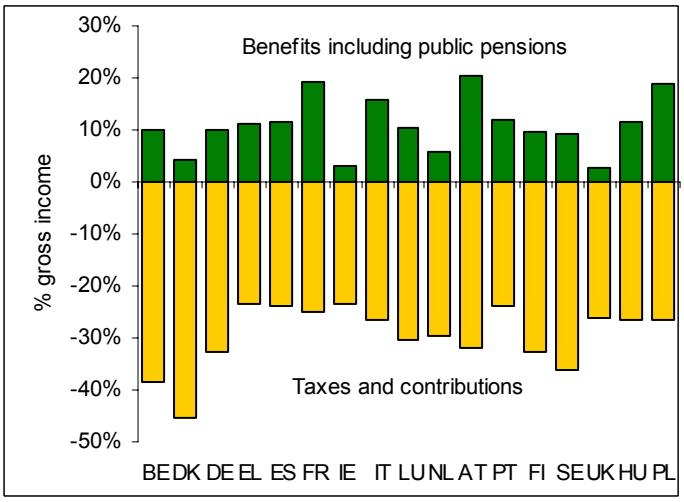
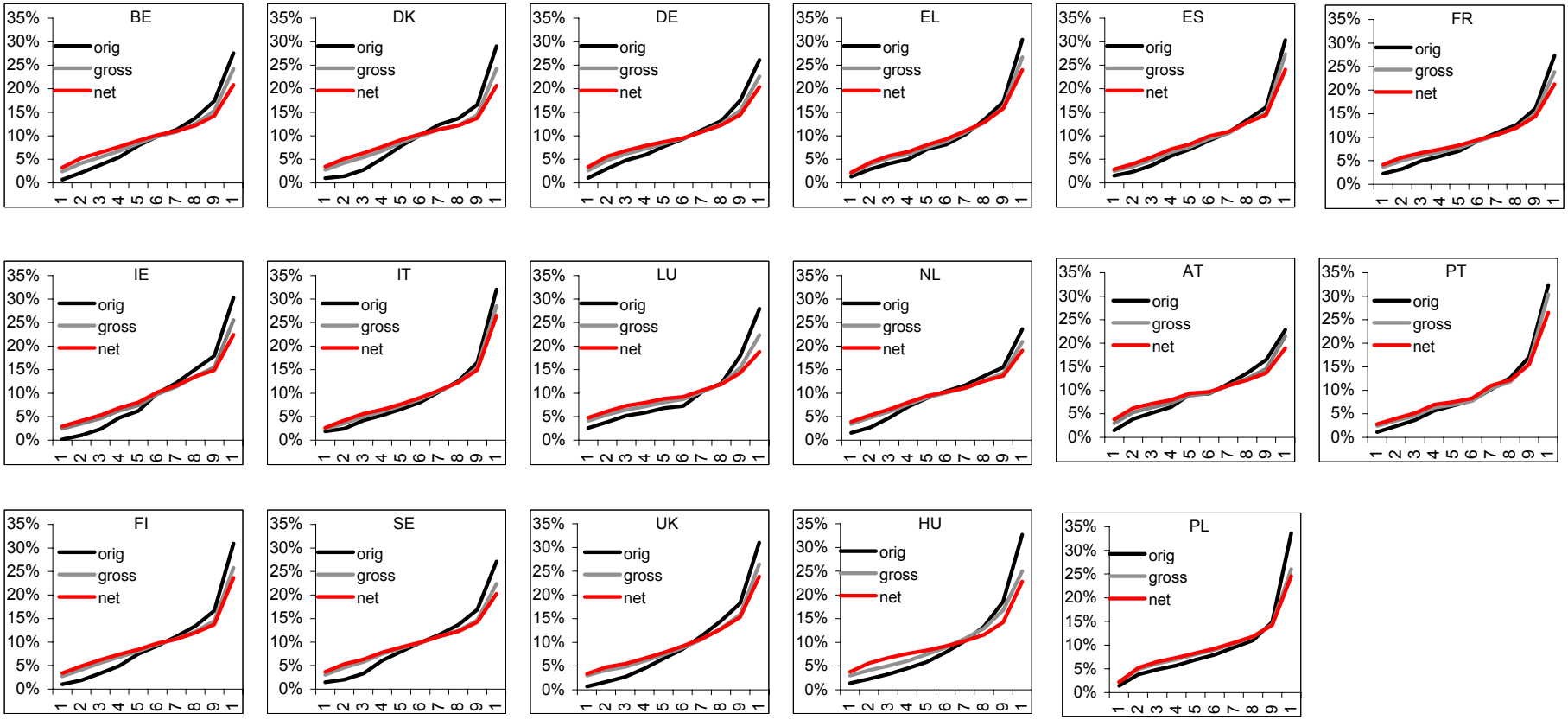
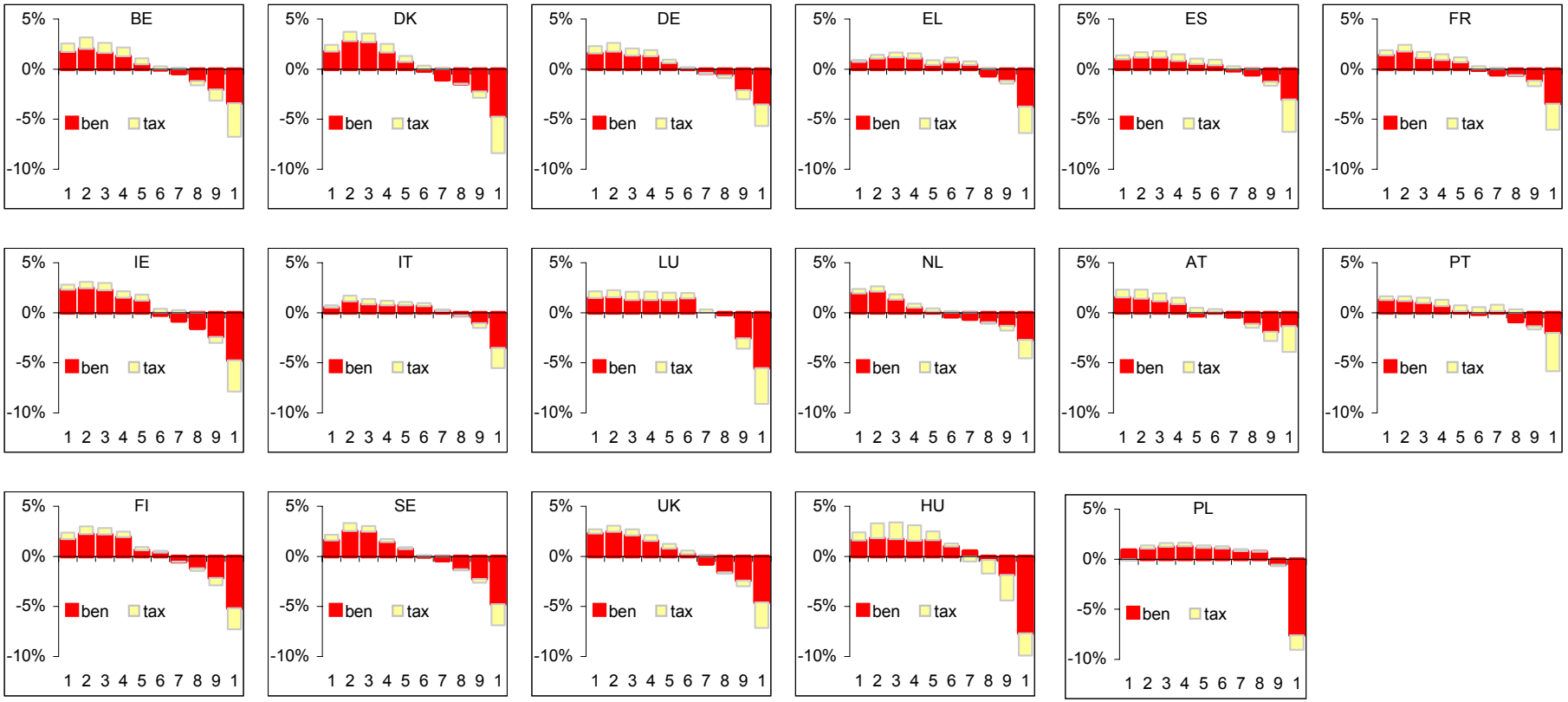


Fig. 6.8 Share of household original, gross and net income by decile in 2001



Source: EUROMOD

Fig. 6.9 Change (percentage points) in share of overall household income due to benefits and taxes in 2001, by decile



Source: EUROMOD

Fig. 6.10 Taxes and benefits by type, as a proportion of gross incomes 2001: all households

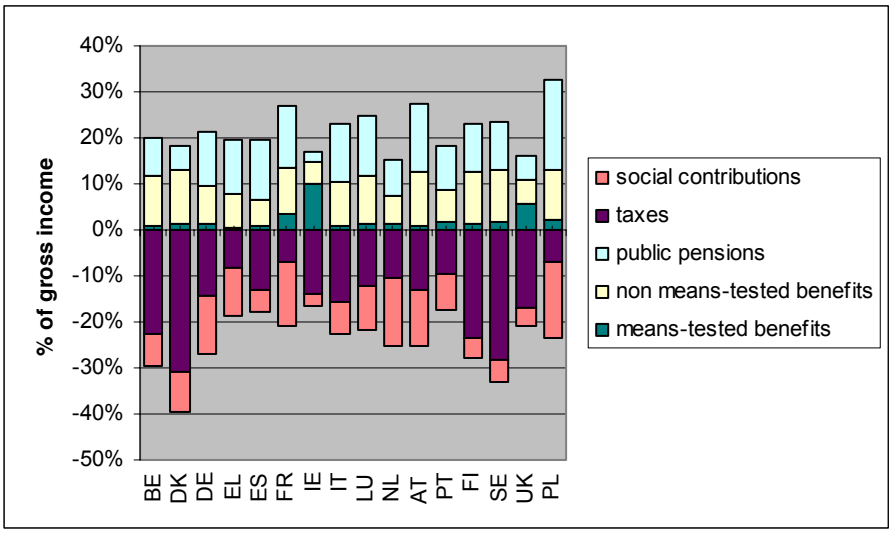


Fig. 6.11 Taxes and benefits by type, as a proportion of gross incomes 2001: bottom quintile

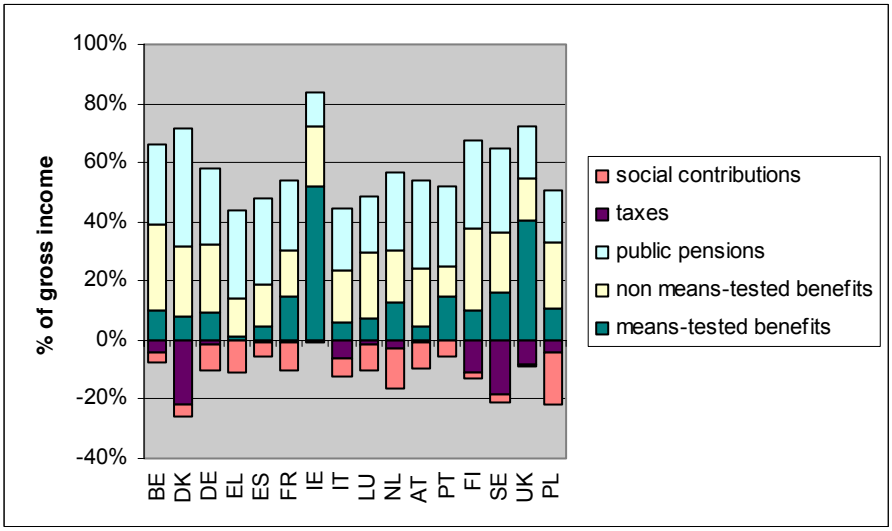


Fig. 6.12 Taxes and benefits by type, as a proportion of gross incomes 2001: top quintile

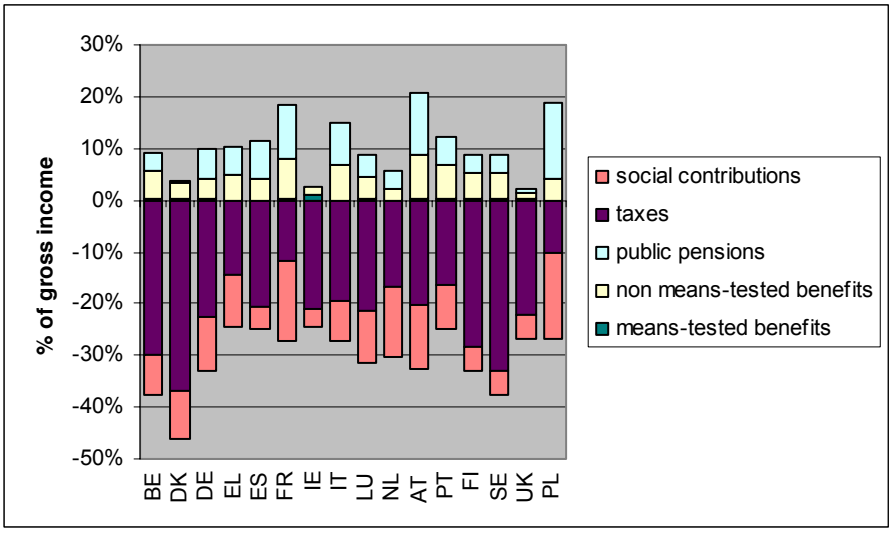


Fig. 6.13 Spending per child on child contingent cash payments as a % of per capita income 2001

Children aged 0-5

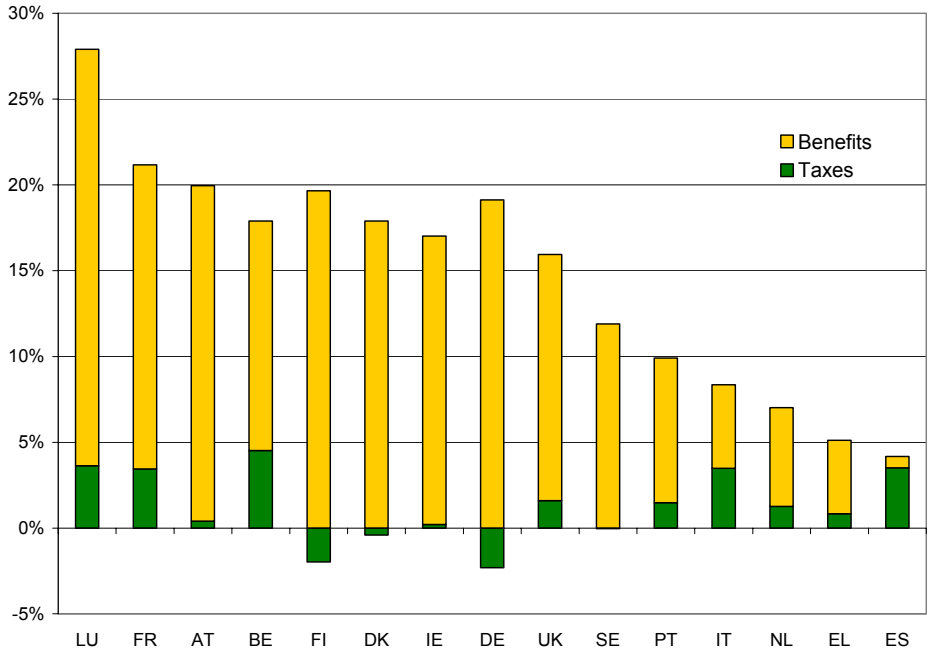


Fig. 6.14 Spending per child on child contingent cash payments as a % of per capita income 2001

Children aged 6-17

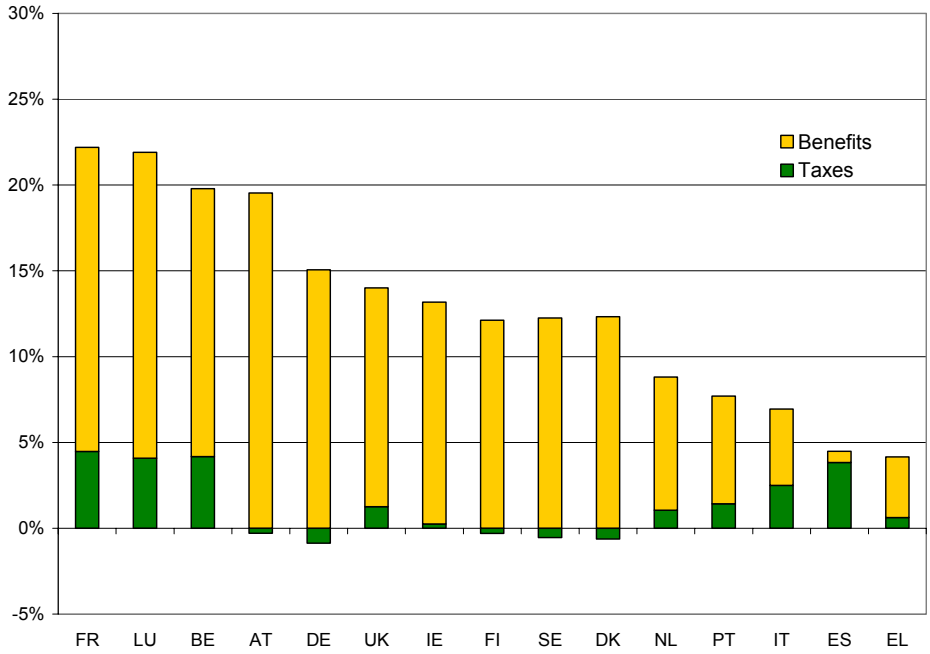


Fig. 6.15 Spending per child on child contingent cash payments as a % of per capita income 2001by decile group

Children aged 0-5

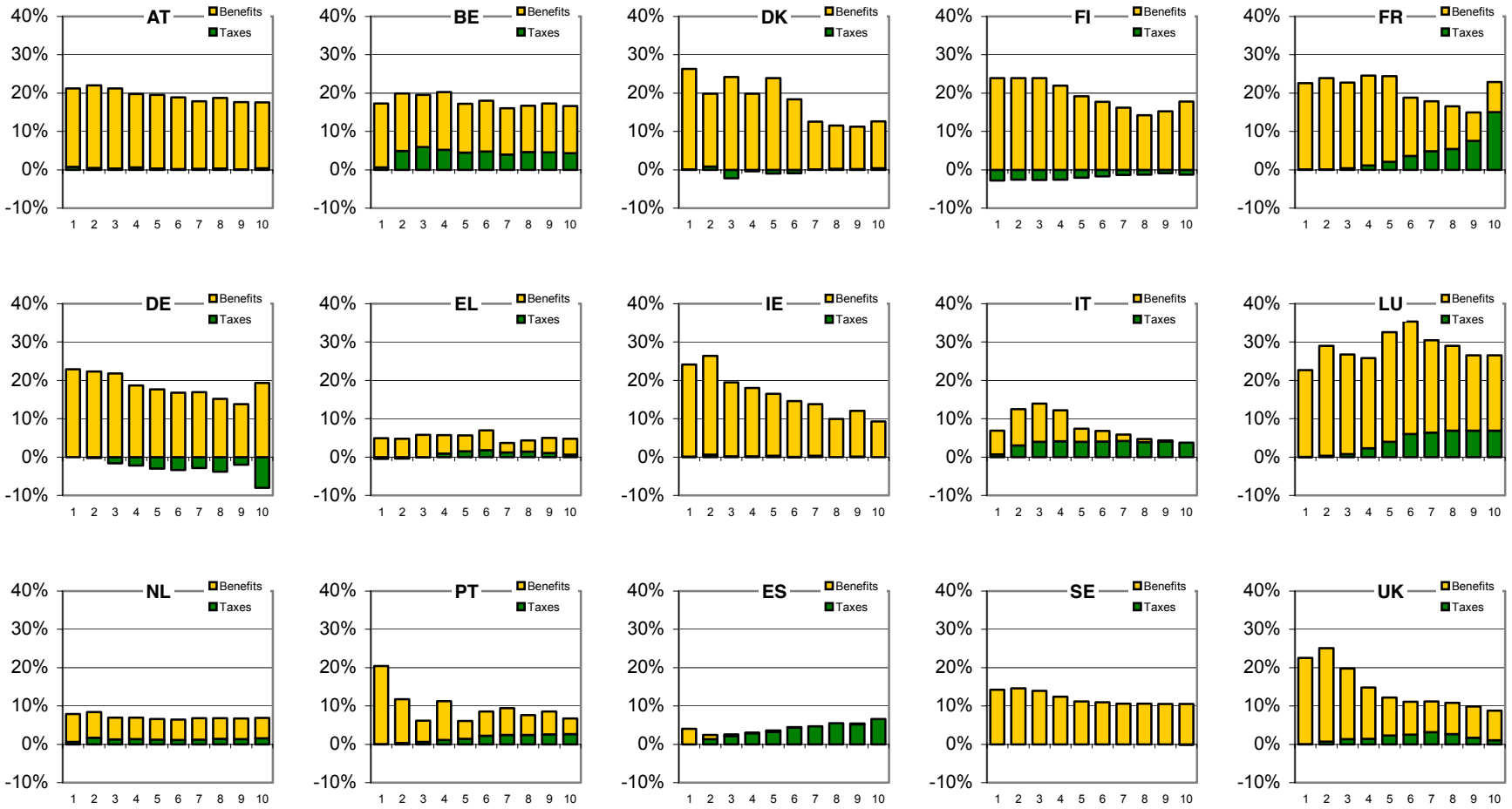


Fig. 6.16 Spending per child on child contingent cash payments as a % of per capita income 2001by decile group

Children aged 6-17

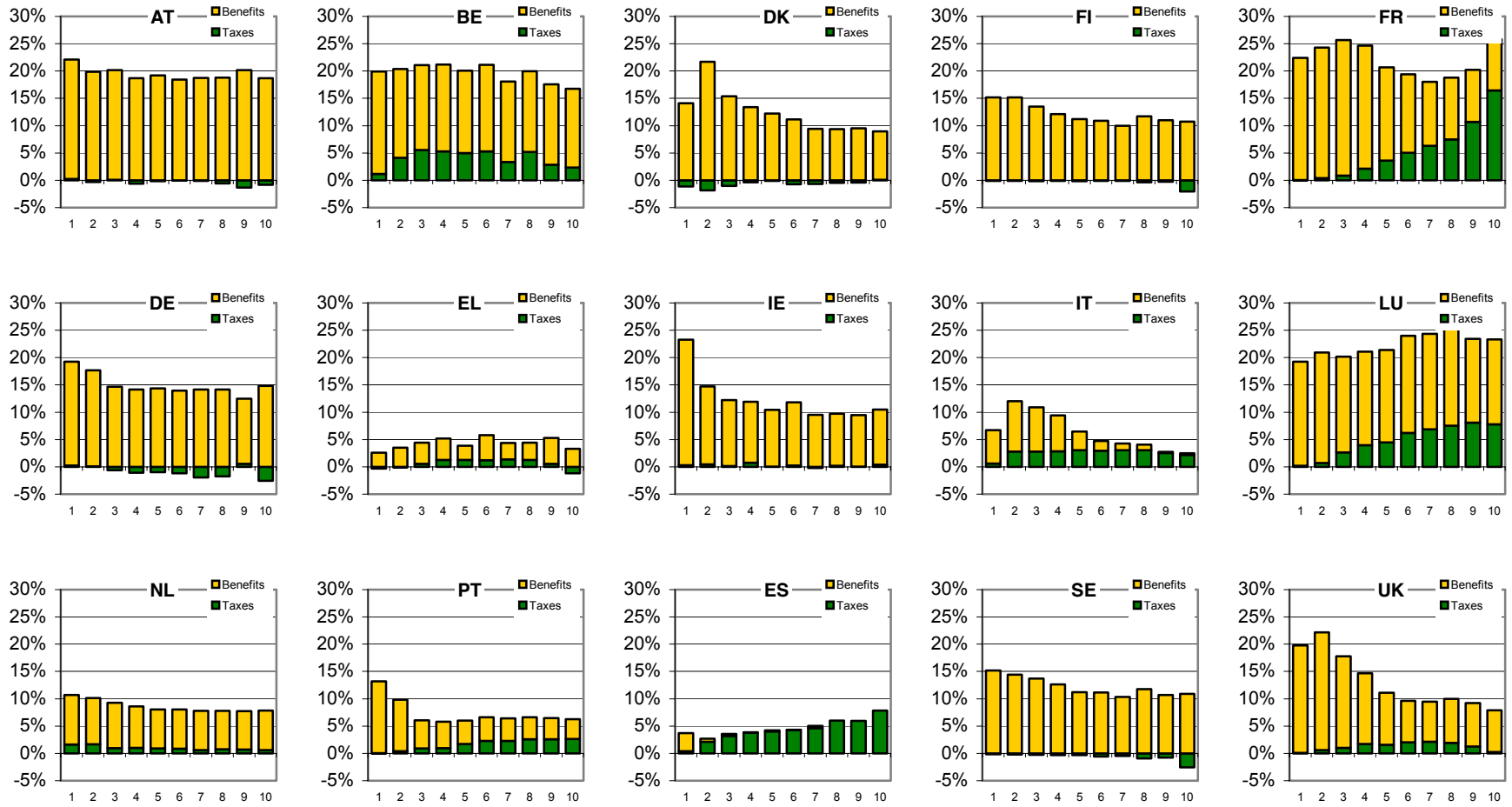


Fig. 6.17 Incomes with and without children and child-contingent incomes and the proportion of child needs covered in EU15 in 2001

Children aged 0-5

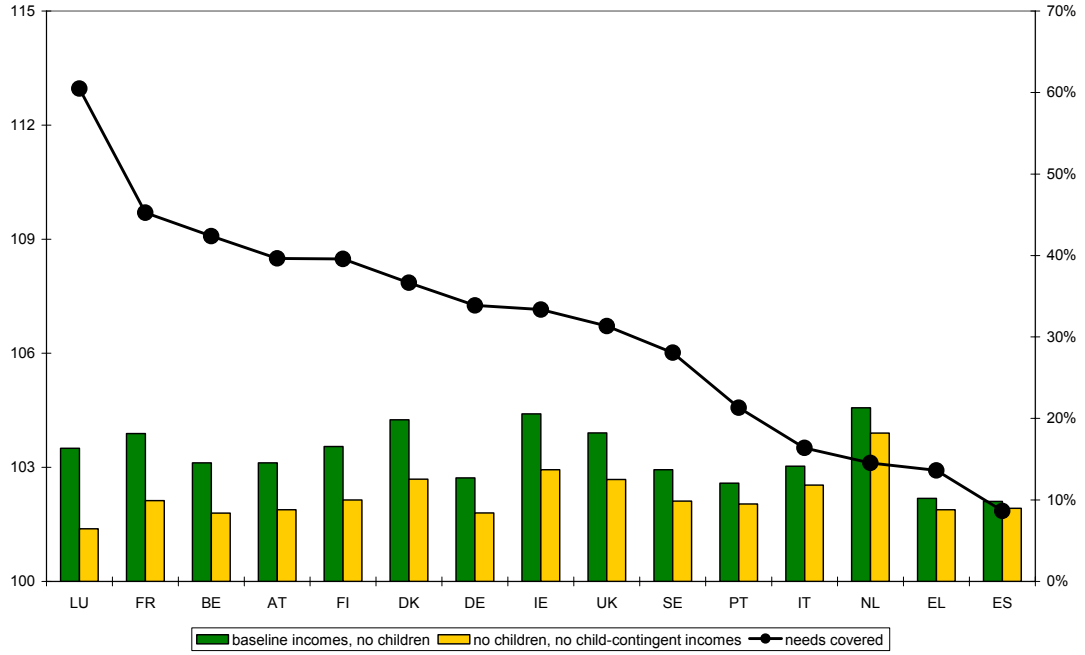
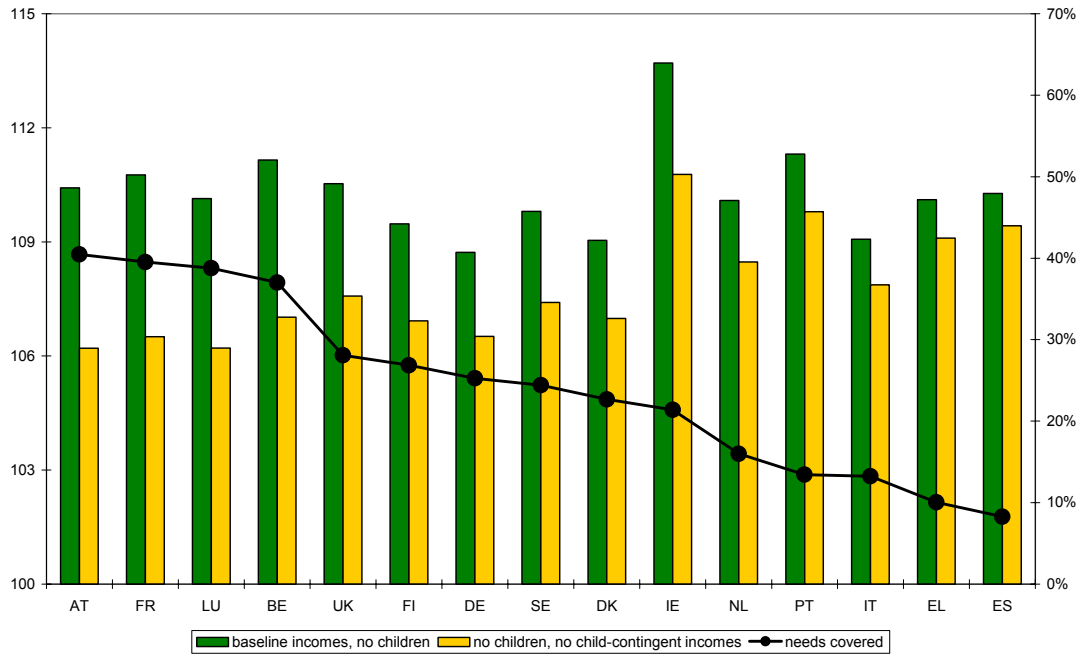


Fig. 6.18 Incomes with and without children and child-contingent incomes and the proportion of child needs covered in EU15 in 2001

Children aged 6-17



Appendix 1: Effects of Tax-benefit Changes on Inequality Trends in Europe: a Microsimulation Analysis[47]

Tax-benefit reforms could well explain some of the observed trend in inequality and poverty. However, there is little systematic evidence about the impact of policy changes on inequality/poverty over time, both in absolute terms and compared to other explanatory factors (change in pre-tax income distribution, change in income composition, etc.). In this note, we first provide an absolute measure of the impact of policy changes on inequality, which combines changes in policy structure (rules, rates, etc.) and changes in monetary parameters (benefit amounts, tax bands, etc.) against a distributionally-neutral benchmark. We apply this measure to analyze the effect of recent policy changes on inequality in ten European countries over the 1998-2001 period. Second, we focus on two countries (France and Germany) to assess the relative role of policy changes compared to changes in gross income inequality.

I. Absolute Effect of Tax-Benefit Policies: An Applications to some European Countries

We rely on the European microsimulation model EUROMOD, which allows to simulate the tax-benefit systems of the EU15 countries. The model computes all direct taxes and monetary transfers affecting households of a representative dataset for each country, and hence simulates their level of disposable income (see description in Sutherland, 2001). Choices of period and data are guided by what is made available by the most recent version of EUROMOD. Tax-benefit simulations can be performed for years 1998 (initial year) and 2001 (final year). In 2007, we will be able to simulate also the year 2003, so that the period of analysis can be extended.

The data used for all countries are described in Table 1. They are all representative of each population. However, data are collected in year 1998 only for Austria, Finland and Germany. For other countries, datasets are a bit older so that adjustments are required: 1998 data are obtained by updating monetary variables (possible changes in income distribution, composition or demographics between the year of data collection and 1998 are implicitly ignored).

[47] Olivier Bargain (UCD), Tim Callan (ESRI)

Table 1: Data Description

Country	Data	Year	no. of observations	no. households (weighted)	1998-2001 updating factor
Austria	European Community Household Panel	1998	7,386	3,238,520	5.7%
Belgium	Panel Survey on Belgium Households	1997	7,057	4,028,723	7.2%
Denmark	European Community Household Panel	1995	7,044	2,531,183	6.2%
Finland	Income Distribution Survey	1998	25,010	2,355,000	7.4%
Germany	German Socio-Economic Panel	1998	18,227	38,259,778	4.1%
Greece	European Community Household Panel	1995	15,062	3,720,085	15.5%
Italy	Survey of Households Income and Wealth	1996	23,924	19,816,115	14.2%
Portugal	European Community Household Panel	1996	14,468	3,211,572	9.8%
Spain	European Community Household Panel	1996	18,991	12,347,454	23.9%
UK	Family Expenditure Survey	1995/6	16,586	24,490,138	6.8%

We simulate the tax-benefit systems of each country for 1998 using the "1998" data (as described above) and produce the distribution of disposable income in each population. For most countries, 2001 data are not available so that a full evaluation of the inequality trend over the 1998-2001 period is not possible. This is the subject of the next section on a sub-group of countries where two years of data are available.

However, it is still possible to assess the effect of policy changes on inequalities over the period. To do so, we update incomes in 1998 data to nominal levels of 2001, using the average income growth rate over the period (coefficient are reported in the last column of Table 1). This way, we obtain a 2001* scenario where income levels are those of 2001 but the underlying gross income distribution is still that of 1998. Simulating the new policy (2001 system) on this adjusted dataset is then consistent and allow to assess the pure effect of the policy change. In other words, the distribution of disposable income obtained this way reflects only the change in policy and not the change in gross income distribution, which is held constant.

We simply use the Gini coefficient to measure inequalities. In the next report, we shall extend this exercise to a broader range of indices of inequality/poverty to obtain a more refined analysis of the policy effects. Results are presented in Table 2, that is, the 1998 Gini and the Gini obtained for the 2001* scenario. The difference provides the absolute effect of the policy changes over time.

As shown in Bargain and Callan (2006), the 1998 distribution of disposable income is approximately equal to the one obtained if incomes are nominally adjusted to 2001 and monetary tax-benefit parameters (benefit amounts, threshold levels of tax brackets, etc.) are also adjusted to 2001 by the same coefficient. Therefore, the 1998 Gini is identical to a 2001* Gini where parameters catch up with income growth over the period - a distributionally-neutral benchmark (see Callan, 2006) -- while the 2001* Gini reflects the true changes in monetary parameters that occurred over the period. Therefore, the difference between the 2001* Gini and 1998 Gini measures not only the effect of changes in policy structure (change in rules,

introduction or abolishment of instruments, change in non-monetary parameters like withdrawal rates of benefits, tax or contribution rates, etc.) but also nominal changes in monetary tax-benefit parameters vis-à-vis parameters in line with income growth (a distributionally neutral situation). The actual adjustments of monetary parameters made by policy makers will then have an impact on inequalities. For instance, amounts of social assistance may not be adjusted by policy makers over the period (or less than the income growth). This is a policy choice that will contribute to increase the Gini in 2001 since the position of the poorest is made relatively worse.

Table 2 then measures the change in inequality due to the change in tax-benefit systems over 1998-2001 (not the actual inequality trends). It seems that substantial policy effects are to be found in Finland, Greece and the UK. In Greece, the large decrease in inequality reflects changes in policy structure (e.g. social contribution rebate for low earners in 2000) but also nominal adjustment (e.g. large increase in real terms of the social pensions, farmers' basic pension and pensioner social solidarity benefit). In the UK, it may reflect important structural changes (e.g. the extension of the refundable tax credit for low-earner families, the Family Credit, to the more generous Working Family Tax Credit in 1999; introduction of a minimum wage) but also nominal changes (e.g. council taxes have been regularly raised above inflation, affecting more families with high incomes; the minimum wage has been consistently raised above earnings growth; Income Support for pensioners has been increased). In Finland, inequalities have increase, maybe as a result of a reduction in the progressivity of the tax scheme. Indeed, the (flat-rate) State tax has been increased while (progressive) municipal taxation has been decreased.

Table 2 : absolute effect of policy change

Country	Gini on disposable income			
	1998	2001*	policy effect	in %
Austria	24.5	24.2	-0.3	-1.1%
Belgium	25.3	25.3	0.0	0.1%
Denmark	25.4	25.1	-0.3	-1.2%
Finland	25.8	26.5	0.7	2.8%
Germany	26.5	26.6	0.1	0.4%
Greece	35.3	34.2	-1.1	-3.0%
Italy	35.1	34.7	-0.4	-1.1%
Portugal	38.1	38.6	0.5	1.2%
Spain	33.1	33.7	0.5	1.6%
UK	31.9	30.7	-1.1	-3.6%

Gini are based on equivalized income (modified OECD scale) - zeros are included and treated as 10E-9
** Disposable income for 2001 are simulated on the basis of 1998 incomes, nominally adjusted to 2001*

II. Relative Effect of Tax-benefit Policies: Example for France and Germany

We now focus on two countries for which the data for the final year (2001) are also available: France, for the period 1995-2001, and Germany, for the period 1998-2001. Thus it is possible to decompose the role of policy changes versus changes in the distribution of gross income.

Table 3 presents the result. Inequality, as measured by the Gini coefficient, has slightly decreased in France (-0.7 points or -2.4%) and increased in Germany (+0.3 points or +1%). These results are line with previous analyses on inequality trends (Förster and Mira d'Ercole, 2005). In France, little change has occurred at the end of the 90s but housing benefits have been reformed in 2000-2001 while a refundable tax credit for low-earning households has been introduced in 2001, two policy measures which have benefited more to the lower part of the distribution. In Germany, the period coincides with the beginning of the tax reform under Schröder's government, including noticeable tax cuts which must have contributed to increase inequalities (see Haan and Steiner, 2004). In addition, the bracket creep has been weaker for top incomes (the higher fringe of top income is taxed at the top rate and does not shift into higher rate bracket). As a result, the regressive effect of the reform on real incomes was even more pronounced than in the case of nominal incomes (Corneo, 2005). Tax cuts have also started in France in the early 2000s but must have had much less regressive effect since the tax base in France is more narrow (less representative) than in Germany so that the tax system does not have as much equivalising effect (Immervoll et al., 2005).

In France and Germany, policy changes explain respectively 54% and 38% of the inequality change over the periods considered in this example. The rest is due to changes in gross income distribution and, to some degree, to change in demographics. A lot of different factors may affect gross income distribution: changes in the composition of income, changes in productivity, unemployment dynamics, wage bargaining, other types of policy (unemployment support, minimum wage, etc.), etc. Behavioral responses (labor supply, fertility, etc.) to the tax-benefit policies can themselves affect the distribution of gross income.

Interpreting the (small) changes in gross income distribution in France and Germany is beyond our scope. However, we can conjecture that for France, much has to do with the strong decrease in unemployment rate over the period (11.3% in 1995 up to 11.8% in 1997 then consistent decrease down to 8.5% in 2001).

Table 2: decomposition and relative effect of policy change

Country	Gini on disposable income			contributions of			
	data 0 / policy 0	data 0* / policy 1	data 1 / policy 1	policy change	in %	change in income distribution	in %
France	29.9	29.5	29.2	-0.39	-1.3%	-0.32	-1.1%
Germany	26.5	26.6	26.8	0.10	0.4%	0.17	0.6%

Gini on equivalized income (modified OECD scale) - zeros are included and treated as 10E-9
Year 0 is 1995 for France and 1998 for Germany, year 1 is 2001 for both countries
** Disposable income for year 1 simulated on the basis of year 0 incomes, nominally adjusted to year 1 levels (hence keeping year 0 underlying distribution constant)*

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Appendix 2: EUROMOD[48]

EUROMOD is a tax-benefit microsimulation model covering the countries of EU15 in a comparable and consistent manner. The analysis using EUROMOD therefore covers only EU15. 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.[49] 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.[50] 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.

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[48] 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.

[49] 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.

[50] This process is documented in EUROMOD Country Reports. See: http://www.iser.essex.ac.uk/msu/emod/countries/

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).

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.[51] 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	2000/1	annual 1999/2000
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

[51] 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).

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Appendix 3: definitions of public pensions, means-tested benefits and non-means-tested benefits used in EUROMOD, by country

PUBLIC PENSIONS

AUSTRIA

minimum pension (ausgleichszulage)
minimum pension for civil servants (ergaenzungszulage)
child bonus for pensioners (kinderzuschuss)
child bonus for civil service pensioners (kinderzulage)
civil servant's pension (ruhebezuege)
early retirement pension (vorzeitige alterspension)
invalidity pension (invalidenpension)
old age pension (alterspension)
other old age related schemes or benefits
survivor pension (witwen- u. waisenpension)

BELGIUM

anticipated pension (prépension)
other public pension income
retirement pension (pension de retraite)
survivor pension (pension de survie)

DENMARK

disability pension – basic amount plus supplement (taxable, tapered)
disability pension – special supplement plus incapacity amount (taxable, not tapered)
disability pension – invalidity amount plus 'augmentation' plus special benefit for disabled with substantial earnings (not taxable, not tapered)
old age pension
supplementary pension
survivor pension

FINLAND

gross state pension income
national (basic) pension increases

FRANCE

minimum old age pension (minimum vieillesse)
pension benefits
alimony (pension de reversion)
pre-retirement pension

GERMANY

own old age pension
miners' own pension
civil servants' own pension
farmers' own pension
widow/orphan old-age pension
miners' widow/orphan pension
civil servants' widow/orphan pension
farmers' widow/orphan pension
accident widow/orphan pension

GREECE

farmers' pension
ekas social solidarity benefit
state pension
invalidity pension (contributory)
state survivor's pension

IRELAND

deserted wife contributory benefits
occupational injury contributory pension
old age contributory benefits
retirement contributory benefits
survivor's contributory benefits

ITALY

supplementary pension
excluding supp. pension: inps (national institute of social insurance): old age, retirement pension
excluding supp. pension: inps: disability pension

excluding supp. pension: inps: widow's pension

excluding supp. pension: ipat (institute of treasury-managed insurance): old age, retirement pension

excluding supp. pension: ipat: disability pension

excluding supp. pension: ipat: widow's pension

excluding supp. pension: state: old age, retirement pension

other pension

foreign pension

state widow's pension

LUXEMBOURG

disability pension

early retirement pension

pension received from employment in private sector

pension received from employment in public sector

private sector reversion pension

public sector reversion pension

NETHERLANDS

state pension

survivors' benefit (anw) (formerly widow benefit)

PORTUGAL

old-age insurance

survivors related benefits

invalidity pension

SPAIN

old age pension supplement

widow pension supplement

old-age (insurance an early retirement)

survivors (widows or orphans, insurance)

SWEDEN

other taxable pensions

non-taxable pension

UK

retirement pension
state earnings related pension (serps)
widow benefit

MEANS-TESTED BENEFITS

AUSTRIA

maternity allowance supplement (zuschuss zum karenzgeld oder zur teilzeitbeihilfe)
new born health check bonus (mutter-kind-pass-bonus)
provincial family bonus (familienzuschuss der bundeslaender)
social assistence (sozialhilfe)
small children benefit (kleinkindbeihilfe)
unemployment benefit (notstandshilfe)
housing benefits
Simulated Long term maternity benefit Kaernten ("Kaerntner Kinderbetreuungsgeld")

BELGIUM

income support (revenu minimum de moyen d'existence, minimex)
income support for the elderly (revenu garanti aux personnes agees)

DENMARK

housing benefit
day care subsidy
housing allowance
social assistance

FINLAND

housing benefit
home child care benefit
social assistance benefit
pensioners housing benefit

FRANCE

disabled benefit (allocation aux adultes handicapes)
young children allowance (allocation pour jeunes enfants)
education related family benefits (allocation de rentree scolaire)
family complement (complement familial)
housing benefits (allocation logement)
lone parent benefit (allocation de parent isole)
minimum income (revenu minimum d'insertion)

GERMANY

housing benefit
federal child raising benefit (bundeserziehungsgeld)
direct housing support (wohneigentumsfoerderung / eigenheimzulagengesetz)
provincial child raising benefit (landeserziehungsgeld)
social assistence (sozialhilfe)

GREECE

large family benefit
third child benefit
unprotected child benefit
social pension

IRELAND

housing benefit
blind persons non-contributory benefits
carer's non-contributory benefits
short term disabled contributory benefits
long term disabled non-contributory benefits
deserted wives non-contributory benefits
family income supplement
long term invalidity contributory benefits
lone parent non-contributory benefits
long term unemployed non-contributory benefits
old age non-contributory benefits
pre-retirement non-contributory benefits
short term unemployed non-contributory benefits

social minimum non-contributory benefits

widow's non-contributory benefits

Home Carers Tax Credit

ITALY

family allowances for single persons with no children

family allowances for single person with children

family allowances for couples with no children

family allowances for couples with children

LUXEMBOURG

education allowance (allocation d'éducation)

housing benefit

maternity allowance (allocation de maternité)

social assistence (minimum income)

NETHERLANDS

housing benefit

ioaw-sab: for unemployed aged 50-64 and disabled unemployed younger than 64 with children

general social assistance for families with children

ioaw-sab: for unemployed aged 50-64 and disabled unemployed younger than 64 without children

general social assistance for families w/o children

general social assistance, self-employed (ubz)

PORTUGAL

child benefits

income supplement to ensure minimum income

old-age social pension

social assistence

SPAIN

child benefit

old age social assistance

unemployed social assistance for those with family charges

social assistance benefits

SWEDEN

housing benefits
housing benefit supplement for pensioners
social assistance

UK

housing benefit
council tax benefit
working family tax credit
income support

NON MEANS-TESTED BENEFITS

AUSTRIA

child benefit (familienbeihilfe)
addition to child benefit for disabled children (erhoehte familienbeihilfe)
caring benefit (pflegegeld)
child care benefit (kinderbetreuungshilfe)
maternity allowance / allowance for parental leave (wochengeld / karenzgeld)
sickness benefit (kranken- und unfallversorgung)
unemployment payment (arbeitslosengeld)
student payments
other irregular lump sum benefits

BELGIUM

child benefit
child birth benefit
career break allocation (indemnité de pause-carrière)
allocation for handicaped persons (allocations aux handicapés)
learning allocation (allocation de formation)
long sickness allocation (allocation d'invalidité)
professionnal illness allocation and work accident allocation (indemnité de maladie professionnel et indemnité d'accident du travail)
allocation from a special funds (allocation du fonds de sécurité d'existence)
short-sickness allocation (allocation de maladie)

unemployement benefit (allocation de chômage)
young unemployed allocation (allocation d'attente)
student payments
housing benefits
other irregular lump sum benefits
maternity payments

DENMARK

student payments
maternity payments
dk: simulated unemployment benefit
dk: child benefit (incl. "ordinary", "extra", "special" and "multi children" benefit)
family allowance
early retirement benefit ('efterløn')
sickness benefit

FINLAND

student payments
other irregular lump sum benefits
maternity payments
child benefit
lone parent child benefit
basic unemployment benefit
earnings related unemployment benefit
labour market support (an unemployment benefit)
military injury compensation
sickness benefit
training subsidy for unemployed

FRANCE

student payments
other irregular lump sum benefits
maternity payments
family allowance (allocation familial)
education related family benefits (aide a la scolaire)

social benefit for dependent elderly adults (aide aux personnes agees dependentes (originally apad))

social benefit for special education (allocation d'education speciale…destinee aux enfants handicapes)

social benefit for parental education (allocation parental d'education)

social benefit for lone parents with certain characteristics (allocation de soutien familial)

invalidity pension

invalidity benefit

aide sociale

war pension

help for child guard (aide a la garde d'enfant)

gross unemployment compensation

GERMANY

student payments

other irregular lump sum benefits

child benefit

post natal benefit for non-earning mothers (entbindungsgeld)

unemployment payment

unemployment benefit

retraining payment

old atransition payment

war victims' own pension

accident own pension

war victims' widow/orphan pension

nursing home insurance payment (pflegeversicherung)

GREECE

student payments

housing benefits

other irregular lump sum benefits

maternity payments

oaed child allowance

civil servant child allowance

disability benefit (non-contributory)

unemployment benefit

IRELAND

student payments
other irregular lump sum benefits
child benefit
occupational injury disablement contributory benefits
maternity contributory benefits
orphan's contributory benefits
unemployed contributory benefits
back to work allowance
constant attendance allowance
other welfare allowances
unemployability supplement

ITALY

student payments
housing benefits
other irregular lump sum benefits
maternity payments
social insurance unemployment cig
social insurance unemployment compensation
state disability non contributory pension
inail disability non contributory pension
social insurance unemployment mobility benefit
social security: national administrations
social security: regional administrations
social security: provincial administrations
social security: municipal administrations
social security: local health centre
social security: other local p.a.
social security: other private institutions
social pension (inps)*
war pension

LUXEMBOURG

student payments
other irregular lump sum benefits

maternity payments

child benefit (family benefit)

prenatal–; postnatal–; and child birth allowance (allocation prenatale; allocation postnatale; allocation de naissance)

handicapped child benefit (allocation speciale supplementaire)

annual beginning of school allowance (allocation de rentrée scolaire)

seriously disabled persons (allocation speciale pour personnes handicapés)

care benefits

other benefits from the fonds national de solidarité (fns)

orphan allowance

other public benefits

permanent accident benefit

unemployment benefit

NETHERLANDS

student payments

other irregular lump sum benefits

maternity payments

dutch child benefit

basic disability benefit (aaw)

disability insurance (former civil servants)

dutch disability insurance (wao)

unemployment benefit for civil servants

unemployment benefit(ww)

sickness insurance (zw)

PORTUGAL

student payments

housing benefits

other irregular lump sum benefits

maternity payments

unemployment related benefits

sickness benefits

family benefits

SPAIN

student payments
housing benefits
other irregular lump sum benefits
unemployment insurance benefit
sickness and invalidity benefits
family benefits

SWEDEN

other irregular lump sum benefits
child benefits
parental allowance
swbensjp='sick benefits'
swbenunt='unemploment benefits total'
resid. tax free educational benefits
residual tax-free benefits
university grants
study grants for high school

UK

student payments
other irregular lump sum benefits
maternity payments
job seekers allowance (simulated contributory unemployment benefit)
child benefit
attendance allowance
disability working allowance
invalid care allowance
incapacity benefit
industrial injury
mobility allowance (now "disability living allowance (mobility)")
severe disablement allowance
statutory sick pay
training allowance
war pension
pensioner's annual heating allowance

6. DYNAMICS OF POVERTY IN THE EU15 (1994-2001)[52]

Introduction

This study provides an overview of the dynamics of poverty in the EU 15 Member States using data from the European Community Household Panel (ECHP) for the years 1994 to 2001. A dynamic analysis of poverty complements the static analysis of the incidence of poverty and its depth in a given year, since it focuses on the impact of the *time* spent in different states (in poverty vs. non poverty) on the transitions into and out of such states, on the factors underlying such transitions and on the policy instruments that can affect the persistence of these states.

The methodology of the study of poverty dynamics is now well consolidated. It developed originally from an approach initiated by Bane and Elwood (1986), which focused on the identification of a number of hierarchically ordered and mutually exclusive "trigger events" associated with transitions into and out of poverty. The pioneering work by Bane and Elwood was improved by Huff-Stevens (1989), who was the first to model the time spent in (or out of) poverty as a function of both observable and unobservable individual characteristics and to study their influence on the probability of leaving poverty (or falling back into it).

The study of poverty dynamics is relevant for both researchers and policy makers to better understand issues like: how the expected time spent in poverty by different household types is affected by events such as the birth of a new child, the loss of a job by the head of the household, divorce, the death of a spouse or a reduction increase in income from benefits.

The analysis below attempts to address such issues. The first section presents the data and some basic definitions which are adopted; the second illustrates some key descriptive statistics associated with the dynamics of poverty in the EU15 Member States; the third describes the methodology adopted for estimating the duration of poverty; the fourth presents the main results of such estimations and the last section sets out conclusions.

DATA AND DEFINITIONS

The analysis here is based on the ECHP, a longitudinal survey based on a standardised questionnaire involving annual interviews with a representative panel of households and individuals in them on household and personal incomes as well as a range of other features. The ECHP includes yearly data for some 60,500 households for the period 1994-2001. For the

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UK, Germany and Luxembourg, data from, respectively, the British Household Panel, the German Socio-economic Panel and the Luxembourg Household Panel are used in the analysis. (For an overview of the main features of the ECHP, including sample attrition and rotation, see Nicoletti and Peracchi (2002).

The definition of poverty adopted here the standard one of equivalised household income below 60% of the national median, with all household members assigned the same equivalised income level (i.e. assuming that income is equally shared within the household). The modified-OECD equivalence scale is used for equivalisation purposes (i.e. weights of 1 being assigned to the household head, 0.5 to every other adult in the household and 0.3 to each child below 14). Given the nature of the data and the methodology of income measurement in the ECHP, poverty (or out-of-poverty) spells lasting less than a year cannot be observed and it is worth emphasising that in the reality, transitions into and out of poverty can occur during periods shorter than a year.

Descriptive results of poverty duration (1994-2001)

The first set of descriptive results presented relate to the number of non consecutive years spent in poverty out of the 8 years for which panel data are available. These are presented in Table 1. The total population is therefore divided between those who never experience poverty over the whole period and those who experience poverty at least once. This latter group is further broken down between individuals who have been in poverty for just one year, for between 2 and 4 years and for five years or more, so providing a measure of the persistency of poverty.

The results suggest that countries with the highest poverty rates are also the countries with the highest incidence of persistent poverty. In Southern European countries (mainly Greece, Spain, Portugal) nearly half of the population experienced poverty at least once over the period considered and around 15% of the population for at least five out of the 8 years. By contrast, in countries such as Finland, Denmark, Netherlands and Luxembourg, poverty exhibited a more transient pattern, with nearly two-thirds of the population never poor and with an incidence of persistent poverty only just over a third of that in the three Southern European countries.

It is worth noting that an analysis based on a balanced panel might, however, be affected by some shortcomings. In particular, the figures are not adjusted to take account of sample attrition and since existing empirical evidence has shown that poor individuals are more likely to drop out of longitudinal panels than the non poor, one can expect shorter poverty spells to be under-represented in a balanced sample.

This type of measure is akin to a commonly used indicator of poverty persistence included among the "Laeken Indicators", which defines this as affecting individuals who have income below the poverty line both in the survey year and in two of the three preceding years.

Table 2a and Table 2b show the same information as Table 1 broken down for two population subgroups at particular high risk of social exclusion, the elderly (those aged 65 or more and children (those aged 0-15). For these subgroups, differences across countries are more marked. Denmark, Finland and Sweden are the only countries for which the proportion of children never experiencing poverty is greater than the corresponding proportion of the total population. For the elderly population, the composition of the best performing countries is different, with the Netherlands, Luxembourg, Italy, Spain and Sweden being those in which the proportion of the elderly never experiencing poverty exceeds that of the total population, while in Finland it is substantially smaller.

There are two other perspectives from which it is possible to analyse chronic poverty. One, for which the results are shown in Table 3, focuses on a long-term definition of income obtained by averaging real incomes[53] across the 8 waves and computing poverty indicators based on the distribution of the average income so calculated This is similar to the approach adopted by Rodgers and Rodgers (1993) and Valletta (2006), the rationale being that smoothing incomes over time might provide a better approximation of permanent income than simply the income for a single year. From this approach, UK and Portugal stand out as the countries with the highest long-run child poverty rates. The ranking in terms of persistent elderly poverty is different from that in Table 2b in the case of Denmark, but in this case there is a significant questionmark over the reliability of the data on which this analysis is based. Both Danish national data and the statistics collected by the EU-SILC indicate substantially lower levels of poverty among the elderly than the ECHP.

The other exercise is to look at the evolution of poverty when the poverty line is anchored at one point in time. In this case, we consider the poverty line fixed at the 1994 level and compare the dynamics of real incomes (inflation-adjusted) over time with this threshold. The advantage of such an exercise is to highlight – from a comparison with Table 1 – the cases where real incomes decline over time. Table 4 shows that this is the case for Greece, for example, where the number of people never experiencing poverty falls by half when a fixed 1994 poverty line is taken. Portugal also experiences a worsening, which is reflected in addition by a corresponding increase in the incidence of persistent poverty (income below the poverty line for at least 5 years). On the other hand, countries such as Italy, Germany and Austria seem to have

[53] Real equivalised household incomes have been obtained by deflating yearly equivalised household income at current prices by a consumer price index at 1995 constant prices.

experienced a moderate improvement according to this measure, which might however be affected by economic developments and shocks affecting different countries asymmetrically.

Finally, Table 5 reports mean poverty duration for different subgroups of the population, averaging the number of years spent in poverty only for those for whom the beginning of a poverty spell can be observed. Table 6 shows instead the composition of poverty spells by different durations for those who have experienced poverty; the table reflects the patterns with which poverty is experienced and shows, not surprisingly, that countries with a high incidence of persistent poverty normally have longer average poverty spells. Spain, however, is an exception, since here above average incidence of persistent poverty is combined with relatively short spells of poverty.

Estimating poverty spells: methodology

The methodology adopted below follows closely the work by Jenkins and Rigg (2001) and Devicienti (2001) and is based on the concept of a hazard rate, which can be intuitively considered as a conditional probability: of leaving poverty at time t conditional on having been in poverty until time t-1 and on the first poverty spell being observable. The relevant sample considered consists of all individuals of working age (above 15) beginning a non left-censored spell[54].

A number of explanatory factors likely to influence exit from poverty conditional on past poverty experience are considered, and we focus on their joint impact on the average poverty duration in different countries:

i) demographic factors: gender, age, a series of dummy variables to indicate whether individuals live alone; in a 2-person household, where both individuals are aged below 65, or in a two-persons household, where one or both are 65 or older; a number of dummies to indicate the individual's marital status and a dummy for primary education being the highest level attained;

ii) labour market factors: a dummy variable capturing economic activity status, specifically being employed as opposed to non employed and a dummy to take account of whether there are other people employed living in the household;

[54] Left-censored spells are those spells whose beginning cannot be observed in the sample during the period of observation. Their treatment is problematic especially in short panels as the ECHP, since it is difficult to infer the true time spent into poverty *before* the observation period by individuals who are observed poor the first time they appear in the sample. Therefore for estimation purposes it is standard practice in the presence of short panels, to exclude left-censored spells from the sample of interest.

iii) non-monetary factors, such as health factors: a dummy to indicate whether the individual has health problems, illness or disability; a dummy for tenure status, indicating whether the person rents or owns their current residence;

iv) factors relating to the composition of household income (income from work, from benefits or from capital or other private sources) and its change over time.

Main results

By estimating the hazard (or risk) of leaving poverty during each year of the poverty spell, we can obtain for different types of individuals the expected time that will be spent in poverty at the beginning of the spell. The results of this exercise are presented in Figure 1, where we report the mean poverty duration for selected household types potentially at risk of social exclusion (single women, elderly – aged 65 or over – couples, unemployed persons with primary education and households with two or more children) in comparison with couples without children[55].

The main results include the following:

- Single women in Ireland display a striking long expected poverty duration (over 3 years) once they enter poverty compared with both those in other countries and with other population subgroups, while nearly all other countries considered exhibit mean poverty duration of between one and one and a half years.
- Unemployed persons with low educational attainment are the second population subgroup with the highest expected poverty duration, in particular in Belgium (over two years) followed by, France and Finland.
- Among households without children, couples where at least one household member is aged 65 or above, exhibit longer (between two and three times longer) expected time in poverty than younger couples in all the countries considered, the most severe cases being Ireland, UK and Portugal, countries also showing high poverty head-count rates among the elderly.

Conclusions

This analysis above gives an overview of the time spent in and out of poverty by different sections of the population according to different measures of poverty persistence and chronic

[55] We do not report the details of the estimation, since this would imply listing for each country the coefficients of 30 explanatory variables. Estimation details will be provided in a separate Appendix.

poverty for the EU 15 Member States in the second half of the 1990s. Using a consolidated methodology for analysing the dynamics of poverty, it also gives estimates of the mean duration of poverty in the different countries for different types of households entering poverty.

7. WHY ARE THE POOR POOR? THE ROLE OF LABOUR MARKET AND DEMOGRAPHIC FACTORS, INCLUDING HEALTH AND IMMIGRATION[56]

Introduction

Why are the poor poor? The main factors which are likely to influence the level of household income and the risk of poverty can be listed as follows:

The level of earnings, and labour market participation.

Lack of employment, and in particular unemployment tends to have a high risk of poverty. On the other hand, employment as such is no guarantee against poverty either, as low paid workers might also be exposed to the risk of poverty. Earnings depend on hourly wages and hours worked, and labour economics has traditionally focussed on the latter. A related important topic is the employment of women, and the gender wage gap.

Social security system, social assistance and the tax system

Income redistribution by the State typically includes the provision of cash benefits and the levying of taxes, including taxes on incomes and taxes on consumption. Although recorded as elements of the tax system, tax allowances, which are actually unpaid taxes, may be regarded as alternatives to cash benefits. For example, support to families may be provided both as cash benefit or as tax credit. The fiscal and distributional effects of tax allowances, however, are often neglected by policy-makers. (The redistributive effect of taxes and benefits on incomes and the risk of poverty is discussed later, in chapter 6, in this Report).

Household composition

The incomes of members other than the head of the household play a crucial role in raising household income above the poverty line. Key questions in this regard concern whether both the spouse or partner of the household head is employed or not; whether the dominant household model is a dual or single earner one; whether and how far unemployment is concentrated among specific households, creating a division between “work-poor” and “work-rich” households.

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Needs

Greater needs imply that more resources are necessary to avoid deprivation. Specific needs, such as health problems, disability, a large number of children and so on, affect the basic minimum resources necessary to avoid deprivation. The concept of poverty currently used to identify those at risk is income based and takes explicit account only of differences in household size. Alternative, outcome-based measures can take account of differences in needs. This issue is considered in more detail later in the report.

The analysis here explores the relative importance of demographic and labour market factors as causes of (relative) poverty – ie 1) and 3) above. Earlier sections of the report have shown that the unemployed and the economically inactive tend to have a relatively high incidence of poverty, along with lone parents and households with three or more children. The analysis presented there, however, does not shed light on the net effect of these factors taken together.

Conceptual framework: the measure of poverty and its implications for the analysis

The measure of poverty used throughout this report is household based. It is – often implicitly – assumed that individuals living in a household share their resources with each other, and therefore the risk of poverty concerns the household as a whole: a household can be poor or non-poor, and if the household is poor, all of its members are poor. "For better, for worse": couples and children share their fate. From the point of view of understanding the causes of poverty, this suggests that an individual's income level depends on the structure of the household in which they live and the incomes of other members. The analysis here, therefore, starts with the household level. Later, analysis of individuals also considers household factors.

The measure of poverty is resource-based. Poverty is interpreted as a lack of income, rather than a lack of particular goods or access to public services. The focus is on assessing resources rather than outcomes. Outcome-based concepts of equity include capabilities, equality of opportunity, and social exclusion (Sen 1985, for a review see Burchardt 2006). One of the arguments in favour of using capabilities is that it accounts for differences in needs, in other words, the varying ability of individuals to convert resources into outcomes. A person with disabilities, for example, needs more resources than someone without to move around freely, or to achieve a minimum standard of living.

There is growing interest among policy-makers of these concepts. The German government's National Action Plan on Poverty and Social Inclusion adopted a capabilities framework (European Commission 2003). The UK Government's Social Exclusion Unit (set up in 1997) and the recent appointment of a Minister for Social Exclusion also reflect a shift in the focus of government

policies. Similarly, the Human Development Reports by the United Nations Development Programme present a wider view on development and poverty. The forthcoming 2006 publication of the global report, for example, will focus on access to water and its impact on inequalities.

Needs seem to be relevant for the study of poverty. Even though poverty is a resource-based measure, there are two particular aspects of needs which are explicitly taken into account: household size and ill health. Bigger households need more resources in order to achieve the same standard of living as smaller ones, though the relationship between the income of different sized households and living standards is not a linear one. Economies of scale as households expand are allowed for through the use of equivalence scales. We also account for the impact of ill health on poverty. This is in the spirit of the pioneering approach of Zaidi and Burchardt (2005), who estimated equivalence scales for disability.

The measure of poverty is income-based. It considers only cash components of income, ignoring social services, as well as access to health care and education, and wealth, in the form for example of the value of housing. Access to these services, the level of user charges and the effective use made of these services might well vary significantly across households and countries. This is especially relevant for comparisons of living standards both nationally and internationally and could be taken into account if an outcome-based measure of inequality were used.

Data and methodology

The data used come from the first release of EU-SILC (Community Statistics on Income and Living Conditions), which provides cross sectional multidimensional micro data on income poverty and social exclusion. Fourteen countries are included in the sample: AT, BE, DK, EE, ES, FI, FR, GR, IE, IT, LU, NO, PT and SE[57]. Norway, though not a member of the European Union, is included in the analysis as it may still provide an interesting comparison.

The target population of EU-SILC is all persons living in private households within the national territory of the country concerned. People living in collective households and institutions are excluded from the target population. The survey includes information on households and demographic information on all their members. Income data and other detailed information is collected from household members aged 16 and over. The income reference period is 1 January

[57] EU-SILC was launched in 2004 in 13 MS (all except NL, DE, UK and the 10 new MS except EE), plus NO and IS. This first release of the cross sectional data refers mainly to income reference year 2003 and fieldwork carried out in 2004. EU-SILC will reach its full scale covering the 25 MS + NO and IS in 2005. Later, TR, RO, BG and CH will also be included. The current release, therefore, provides cross sectional data for only a limited set of countries.

– 31 December 2003 for all countries, except Ireland, where the period is 12 months prior to the date of interview.

The launch of EU-SILC foresees a transition period up until 2007 during which national statistical institutes can adapt their methods to a common standard in relation, for instance, to imputed rent, employer social contributions and income components measured in gross terms.

The sample for the first survey covers 114.771 households and 235.033 individuals, which falls to 192.071 in the regressions due to the exclusion of missing values. The number of households included in the different countries vary between about 3,500 (Luxembourg) and 24,000 (Italy).

Weights have been used to take account of the units' probability of selection, non-response and, as appropriate, to adjust the sample to the distribution of households and individuals in the target population as a whole.

The methodology adopted entails estimating how the probability of being poor (at both the individual and household level) is affected by demographic and labour market characteristics together with specific individual attributes. Simple bivariate associations of individual or household level characteristics with the risk of poverty as presented in section on trends above do not, in fact, enable account to be taken of the joint effect of a larger number of observable characteristics on poverty. Adopting a regression approach therefore has the advantage of allowing account to be taken not only of the effect of single explanatory factors on the probability of individuals or households having income below the poverty line, but also the combined effect of different factors. It accordingly enables answers to be given to questions such as: what is the probability of having income below the poverty line for a low-educated young woman with children in different countries, given her age, household circumstances and so on?

The *household level analysis* below examines, the relative importance of labour market and demographic factors on the poverty of households. Demographic factors are measured in terms of household composition and labour market factors by work intensity within the household.

The estimated equation takes the form:

$$Povertyi = f(hhtypet, workintensityi)$$

Povertyi is a dummy variable, indicating whether or not household has income below the poverty line (below 60% of the national median), hhtypei is a series of dummy variables, indicating the specific household type, workintensityi is a categorical variable, indicating either none, partial employment or full employment of members of the household of working age.

The approach adopted hereby is based on the EUROSTAT definition of work intensity: the work intensity of the household is defined by the ratio between the number of months spent in employment during a year by household members in working age (i.e. aged 16-64) and the number of months during which household members are observed in an economically active status. Therefore, a work intensity index equal to 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 in working age are employed during the full length of the year, while a work intensity index between 0 and reflects a situation in which either only one of the adult household members is working for the full year length or all household members are working but not for the full-length.

Probit regressions are estimated for the total sample, including all 14 countries, and then for individual ones.

Most model specifications include country dummies. These account for all country-specific characteristics, including institutional, demographic, and cultural characteristics, some of which may be unobservable. The interpretation of these country coefficients is therefore not straightforward, because they do not only refer e.g. to the role of the state in alleviating poverty, but include many other factors.

The output tables present both the estimated coefficients and the marginal effect, that is the change in the probability of poverty for an infinitesimal change in each independent, continuous variable and for a discrete change in the dummy variables. Given their straightforward interpretation as probability changes, marginal effects will be discussed, rather than the coefficients.

The relationship between poverty on the one hand, and household structure or labour market involvement, on the other, needs to be interpreted as a correlation rather than as a causal relationship. This is due to the nature of the data, which relate to a single point in time only. In other words, there is no certainty that household composition and work intensity are endogenous variables. While there is considerable evidence that household composition and work intensity determine the risk of poverty, to some extent the direction of causation might also run in the reverse direction as well. Poverty might lead to change in household structure (e.g. as a result of divorce), or it might lead to long-term unemployment. In a few years time, with the use of longitudinal data from EU-SILC, it should be possible to analyse the causal relationship between household characteristics and poverty, as well as the effect of external shocks and policy changes on poverty.

Secondly, in the *individual level analysis*, we control for a larger set of factors which vary between members of the same household and can therefore affect their individual risk of poverty. These factors include gender, age, educational attainment and detailed labour market status. This type of analysis therefore extends the household-level analysis adding robustness to the findings as regards the causes of poverty. The larger in fact the number of significant explanatory variables included in the specification, the lower the risk that the estimation results are affected by potentially relevant variables which have been omitted.

The estimated equation takes the form of:

$$Poverty_i = f(emp_i, hhtype_i,, sex_i, age_i, edu_i, health_i)$$

Poverty is a dummy variable, indicating whether or not individual i has poverty-level income, empi indicates labour market status and hhtypei is a series of dummy variables, indicating the specific household type, sexi is a dummy, taking the value of 1 when i is female, agei is a categorical variable, edui is also a categorical variable, indicating the educational attainment of individual i,. Healthi refers to health problems which hamper daily activities.

Two specific themes are also explored in greater depth: ill health and immigrant status.

For ill health, three alternative definitions are considered: (1) self-assessed health on a scale from "very good" to "very bad", (2) the prevalence of chronic illness, and (3) health problems which hamper daily activities. Immigrant status is defined in two alternative ways: (1) a person with citizenship of another country, (2) someone is born elsewhere than the country of residence. The analyses compare the specific impact of these alternative measures, and contrast them to the previously used demographic and labour market variables.

Causes of poverty at the household level

FOURTEEN EUROPEAN COUNTRIES

Results of the probit regressions show that labour market participation has a major effect on the risk of poverty: when none of the working-age members of a household are in employment, the poverty risk of the household increases by 36-38%, after controlling for differences in household composition and country specific effects. This suggests that social benefits, including unemployment insurance and social assistance, often do not prevent people from falling into poverty. This also seems to be the case, though to a lesser extent, when only one household member is employed. The partial employment of household members increases the poverty risk by 15-17% as compared with the reference group, where all members of working age are in full-time employment.

Table 1. Poverty risk among households, probit estimates

	(1)		(2)		(3)	
	Coefficients	Marginal effects	Coefficients	Marginal effects	Coefficients	Marginal effects
Household composition						
2 adults, no children, <65 yrs	-0.573**	-0.091**	-0.922**	-0.129**	-0.585**	-0.088**
	(29.13)	(29.13)	(23.63)	(23.63)	(29.33)	(29.33)
2 adults, no children, >65 yrs	-0.587**	-0.083**	-0.939**	-0.108**	-0.685**	-0.086**
	(22.35)	(22.35)	(21.86)	(21.86)	(25.57)	(25.57)
Other hh no children	-0.610**	-0.089**	-1.218**	-0.134**	-0.767**	-0.098**
	(26.56)	(26.56)	(19.27)	(19.27)	(32.37)	(32.37)
Single parent, 1+ children	0.383**	0.091**	-0.091	-0.017	0.366**	0.083**
	(15.06)	(15.06)	(1.73)	(1.73)	(14.21)	(14.21)
2 adults, 1 child	-0.333**	-0.056**	-0.887**	-0.115**	-0.410**	-0.063**
	(15.16)	(15.16)	(15.34)	(15.34)	(18.32)	(18.32)
2 adults, 2 children	-0.127**	-0.023**	-0.827**	-0.113**	-0.198**	-0.034**
	(6.21)	(6.21)	(11.72)	(11.72)	(9.48)	(9.48)
2 adults, 3+ children	0.034	0.007	-0.811**	-0.100**	0.037	0.007
	(1.31)	(1.31)	(9.48)	(9.48)	(1.42)	(1.42)
Other hh with children	-0.209**	-0.037**	-1.001**	-0.114**	-0.344**	-0.053**
	(8.46)	(8.46)	(12.43)	(12.43)	(13.59)	(13.59)
Hh size, ln			0.507**	0.099**		
			(10.36)	(10.36)		
Work intensity						
Not a single adult working (WI=0)	1.301**	0.381**	1.300**	0.380**	1.279**	0.364**
	(79.57)	(79.57)	(79.40)	(79.40)	(76.82)	(76.82)
Not fully working (0<WI<1)	0.765**	0.167**	0.759**	0.165**	0.733**	0.153**
	(54.02)	(54.02)	(53.48)	(53.48)	(50.60)	(50.60)
Country fixed effects	No	No	No	No	Yes	Yes
Constant	-1.404**		-1.403**		-1.292**	
	(91.77)		(91.68)		(68.40)	
Pseudo R^2	0.1283		0.1298		0.1532	
Observations	87419	87419	87419	87419	87419	87419

Source: Authors calculations based on EU-SILC 2004

Countries include: AT, BE, DK, EE, ES, FI, FR, GR, IE, LU, NO, PT, SE

Notes:

Dependent variable: household in poverty, using the 60% of median income as a threshold

Absolute value of z statistics in parentheses

* indicates that estimates are significant at 5% level ; ** significant at 1% level

Reference categories: Work intensity=All working age persons in the household are fully employed (WI=1), Household type=One adult without children

Household composition also explains part of the variation in poverty risk, over and above the impact of the labour market involvement of household members. Compared with the reference group of single-person households, most other households have a lower risk of poverty, with the exception of single parents. Being a single parent increases the probability of having income below the poverty line by 9%. In addition, as expected, household size is positively

correlated with the probability of them having poverty level income: larger households are more likely to be in this position.

Institutional or cultural differences across countries are also expected to affect the influence of demography and labour market status on poverty. One specification of the model includes a series of dummy variables for each country (see column (3)). As Table 1 shows, this does not change the results qualitatively. At a multi-country level, the relationship between household work intensity and household composition. on the one hand, and the risk of poverty, on the other, are not altered. The results indicate how the risk of poverty varies between countries. Compared with the reference country, Italy, households in most countries tend to have a lower risk of poverty (see Table A2 in the appendix, which shows details of the estimation summarised in Table 1). The poverty risk is higher only in four countries out of the fourteen: in Estonia, Spain, Portugal, and Greece. This specification, however, allows a single level difference per country and does not explore whether these country effects are specific to the labour market situation or to household composition (interaction effects). These effects are explored in the next section.

EVIDENCE IN SPECIFIC COUNTRIES

In order to analyse country-specific variations in the link between poverty, on one hand, and household structure and labour market involvement, on the other, the above analysis is repeated for each country separately. The estimated probit regressions, therefore, have the same specification as before. Demographic factors are measured as household composition, and labour market involvement is measured as work intensity within the household.

The following graphs present the estimated marginal effects for social groups with specific demographic or labour market characteristics, controlling for the impact of the other variables. Positive marginal effects indicate a higher poverty risk for the specific group, while negative marginal effects indicate a lower probability of having poverty-level income. This provides a possible way of comparing differences in the risk of poverty across countries.

Labour market involvement, or rather the lack of it, seems to bring a much higher risk of poverty than, for example, having a large family. Moreover, the scale of the risk varies markedly across countries. Jobless households face the highest risk of poverty in Ireland, Spain and, to a lesser extent, in France and Italy. On the other hand, in countries such as Finland, Luxembourg, Sweden and Norway, jobless households are relatively well protected by the State from the risk of poverty and face only about a 20% higher risk than households where all working-age members are employed. The explanation for these cross-country differences is not straightforward. Although some of the high-risk countries, Italy and Spain, tend to have low

replacement rates for long-term unemployed, this is not the case for some other high-risk countries, such as France and Ireland, which tend to be generous with the unemployed, according to OECD calculations[58]. On the other hand, countries which were labelled as low-risk tend to have high average net replacement rates for the long-term unemployed, which may explain their advantageous situation.

As seen above, the poverty risk of households declined significantly when at least one household member is employed. The poverty risk ranges between 3% and 24% for these households, other things being equal, with Denmark scoring lowest and Estonia the highest. As compared with the poverty risk of entirely and partly jobless households, the risk is at least halved in the majority of countries. The relative reduction is 60% or more in Denmark, Ireland, Belgium, Spain France, and Finland. Since in Finland and Denmark the poverty risk of jobless households is relatively low and in the other countries relatively high, this suggests that it is not necessarily in countries with high-poverty jobless households where partly employed households fare much better.

The net effect of household composition on the risk of poverty tends to be lower than that of involvement in employment once e work intensity of t households is controlled for. Single parent households have a 10% higher chance of having poverty-level income poor than single households in Belgium, Estonia, Spain, France, and Italy. In Spain and Greece, however, the effect is around 20%. Interestingly, some of the results for the total sample of countries do not hold for specific countries. In Table 1 above, large families (2 adults, 3+ children) did not have a significantly different poverty risk than single persons, and “traditional” 2-parent 2-children families had a lower risk. In the country-specific analysis, large families are found to have a much greater risk in some countries, including Greece and Spain, and “traditional” families are more exposed to poverty in Ireland.

An issue for further research is the relationship between low pay and the risk of poverty. While low pay is a potential source of i poverty, countries vary a great deal in this respect, partly according to the structure of the labour market. Wage determination policies, including the role of trade unions and minimum wage policies strongly affect the prevalence of low pay. Not all low-paid workers, however, are poor. Using UK data, Gardiner and Millar (2006) highlight the importance of family structure in helping low-paid workers avoid the risk of poverty, in relation to working long hours or social transfers.

[58] Average of Net Replacement Rates over 60 months of unemployment, 2002 (OECD 2004)

Causes of poverty among individuals

The dependent variable, the risk of poverty, is measured at the household level. The estimates show how the probability of having a poverty level of income depends on specific individual and household characteristics and the relative importance of these, when other factors are held constant. The estimates are based on the sample of individuals in the fourteen countries. Where relevant, household characteristics are also included in the model. As above, positive marginal effects indicate a higher poverty risk for the group in question, while negative marginal effects indicate a lower risk.

Joblessness appears to be the main risk of poverty, while demographic factors play a lesser role. Unemployment increases the probability of being poor by 26%, other things being equal. "Other inactive" (inactive other than students or the retired), who are primarily women with caring responsibilities, face a risk 17% higher than employed. Pensioners have only a 6% higher probability of being poor than those in employment, other things being equal. The poverty risk associated with specific household types tends to be somewhat lower in general. Single parents face the highest risk: they have 12% higher chance of being poor than 2-parent-2-children families (our reference group in the analysis). Having children clearly raises the risk of poverty in case of all household types. For example, two adult households with no children have 4-5% lower poverty risk than two adult households with two children. Note, however, that single person households tend to have a comparatively higher poverty risk, 8% higher than the reference group, over and above the impact of age, education, employment status and other characteristics.

The coefficients of education are statistically significant and negative, which suggests that higher educational level decreases the risk of poverty. This is likely to reflect the wage premium of more skilled labour, rather than the impact of education per se. The poverty risk seems to be declining with age, ceteris paribus. Those aged under 30 have a lower risk, while those of 45 and over have a higher poverty risk than the reference group, those aged 30-44. The effect, however, is relatively small and varies between 1% and 3%.

Women tend to have lower risk of poverty than man, once other factors are controlled for. The effect is rather small, but statistically significant. This seems to imply that the income disadvantage of women tends to stem from lower employment first of all, and also from differences in household structure. Women are three times more likely to be single parents, and the occurrence of one person households is also higher among women, and as shown before both household types are typically associated with higher poverty risk.

The models included controls for health situation. The impact of health problems on poverty will be explored in more depth in a following section.

Table 2. Poverty risk among individuals, probit estimates

	Coefficients	Marginal effects
Unemployed	0.879**	0.263**
	(61.69)	(61.69)
Student	0.452**	0.116**
	(28.37)	(28.37)
Retired	0.260**	0.060**
	(17.34)	(17.34)
Other inactive	0.664**	0.175**
	(57.98)	(57.98)
1 person hh	0.333**	0.080**
	(21.65)	(21.65)
2 adults, no children, <65 yrs	-0.265**	-0.050**
	(17.09)	(17.09)
2 adults, no children, >65 yrs	-0.224**	-0.043**
	(12.50)	(12.50)
Other hh no children	-0.513**	-0.089**
	(33.65)	(33.65)
Single parent, 1+ children	0.456**	0.120**
	(21.21)	(21.21)
2 adults, 1 child	-0.210**	-0.040**
	(13.53)	(13.53)
2 adults, 3+ children	0.193**	0.045**
	(10.69)	(10.69)
Other hh with children	-0.117**	-0.023**
	(7.86)	(7.86)
Education: Female	-0.112**	-0.024**
	(14.10)	(14.10)
Age: 16-29 yrs	0.072**	0.016**
	(5.61)	(5.61)
Age: 45-59 yrs	-0.037**	-0.008**
	(3.26)	(3.26)
Age: 60+ yrs	-0.128**	-0.026**
	(7.90)	(7.90)
Education: secondary	-0.324**	-0.070**
	(34.71)	(34.71)
Education: post-secondary non tertiary	-0.549**	-0.085**
	(21.95)	(21.95)
Education: tertiary	-0.759**	-0.121**
	(55.25)	(55.25)
Health hampers: yes, strongly	0.090**	0.020**
	(6.73)	(6.73)
Health hampers: yes	0.079**	0.017**
	(7.43)	(7.43)
Country fixed effects included	Yes	

Source: Authors calculations based on EU-SILC 2004, N=192.071
Dependent variable: households in poverty, using the 60% of median income as a threshold
Absolute value of z statistics in parentheses;
* indicates that estimates are significant at 5% level; ** significant at 1% level
Reference categories: Age=30-44 yrs, Education=primary, Employment status=employee, Household type=Two adults two children

Ill health: increased risk of poverty, but mostly indirectly

The EU-SILC dataset used here allows us address to what extent health problems are likely to increase the risk of poverty. The data includes three alternative definitions of health. As part of the first, subjective health, question people assess their health as very bad, bad, fair, good or very good. The second question asks people whether they suffer from any long standing illness or condition. The third variable explores whether the individual has limitations in daily activities due to health problems. We limited our analysis to the population under the age of 60, as we are primarily interested on the impact of health problems among the working age group.

First we looked at the direct relationship of bad health and poverty occurrence. Then we analysed this relationship with a multivariate model, controlling for demographic and labour market characteristics of the individual and for country specific effects.

Health problems increase the risk of poverty by 2-12%, depending on the measure of health used (Table 3). Interestingly, the impact of long standing illness is relatively small, 2%, compared to other indicators of health problems. Strongly hampering health problems increase the risk of poverty by 7%, while very bad health by 12%. This latter seems to suggest that people's self assessed health is the strongest correlate with poverty risk. This subjective measure is often used in the literature, and appears to be a good proxy for actual health condition, especially when we consider that health includes not only physical, but mental aspects as well.

Table 3. Health problems and the risk of poverty among the working age population, bivariate probit estimates

	(1)		(2)		(3)	
	Coefficient	Marginal effect	Coefficient	Marginal effect	Coefficient	Marginal effect
Health: fair	0.151**	0.037**				
	(14.87)	(14.87)				
Health: bad	0.372**	0.101**				
	(21.60)	(21.60)				
Health: very bad	0.430**	0.122**				
	(13.01)	(13.01)				
Long standing illness			0.089**	0.022**		
			(9.04)	(9.04)		
Health hampers: yes, strongly					0.277**	0.073**
					(16.41)	(16.41)
Health hampers: yes					0.124**	0.031**
					(9.93)	(9.93)
Individual control variables included	No		No		No	
Country dummies included	No		No		No	

Source: Authors calculations based on EU-SILC 2004, N= 142.711

Dependent variable: households in poverty, using the 60% of median income as a threshold

Absolute value of z statistics in parentheses

* indicates that estimates are significant at 5% level ; ** significant at 1% level

Reference categories: Health: good or very good, No long standing illness, Health does not hamper

Sickness may be an impediment of labour market participation, and therefore it may indirectly cause higher poverty. The impact of health on incomes is also influenced by the household structure, in particular whether the incomes of other members can buffer the impact of health related negative income shocks. How much is the effect of health, once we account for (lower) labour market participation and variation in demographic characteristics?

Table 4. Health problems and the risk of poverty among the working age population, multivariate probit estimates

	(1)		(2)		(3)	
	Coefficient	Marginal effect	Coefficient	Marginal effect	Coefficient	Marginal effect
Health: fair	0.083**	0.017**				
	(7.37)	(7.37)				
Health: bad	0.209**	0.047**				
	(11.14)	(11.14)				
Health: very bad	0.210**	0.047**				
	(5.94)	(5.94)				
Long standing illness			0.046**	0.009**		
			(4.21)	(4.21)		
Health hampers: yes, strongly					0.116**	0.025**
					(6.25)	(6.25)
Health hampers: yes					0.079**	0.016**
					(5.76)	(5.76)
Individual control variables included	Yes		Yes		Yes	
Country dummies included	Yes		Yes		Yes	

Source: Authors calculations based on EU-SILC 2004, N= 142.711

Dependent variable: households in poverty, using the 60% of median income as a threshold

Absolute value of z statistics in parentheses

* indicates that estimates are significant at 5% level ; ** significant at 1% level

Reference categories: Health: good or very good, No long standing illness, Health does not hamper

All the models include individual control variables (demographic, labour market characteristics), and country controls, as in Table 2.

The results of the multivariate probit estimation show that health has a relatively small effect on poverty risk, over and above the impact of labour market, age, education, household composition and country of residence. Comparing the marginal effects in Table 4 and the earlier, bivariate results in Table 3, we can see that the relationship between health status and poverty is much weaker in the multivariate model. “Very bad health”, for example increases the risk of poverty by 5%, when controlling for employment and other personal characteristics, in

contrast to 13% when no such controls are used. This suggests that health problems cause poverty primarily via other factors: through lower labour market participation, first of all. According to our calculations, unemployment is about twice as high among those who report very bad health than among those with good health, and inactivity (other than retired or students) is nearly three times as high.

The direct effect of health on poverty seems to be relatively small. While ill health itself increases the risk of poverty by 2–5%, depending on the measure used, unemployment for example increases the risk by 26%, ceteris paribus (see Table 2).

Immigrants from other EU states often face higher risk of poverty

The survey allows us to identify two different, but overlapping, groups of the immigrant population. One definition captures people who are born in a different country than their country of residence. Their share may be as low as 3% of the population (Finland), or may reach 20% (Estonia), or even 37% (Luxembourg). The other definition identifies those who have citizenship which differs from the country where they live. This group tends to be smaller than the previous, which is not surprising, as many of those who were born elsewhere have already received the citizenship of their country of residence. Note, however, that these definitions do not make a distinction on the basis of arrival to the country, and therefore will include people who have been residing in the country for decades.

The number of immigrants in the sample is small at times (see Table 5), which means that the number of poor immigrants is even smaller, falling under 50 observations in the specific countries. This limits the possibility of exploring the characteristics of poor immigrants in specific countries. Such analysis would require larger, and more specifically designed surveys.

Table 5. Share of immigrants within countries in the sample population

	Ratio of immigrants, %		Ratio of immigrants, %		Number of observations in the sample		Number of observations in the sample	
	Country of birth		Citizenship		Country of birth		Citizenship	
	(other) EU	Other	(other) EU	Other	(other) EU	Other	(other) EU	Other
AT	6.91	6.96	6.91	6.96	597	603	284	390
BE	5.34	6.08	5.34	6.08	589	718	505	300
DK	1.96	4.35	1.96	4.35	236	507	236	507
EE	0.00	20.33	0.00	20.33	-	1.340	-	1.287
ES	1.50	3.34	1.50	3.34	425	953	339	659
FI	1.10	1.61	1.10	1.61	249	295	103	188
FR	4.42	8.06	4.42	8.06	785	1.503	508	608
GR	2.18	5.60	2.18	5.60	277	695	146	492
IE	6.73	2.40	6.73	2.40	708	235	339	158
IT	1.49	3.63	1.49	3.63	711	1.624	286	1.095
LU	30.22	6.87	30.22	6.87	2.284	518	2.436	351
NO	2.89	4.38	2.89	4.38	346	565	244	227
PT	1.57	4.67	1.57	4.67	164	453	73	202
SE	5.04	7.00	5.04	7.00	557	842	257	290

Source: Authors calculations based on EU-SILC 2004, N= 232.164

Note: the data refers to people who are born elsewhere than the country of residence, or have other citizenship

To what extent are these two groups exposed to poverty, and how does it differ from the non-immigrant population? We expect that immigrants face higher risks of poverty. This might not hold in case immigrants are dominantly consist of highly skilled workforce, which exploits the opportunity of free movement of labour within Europe.

Do the two immigrant groups imply different poverty risks? Assuming that citizenship of the country of residence is a sign of integration, we expect poverty to be lower among the broader group, which includes those who already have the citizenship (and are born elsewhere).

In most countries, the risk of poverty is significantly higher among immigrants, especially among people who are coming from outside the European Union. The EU-non-EU gap among immigrants if particularly marked in Belgium, France, Luxembourg, and Norway (see Figure 2). In Belgium, over half of those who have non-EU citizenship, live in poverty. The ratio reaches 45% in France and Luxembourg. In Portugal, which is a country with relatively high poverty, immigrants do not seem to fare worse than the non-immigrant population. Estonia seems to be also egalitarian in this respect. Note that here no less than one fifth of the population has a foreign citizenship, dominantly consisting of Russians. In 2003, the survey year, Estonia was not yet member of the European Union, which explains the lack of EU citizens in the country.

The existing gap in terms of poverty risk between EU and non-EU is largely attributable to the characteristics of these two groups. As hypothesised, immigrants from EU countries tend to have a higher educational attainment and higher labour market involvement, often surpassing

even that of the non-immigrant population. As our calculations suggest, 30% of people with EU citizenship have tertiary education degree on average, which is greater than the ratio for the non-immigrant population (19%). Employment is also higher among EU immigrants in these countries on average (59% versus 50% of the non-immigrants, in % of the total population[59]).

Some countries seem to be exceptions: in particular Austria, Spain, Finland, France, Luxembourg and Sweden, where immigrants with EU citizenship tend to have higher risk of poverty than non-immigrants. It might be attributable to the social welfare system, or the special attributes of immigrant groups in these countries. The situation of these specific groups could be a subject of further, in-depth research, based on labour force surveys, for example.

The second, alternative definition of immigrants refers to people who are born elsewhere than the country of residence. This approach captures a larger group, as shown in Table 5 before, and over one third of them already possess the citizenship of the country of residence (see Table A4 in the Annex.) This group is therefore more heterogenous, including those who are more integrated (acquired citizenship) and those who are less so. In addition, this definition refers to people who are likely to be staying in the country for longer on average.

The difference between EU and non-EU immigrants prevails, and poverty rates tend to be higher among the latter group. On the other hand, average poverty rates are lower according to this definition, than the alternative one, based on citizenship. In Austria, Belgium, Denmark, Finland, France, Luxemburg, Norway, and Sweden immigrants who were not born in an EU country face poverty risks which are over twice as high as among the non-immigrant population. Austria seems to have a specific situation, as poverty among EU citizens tends to be also nearly twice as high as among non-immigrants. Note, however, that this cannot be the impact of EU enlargement, and the resulting influx from Central-Eastern Europe, as the date of the survey (2003) precedes this.

Is it possible that the poverty rates presented above are erroneous, and strongly biased by the relatively small number of observations? How does the number of the observations in the sample population influence the reliability of the results? In order to respond to such possible challenges, we estimated confidence intervals of specific immigrant groups in each of the fourteen countries. These confidence intervals show with 95% probability how much the extent of poverty is likely to be in the original population. Poverty among the specific immigrant groups discussed above is maximum 1% higher or lower in the original population with 95% probability than the values presented so far, as shown by Table A5 in the Annex. For example,

[59] Note that this ratio is not calculated as a per cent of the labour force, which is normally a measure of employment ratio. This calculation, however, seemed more appropriate for the sake of the argument presented above.

poverty rate of EU immigrants in Austria is expected to be between 19.0 and 20.6% among those who are not born in Austria, while it is between 23.8% and 25.5% among non-Austrian EU citizens. The point estimates presented in the graphs are 19.8% and 24.6% respectively, which is by definition the middle point of the range. The width of the confidence interval, 1%, is relatively small compared to the poverty ratios. From this, it follows that the inter-group differences discussed above in details are statistically significant.

Immigrants might fact higher poverty due to lower levels of education, lower labour market participation, linguistic barriers, social discrimination, and a number of other reasons. As mentioned before, due to small cell sizes we cannot conduct country specific multivariate analysis. Instead, we explored how much of the relatively greater poverty among immigrant groups cannot be explained by demographic and labour market characteristics.

Table 6. Poverty risk among immigrants, probit estimates

	Coefficient	Marginal effect	Coefficient	Marginal effect
Born in (other) EU country	0.247**	0.059**		
	(12.01)	(12.01)		
Born in (other) non-EU country	0.456**	0.118**		
	(28.74)	(28.74)		
(Other) EU citizen			0.320**	0.079**
			(12.95)	(12.95)
Non-EU citizen (of other country)			0.551**	0.149**
			(28.62)	(28.62)
Individual control variables included	Yes		Yes	
Country dummies included	Yes		Yes	

Source: Authors calculations based on EU-SILC 2004, N= 191.989

Dependent variable: households in poverty, using the 60% of median income as a threshold

Absolute value of z statistics in parentheses

* indicates that estimates are significant at 5% level ; ** significant at 1% level

Reference categories: Born in country of residence, Citizen of the country of residence

All models include individual control variables (demographic, labour market characteristics), and country controls, as in Table 2.

The risk of poverty is 6-15% higher among immigrants, depending on the definition of this group, controlling for individual differences and country fixed effects (Table 6). This suggests that these groups are exposed to greater poverty, over and above the impact of age, education, labour market participation, household composition and health. This higher poverty risk might be due to differences in access to cash benefits, or might be due to lower wages (if discrimination exists). This kind of analysis typically cannot answer such questions, but can highlight the magnitude of the problem.

Results of the multivariate regression analysis also highlight that (1) non-EU immigrants tend to have nearly twice as high risk of poverty than EU-immigrants, (2) people who are not citizens of the country of resident tend to have higher poverty on average than those who are born outside of the country. The difference between these specific groups (EU, non-EU on the one hand, and citizenship and country of birth on the other) is not simply attributable to differences in labour force status, education attainment and household composition, since immigrant status tends to be associated with higher poverty in the regression results, which control for the potential impact of all these factors.

From the point of view of free movement of labour within the European Union, the situation of arrivals from other EU countries deserve special attention. As mentioned before, in a number of countries these people face higher risk of poverty than the non-immigrant population. The causes of this problem need to be explored. This issue needs to be also assessed with data, which refers to the enlarged European Union, as situation may have significantly altered after May 2004.

Conclusion

The paper provides new evidence based on the first release of EU-SILC (Community Statistics on Income and Living Conditions), including fourteen countries: AT, BE, DK, EE, ES, FI, FR, GR, IE, IT, LU, NO, PT and SE. Norway, though not a member of the European Union, is included in the analysis as it may still provide an interesting comparison. The data refers to incomes of 2003.

The methodology adopted entails estimating how the probability of being poor (at both the individual and household level) is affected by demographic and labour market characteristics together with specific individual attributes. Adopting a regression approach allows us to compare the importance of specific factors as causes of poverty.

Joblessness appears to be the main risk of poverty, while demographic factors play a lesser role. Unemployment increases the probability of being poor by 26%, after controlling for personal characteristics, household structure and country of residence. The impact of unemployment is greater when other family members are also out of work. The household level analysis shows that when none of the working-age members of a household are in employment, the poverty risk of the household increases by 36-38%, after controlling for differences in household composition and country specific effects. This suggests that social benefits, including unemployment insurance and social assistance, often do not prevent people from falling into poverty.

The poverty risk associated with specific household types tends to be somewhat lower in general. Single parents face the highest risk: they have 8-12% higher chance of being poor than

2-parent-2-children families, even when control for employment, education, age group, health status, country of residence and other characteristics. Having children clearly raises the risk of poverty in case of all household types.

Ill health has a relatively small direct effect on poverty risk, other things being equal. Health problems increase the risk of poverty by 2-5% among the working age population, depending on the measure of health used, when individual and country differences are controlled for. Interestingly, the impact of long standing illness is relatively small, 2%, compared to other indicators of health problems. Strongly hampering health problems increase the risk of poverty by 3%, while very bad health by 5%. This suggests that people's self assessed health is the strongest correlate with poverty risk, and as such, it appears to be a meaningful measure.

Ill health causes poverty primarily via other factors: through lower labour market participation, first of all. According to our calculations, unemployment is about twice as high among those who report very bad health than among those with good health, and inactivity (other than retired or students) is nearly three times as high.

We also explored the relative poverty risks of specific immigrant groups, defined on the basis of either citizenship or country of birth. Regression results show that (1) non-EU immigrants tend to have nearly twice as high risk of poverty than EU-immigrants, (2) people who are not citizens of the country of residence tend to have higher poverty on average than those who are born outside of the country. The difference between these specific groups (EU, non-EU on the one hand, and citizenship and country of birth on the other) is not simply attributable to differences in labour force status, education attainment and household composition, since immigrant status tends to be associated with higher poverty in the regression results, which control for the potential impact of all these factors.From the point of view of free movement of labour within the European Union, the situation of arrivals from other EU countries deserve special attention. As mentioned before, in a number of countries these people face higher risk of poverty than the non-immigrant population. The causes of this problem need to be explored. This issue needs to be also assessed with more recent data, which refers to the enlarged European Union, as situation may have significantly altered after May 2004.

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Appendix

Table A1. Main sample characteristics, EU-SILC 2004

	Household level		Individual level	
Country	Freq.	Percent	Freq.	Percent
AT	4.521	4.02	9.263	3.98
BE	5.264	4.68	10.126	4.35
DK	6.817	6.06	13.419	5.76
EE	3.919	3.48	8.784	3.77
ES	14.347	12.75	29.761	12.78
FI	11.198	9.95	22.747	9.77
FR	10.244	9.10	19.259	8.27
GR	6.244	5.55	13.977	6.00
IE	5.466	4.86	10.978	4.71
IT	24.204	21.51	51.911	22.29
LU	3.571	3.17	7.600	3.26
NO	6.020	5.35	12.037	5.17
PT	4.981	4.43	11.684	5.02
SE	5.739	5.10	11.340	4.87
Total	112.535	100.00	232.886	100.00

Source: Authors calculations based on EU-SILC 2004

Table A2 Risk of poverty by country

	Freq. (of poor in the sample)	Poverty ratio, using national thresholds (60% of median)	Poverty headcount in the total population, 1000s, estimates with 95% confidence interval	
			Lower	Upper
AT	1.019	12	964	977
BE	1.513	14	1.580	1.602
DK	606	11	315	317
EE	259	19	250	254
ES	8.704	21	9.852	9.947
FI	590	11	484	487
FR	7.867	13	7.953	8.028
GR	2.250	20	2.391	2.424
IE	810	21	941	956
IT	10.863	18	9.128	9.186
LU	44	10	49	49
NO	518	11	338	341
PT	2.204	20	2.273	2.307
SE	1.031	11	783	792
Total	232.219	16	–	–

Source: Authors calculations based on EU-SILC 2004

Table A3 a-d) Risk of poverty by specific social groups

(a) Age (years)

	16-29	30-44	45-59	60+
AT	12.6	11.5	10.1	14.9
BE	14.6	12.0	11.9	19.4
DK	23.4	7.2	4.4	13.6
EE	19.5	17.1	19.6	19.5
ES	18.6	18.2	18.1	29.0
FI	16.6	7.7	7.7	14.3
FR	16.8	10.6	11.6	14.8
GR	19.1	15.8	17.8	26.9
IE	16.0	14.4	18.6	37.7
IT	22.2	18.6	16.1	15.2
LU	11.0	13.2	8.6	5.6
NO	22.3	7.2	3.4	15.0
PT	17.4	17.4	17.7	27.6
SE	20.6	8.3	5.1	12.1
Total	18.7	14.7	13.8	18.9

(b) Employment status

	Employed	Unemployed	Student	Retired	Other inactive
AT	7.8	31.8	18.5	13.3	21.9
BE	5.5	30.6	19.3	17.5	29.2
DK	5.1	19.6	34.6	14.4	12.6
EE	10.0	45.9	23.9	22.2	40.1
ES	12.1	33.6	26.4	24.8	32.4
FI	4.7	28.9	21.6	15.3	14.2
FR	6.1	29.7	23.2	13.2	30.7
GR	13.5	29.5	26.1	26.2	25.1
IE	7.0	36.9	22.9	34.7	41.0
IT	11.3	45.1	23.1	11.6	27.3
LU	8.9	37.0	9.2	4.9	12.5
NO	4.8	24.1	33.8	18.8	12.4
PT	14.3	26.2	21.5	25.7	34.5
SE	6.4	21.9	23.9	14.1	14.0
Total	9.2	34.2	24.0	16.1	28.7

(c) Household structure

	One person household	2 adults, no children, <65 yrs	2 adults, no children, >65 yrs	Other hh no children	Single parent, 1+ children	2 adults, 1 child	2 adults, 2 children	2 adults, 3+ children	Other hh with children
AT	21.1	11.0	14.4	4.8	23.9	10.5	8.5	22.3	8.8
BE	20.7	10.6	19.8	5.3	32.7	10.4	9.5	17.9	13.9
DK	24.1	5.1	12.8	2.6	13.6	3.9	3.7	12.4	3.9
EE	36.9	15.0	11.1	9.1	41.2	15.5	16.4	24.3	11.4
ES	37.4	12.9	30.9	1.,7	37.4	15.2	25.1	36.1	22.4
FI	27.1	6.6	6.9	4.3	15.7	4.6	5.4	10.7	8.0
FR	19.1	9.2	13.4	9.3	27.5	10.0	9.7	17.3	16.5
GR	29.2	14.4	28.7	14.5	38.9	15.6	18.6	32.4	24.9
IE	55.3	19.0	28.9	9.2	53.1	13.8	10.6	22.4	11.5
IT	22.7	11.3	12.4	11.5	34.6	14.9	24.3	36.0	23.8
LU	12.6	7.2	5.3	4.9	15.5	6.7	16.3	14.5	9.7
NO	29.7	5.8	6.1	1.5	14.0	3.6	4.5	6.9	2.1
PT	35.9	18.3	30.7	12.8	26.6	14.7	25.1	30.6	16.3
SE	23.0	5.9	6.0	0.8	18.8	7.5	5.1	12.3	8.2
Total	24.3	10.4	17.5	11.2	29.0	12.4	16.8	22.7	19.7

(d) Health

	Strongly hampered by health in daily activities	Hampered by health in daily activities	Not hampered by health in daily activities
AT	19.0	14.6	10.8
BE	20.6	16.2	13.0
DK	0.0	13.5	14.0
EE	27.2	21.2	16.4
ES	29.8	26.8	19.0
FI	19.0	15.9	13.3
FR	19.6	17.4	11.9
GR	29.8	23.9	18.7
IE	40.9	34.1	16.6
IT	17.7	21.0	17.4
LU	14.1	12.2	8.9
NO	17.4	16.9	15.5
PT	32.2	25.6	15.9
SE	16.8	14.1	13.6
Total	23.04	20.73	15.6

Source: Authors calculations based on EU-SILC 2004

Table A4. Two definitions of immigrants: overlap between population groups defined by country of birth and citizenship

		Citizenship			
		EU	Country of residence	Other	Total
Country of birth	EU	63.7	35.9	0.4	100.0
	Country of residence	0.3	99.4	0.3	100.0
	Other	2.3	41.6	56.1	100.0
	Total	2.5	94.6	2.9	100.0

Table A5 Confidence intervals of the poverty ratios of immigrant population groups

(a) Country of birth

	EU		Other	
	Lower	Upper	Lower	Upper
AT	19.0	20.6	23.7	25.4
BE	17.2	18.7	41.9	43.9
DK	5.1	5.9	15.7	17.0
EE			17.7	19.3
ES	28.8	29.8	36.9	38.0
FI	15.2	16.1	24.5	25.6
FR	16.4	17.5	27.2	28.5
GR	18.8	20.2	28.9	30.4
IE	19.2	20.7	27.2	28.9
IT	22.6	23.3	27.1	27.8
LU	14.0	15.6	36.4	38.5
NO	7.0	8.0	20.0	21.4
PT	20.6	22.1	20.0	21.5
SE	12.8	14.1	23.2	24.8

Note: 95% confidence level

(b) Citizenship

	EU		Other	
	Lower	Upper	Lower	Upper
AT	23.8	25.5	26.3	28.1
BE	17.3	18.8	53.7	55.6
DK	5.1	5.9	15.7	17.0
EE	0.0	0.0	19.6	21.3
ES	29.0	30.0	37.6	38.7
FI	20.8	21.9	31.8	33.1
FR	16.8	17.9	44.5	45.9
GR	17.2	18.4	29.7	31.3
IE	20.2	21.7	29.5	31.2
IT	22.0	22.7	32.6	33.4
LU	15.0	16.6	44.2	46.4
NO	6.9	7.8	26.1	27.7
PT	17.1	18.5	21.0	22.5
SE	16.8	18.2	32.6	34.3

Note: 95% confidence level

Table A6. Poverty risk among households, probit estimates, including country effects

	(1)	(2)	(3)	(4)	(5)	(6)
	Coefficients	Marginal effects	Coefficients	Marginal effects	Coefficients	Marginal effects
2 adults, no children, <65 yrs	-0.573**	-0.091**	-0.922**	-0.129**	-0.585**	-0.088**
	(29.13)	(29.13)	(23.63)	(23.63)	(29.33)	(29.33)
2 adults, no children, >65 yrs	-0.587**	-0.083**	-0.939**	-0.108**	-0.685**	-0.086**
	(22.35)	(22.35)	(21.86)	(21.86)	(25.57)	(25.57)
Other hh no children	-0.610**	-0.089**	-1.218**	-0.134**	-0.767**	-0.098**
	(26.56)	(26.56)	(19.27)	(19.27)	(32.37)	(32.37)
Single parent, 1+ children	0.383**	0.091**	-0.091	-0.017	0.366**	0.083**
	(15.06)	(15.06)	(1.73)	(1.73)	(14.21)	(14.21)
2 adults, 1 child	-0.333**	-0.056**	-0.887**	-0.115**	-0.410**	-0.063**
	(15.16)	(15.16)	(15.34)	(15.34)	(18.32)	(18.32)
2 adults, 2 children	-0.127**	-0.023**	-0.827**	-0.113**	-0.198**	-0.034**
	(6.21)	(6.21)	(11.72)	(11.72)	(9.48)	(9.48)
2 adults, 3+ children	0.034	0.007	-0.811**	-0.100**	0.037	0.007
	(1.31)	(1.31)	(9.48)	(9.48)	(1.42)	(1.42)
Other hh with children	-0.209**	-0.037**	-1.001**	-0.114**	-0.344**	-0.053**
	(8.46)	(8.46)	(12.43)	(12.43)	(13.59)	(13.59)
WI=0	1.301**	0.381**	1.300**	0.380**	1.279**	0.364**
	(79.57)	(79.57)	(79.40)	(79.40)	(76.82)	(76.82)
0<WI<1	0.765**	0.167**	0.759**	0.165**	0.733**	0.153**
	(54.02)	(54.02)	(53.48)	(53.48)	(50.60)	(50.60)
Hh size, ln			0.507**	0.099**		
			(10.36)	(10.36)		

Table A.6 cont'ed

AT					-0.181**	-0.030**
					(5.91)	(5.91)
BE					-0.176**	-0.030**
					(6.13)	(6.13)
DK					-0.569**	-0.077**
					(16.88)	(16.88)
EE					0.215**	0.045**
					(7.07)	(7.07)
ES					0.309**	0.067**
					(16.01)	(16.01)
FI					-0.269**	-0.044**
					(11.96)	(11.96)
FR					-0.225**	-0.037**
					(9.70)	(9.70)
GR					0.203**	0.042**
					(8.11)	(8.11)
IE					0.143**	0.029**
					(5.29)	(5.29)
LU					-0.191**	-0.032**
					(5.78)	(5.78)
NO					-0.412**	-0.061**
					(13.11)	(13.11)
PT					0.333**	0.074**
					(12.51)	(12.51)
SE					-0.279**	-0.044**
					(9.01)	(9.01)
Constant	-1.404**		-1.403**		-1.292**	
	(91.77)		(91.68)		(68.40)	
Pseudo R^2	0.1283		0.1298		0.1532	
Observations	87419	87419	87419	87419	87419	87419

Source: Authors calculations based on EU-SILC 2004

Countries include: AT, BE, DK, EE, ES, FI, FR, GR, IE, LU, NO, PT, SE

Notes:

Dependent variable: household in poverty, using the 60% of median income as a threshold

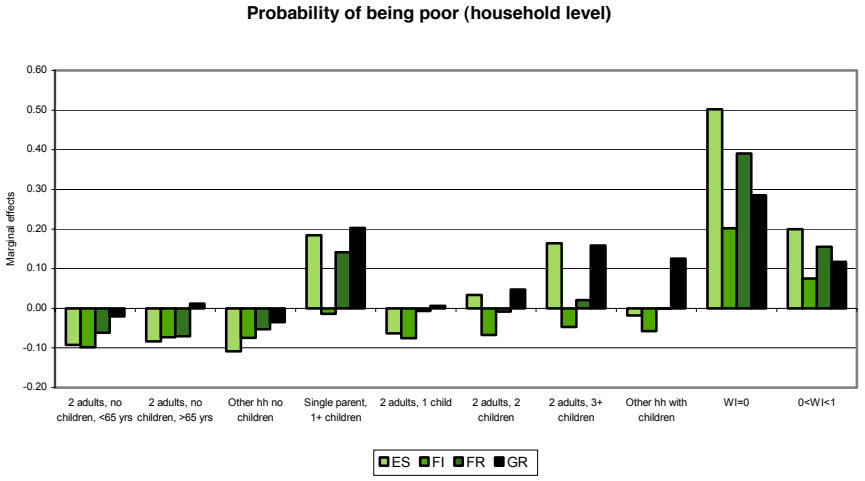
Absolute value of z statistics in parentheses

* indicates that estimates are significant at 5% level; ** significant at 1% level

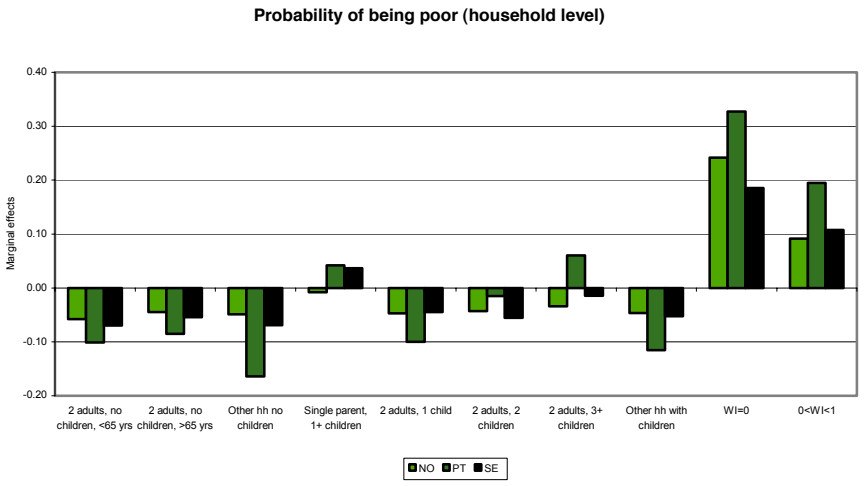
Reference categories: Work Intensity=1 (all working age persons in the household are fully employed)

Household type=One adult without children, Country=Italy

Fig. 1 a-c Poverty risk among households in specific countries (estimated probabilities)



Note: Work intensity: Not a single adult working (WI=0), Not fully working (0<WI<1)



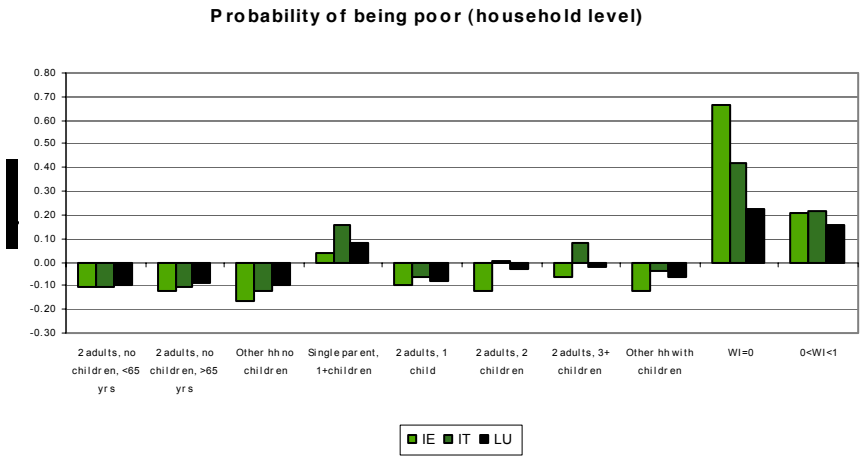
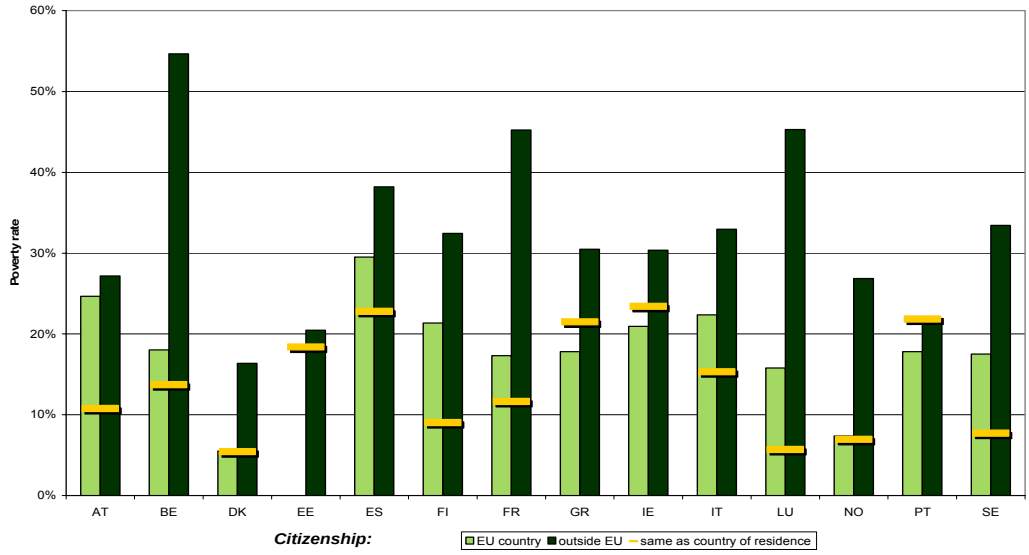


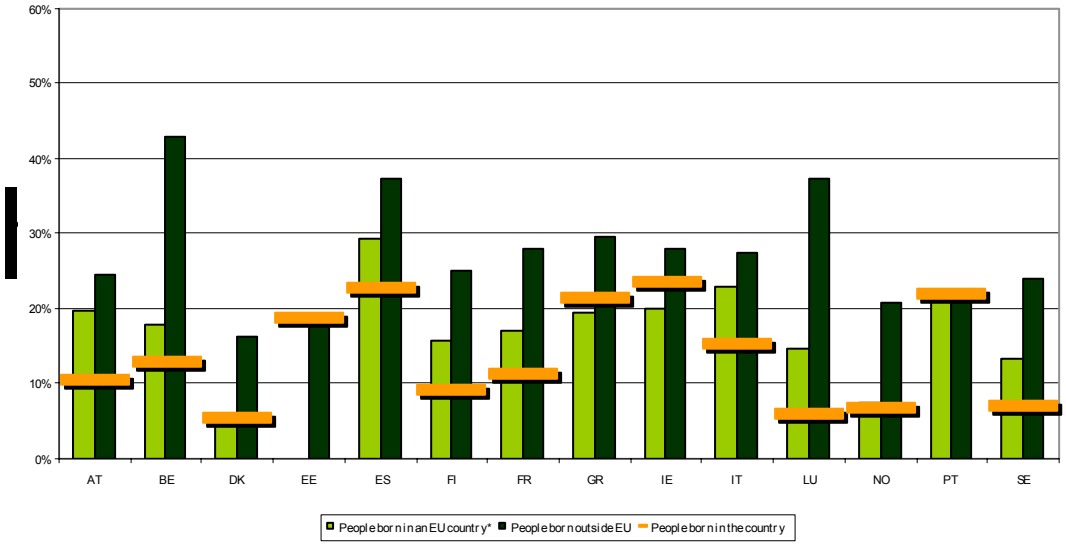
Fig. 2. The risk of poverty among immigrants (defined as citizenship of another country)



Note: * other than the country of residence, if country is an EU member state

Source: Authors calculations based on EU-SILC 2004

Fig. 3. The risk of poverty among immigrants (defined as born in other country)



Note: * other than the country of residence, if country is an EU member state

Source: Authors calculations based on EU-SILC 2004

8. NON-INCOME MEASURES OF DEPRIVATION[60]

Introduction

As is well documented, monetary income, however defined, is liable to be an incomplete and, therefore, not fully satisfactory measure of living standards and, accordingly, of the risk of social exclusion. This is recognised by the compilation of a range of indicators (launched by the Laeken Council at the end of 2001) to monitor social inclusion across EU Member States rather than relying solely on income as a measure of deprivation or, more specifically, of relative poverty. Nevertheless, although these indicators include other aspects of living conditions – employment status, especially – they are still very much focused on disposable income, defined moreover in relative rather than absolute terms. The potential shortcomings of income as a measure of deprivation, however – the fact, for example, that it ignores accumulated wealth and its effect on living standards, non-monetary benefits of various kinds, the scale of largely unavoidable costs, such as for housing or for childcare and so on – have raised questions about its adequacy for this purpose.

These questions have been given added weight by the entry into the EU of Central and Eastern European countries with much lower levels of income per head. This is not least the case because according to the measure of poverty which is the main focus of policy attention – ie the relative number of people in each country with income below 60% of the national median on an equivalised basis – their entry has not only failed to increase this but has served to reduce it slightly. Because the new Member States, therefore, have, on average at least, a more equal distribution of income than in the EU15 and accordingly a smaller proportion of people with income below the poverty line as defined, the effect of their entry has been to lower the relative number of people considered to be at risk of poverty in the EU as a whole by the measure used.

Accordingly, the fact that average income per head in the new Member States, even measured in purchasing power parity terms, is in many of the countries concerned only around half or less of the level in the EU15 does not enter the assessment of the risk of poverty at all and, indeed, is irrelevant in this regard. The entry of Bulgaria and Romania, which have average levels of income of only around a third of the EU average will also leave the aggregate indicator of poverty risk largely unchanged since in both countries, the proportion of the population with income of under 60% of the median does not differ significantly from the EU average (in Bulgaria, it is about the same, in Romania, only marginally higher according to the latest estimates).

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This is not to criticise the indicator as such, but simply to highlight the limitations of a relative measure of income distribution which focuses on those with low income as compared with the average in the country in which they live. While the measure may give an indication of the extent of inequalities in a particular society and of the proportion of people whose income falls below what is deemed to be a critical level in relation to people in general, it says nothing about their standard of living as such or about how this compares with that of people elsewhere in the EU. This limitation has prompted growing interest in the development of other indicators which throw light on these latter aspects which are not without relevance for policy at EU-level.

Measures of deprivation

There are a number of possible options for indicators which give an insight into t absolute poverty or deprivation in different parts of the EEU. One is a direct measure of the income required in different parts of the EU to achieve an acceptable standard of living, which avoids people going hungry or not being able to afford essentials. This, however, is difficult to define, especially given the differences in climate, consumption patterns and so on which exist across the EU.

Another is to retain a relative approach but to relate incomes to median income at the EU rather than the national level, expressing income in terms of purchasing power parities rather than euros or national currencies. The level of income chosen as the poverty threshold could in this case reflect what is regarded as a minimum acceptable level.

While this seems less problematic than the first option, it still requires a judicious choice of the poverty threshold and it is does not entirely avoid the difficulties of accounting for variations in local circumstances. Although measuring income in purchasing power standard (PPS) – or parity – terms is intended to take account of such variations, it does so only to the extent that they are reflected in the relative price levels of a common basket of goods and services and it cannot easily allow adequately for significant differences in the composition of such a basket in terms of the goods and services which are required to provide an adequate, or acceptable, standard of living. PPS corrections, therefore, are inevitably approximate. This is even more the case in relation to measuring different income levels in different regions of the EU and not just different countries, given the often wide differences which exist in prices (especially for housing) as well as patterns of consumption within Member States as well as between them.

A third option is to try to measure deprivation directly through collecting information about relevant aspects of living conditions by means of surveys. This is an approach advocated, for example, by Atkinson, Cantillon, Marlier and Nolan (2005) in their report produced in 2005 under the Luxembourg Presidency of the EU on *Taking forward the EU social inclusion process*,

as a follow-up to their report to the Belgian Presidency in 2001 (Atkinson, Cantillon, Marlier and Nolan, 2001) which was the basis for the compilation of the 'Laeken' indicators at present being used to monitor social inclusion across the Union. Their suggestion is to use a range of indicators bearing on living and housing conditions as well as on the financial circumstances of households which would reflect the multi-dimensional nature of deprivation as well as supplementing the use of income as an indicator and so help to take account of instances where this gives a misleading impression of living standards. It would equally help to identify, at least in terms of their characteristics, those recorded as being at risk of poverty on the existing measure who suffer most from deprivation and are in most need of assistance, so informing the formulation of policy.

This suggestion follows extensive literature on the concept and measurement of material deprivation, which was initiated by Townsend some 27 years ago (Townsend, 1979), who interpreted deprivation In the wide sense of not being able to live a decent life. The concept has been subsequently refined to refer to not having adequate resources to lead a minimum acceptable way of life in the country in the question (Callan *et al.*, 1993; Nolan and Whelan, 1996; Kangas and Ritakallio, 1998; Layte *et al.* 2001; Whelan *et al.* 2002; Perry, 2002) or, alternatively, to lack the necessities which society regards as essential (Bradshaw and Finch, 2003; Nolan and Whelan, 1996).

The focus of studies has been not only on trying to measure material deprivation so defined – starting from Townsend who based his analysis on 60 different aspects of living standards – but on identifying the goods and services which should be included in the measurement and the relative importance to be given to subsets of them. A number of criteria have been proposed to determine what should be incorporated, including their relevance in terms of capturing the disadvantage suffered by not being able to afford the item in question or living under particular conditions(Townsend, 1988); their clarity in distinguishing between individual preferences and deprivation stemming from a lack of resources as such; and their comparability across countries, in the sense that the deprivation concerned is equally relevant in the different countries being considered.

A number of empirical studies of material deprivation have been undertaken in the EU as well as in other developed countries in recent years (see (Boarini and Mira d'Ercole, 2006, for a summary of these). Two findings of these are of particular relevance:

- across all OECD countries, an aggregate measure of the relative numbers suffering material deprivation is only weakly related to measures of relative income poverty but is more closely related to GDP per head. If the analysis is limited, however, to the more prosperous countries, the reverse is the case;

- longitudinal data which track the circumstances of households over a number of years indicate that deprivation tends to persist over prolonged periods of time.

The implication of the first is that an analysis of material deprivation across the enlarged EU is not only likely to give different general results than one across the EU15 but might well be more useful in reflecting the effect of absolute, rather than relative, income levels on living standards. In other words, the value of a measure of material deprivation is enhanced if it does not simply replicate the conclusions which can be drawn from measures of relative income levels.

The implication of the second is that a measure of material deprivation is all the more useful in a context where longitudinal data are not available to monitor the position of individuals over time. In other words, an indicator of this kind is particularly useful in the period before data from the EU-SILC covering a number of years for selected households become available.

A recent Statistics in Focus produced by Eurostat at the end of 2005 (*Material deprivation in the EU*) came to conclusions which were broadly in line with these findings. The study, based on data from the ECHP for EU15 Member States and for 6 of these countries on preliminary data for 2003 from the EU-SILC, covered three aspects of material deprivation – access to household durables, specifically a car, colour TV and telephone; financial strain in terms of not being able to afford certain things, such as an annual holiday, and being in arrears on payments; and housing conditions.

A main finding was that while there was some overlap between having an income below the poverty line and being materially deprived (defined in terms of reporting not being able to afford at least two of the household durables and/or things included in the 'financial strain' list), in most of the countries (ie most of which had relatively high average levels of income per head), only a small minority of those with a poverty level of income reported being deprived. Significantly, however, in three of the four southern Member States, Greece, Spain and Portugal, the three countries with the lowest levels of income per head in PPS terms in the EU15, a large majority of those with income below the poverty line reported being deprived. Moreover, the relative number concerned was larger in Greece and Portugal, where income per head was the lowest in the EU,15, than in Spain, where income was somewhat higher.

Equally significantly, a substantial proportion of those in these two countries who were recorded as not having a poverty level of income reported being deprived as defined in the study. This was particularly the case in Portugal, where some 35% of the population are estimated to fall into this category (25% in Greece, 20% in Spain), which meant that together with those with income below the poverty line who were deprived, over half of the population

are estimated to experience material deprivation. By contrast, in the Netherlands and Luxembourg, with much higher levels of income per head, the figure was only 4-5%.

Although Portugal, along with Greece and Spain, also has a significantly larger proportion of people with (relative) poverty levels of income – ie below 60% of the national median – than the Netherlands or Luxembourg, a deprivation indicator seems to provide an additional dimension to the assessment of living standards and the potential extent of social exclusion.

The concern here is to extend the analysis in the *Statistics in Focus* in a number of ways:

- it covers the 14 countries included in the EU-SILC for 2004, which means the 6 EU15 countries covered on the basis of the preliminary 2003 EU-SILC plus 6 others, making 12 EU15 countries in all (all apart from Germany, the Netherlands and the UK), plus a new Member State, Estonia, and Norway (which though not an EU Member State is included here for the sake of comparison – and to have a larger number of countries to include in the analysis);
- it focuses explicitly on the relationship between the indicators of financial strain and housing conditions which are used as measures of material deprivation and average disposable income per head in the countries covered as well as their relationship with relative poverty and income distribution in these countries – the latter examined across the whole range and not just at the bottom end of the scale. The intention, therefore, is to see how far these indicators provide an insight into the effect of differences in absolute measures of income as well as relative ones;
- in so doing, it attempts to assess the relative value, or relevance, of the different measures of financial strain and housing conditions on which data are collected by the EU-SILC as indicators of deprivation in order to determine which of them might most usefully included in an aggregate index. This contrasts with the *Statistics in Focus* approach which tends to treat each measure as of equal value to one another – ie they are effectively given equal weight in the construction of an aggregate index. Since, however, as indicated below, the measures seem to differ significantly in the results they show, a simple approach of assigning equal weights is liable to lead to misleading results – or at least, results which are not as clear-cut as they might be through an informed choice of what to include in an aggregate indicator;
- it examines environmental aspects, in addition to measures of financial strain and housing conditions, particular, noise, pollution and crime or vandalism, to see how far material deprivation goes together with living in a neighbourhood affected by problems of this kind.

The analysis, however, does not cover differences between households in their ability to afford particular durable goods (specifically, a TV, car or telephone), partly in order to limit the analysis, partly because of doubts about how far the goods in question are reliable indicators of deprivation given the potentially low cost of these items if bought second-hand.

The analysis, in addition, is conducted solely at a household level and no account is taken of differences in the characteristics of households in terms of their composition (ie whether they consist of someone living alone, of a couple with children, of couple with out children and so on). The income of households, however, is equivalised to take explicit account of differences in their size and composition.

It should be noted that household characteristics have been included in a study on material deprivation also based on the new EU-SILC data carried by Anne-Catherine Guio and Isabelle Engsted Maquet at the same time as the present study was being undertaken (Guio and Maquet, 2006). Among other issues, this considers specifically the position of households with children. In addition, it examines the relative value of the various measures in more detail through the use of factor analysis and correlates the indicators derived with relative poverty. The results of the present analysis are broadly consistent with the findings of this study.

The results

INDICATORS OF FINANCIAL STRAIN

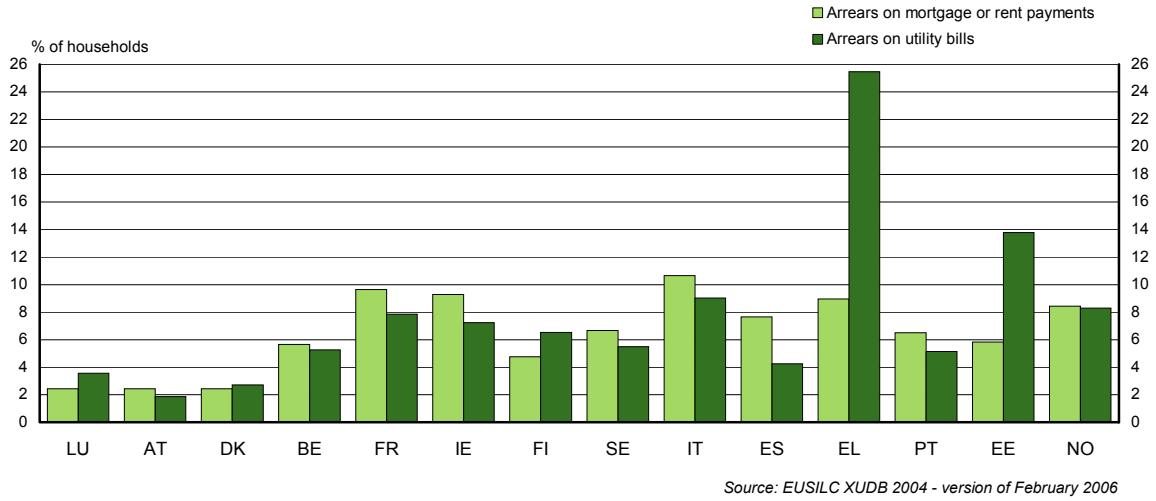
Variations across countries

The SILC includes a number of indicators of the financial strain on households, specifically whether they are in arrears in paying housing costs, utility bills or hire purchase or similar instalments, their ability to afford a one week's annual holiday and a meal of meat or fish (or the vegetarian equivalent) every other day and to make ends meet and their capacity to cope with unexpected financial expenses. The concern here is to examine how the proportion of households reporting financial strains in these terms varies, first, between the countries covered and, secondly, between households within countries. In both cases, the primary aim is to see how far these variations are in line with differences in disposable income in order to determine the extent to which the measure concerned reflects such differences.

The proportion of households reporting having arrears on rent or mortgage payment varies from only 2% in Denmark, Luxembourg and Austria to 11% in Italy. While the proportion is slightly larger in Greece (9%) than average, it is not much different from elsewhere in Portugal (7%) or Estonia (6%), so that only a weak relationship is evident between this proportion and the

level of income per head across countries (Fig. 1, in which the countries, except for Norway, are ranked in terms of the average disposable income per head – or, more accurately, equivalised head measured in purchasing power parity terms).

Fig. 1 Arrears on mortgage or rent payments and utility bills

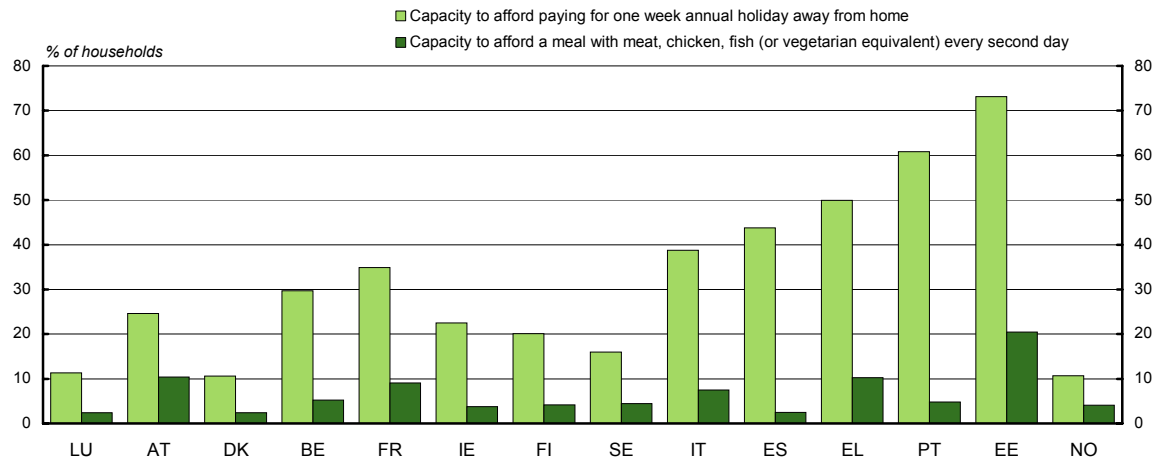


Source: EUSILC XUDB 2004 - version of February 2006

There is more variation in the relative number of households reporting being behind on payments of utility bills, which ranges from 2% in Austria and 3% in Denmark to 25% in Greece. Since the figure for Estonia is 14%, there is also more evidence of a variation with income levels, though this is far from being systematic since the figure for Portugal is only 5% and for Spain 4%. The proportion in arrears on hire purchase and other instalments (not shown in the graph) is also relatively large in Greece (11%) and Estonia (9%) but it is equally large in Austria (11%) and even higher in Italy (14%), so does not seem to add much to the overall picture shown by the other two measures.

There is a considerably more variation in the ability to afford one week's holiday a year and a much more systematic relationship between this and income levels across countries. The proportion reporting not being able to do so ranges from only just over 10% in Luxembourg and Denmark to 41% in Spain, 50% in Greece, 61% in Portugal and as much as 73% in Estonia (Fig. 2, in which countries are again ranked, as throughout the present analysis, by average disposable income per head in PPP terms). This suggests that this is a reasonable indicator of relative levels of purchasing power in different countries, at least in broad terms. The main exceptions to the relationship are the Nordic countries and Ireland, in each of which the proportion unable to afford an annual holiday is lower than the average relationship suggests.

Fig. 2 Capacity to afford paying for one week annual holiday away from home and to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day



Source: EUSILC XUDB 2004 - version of February 2006

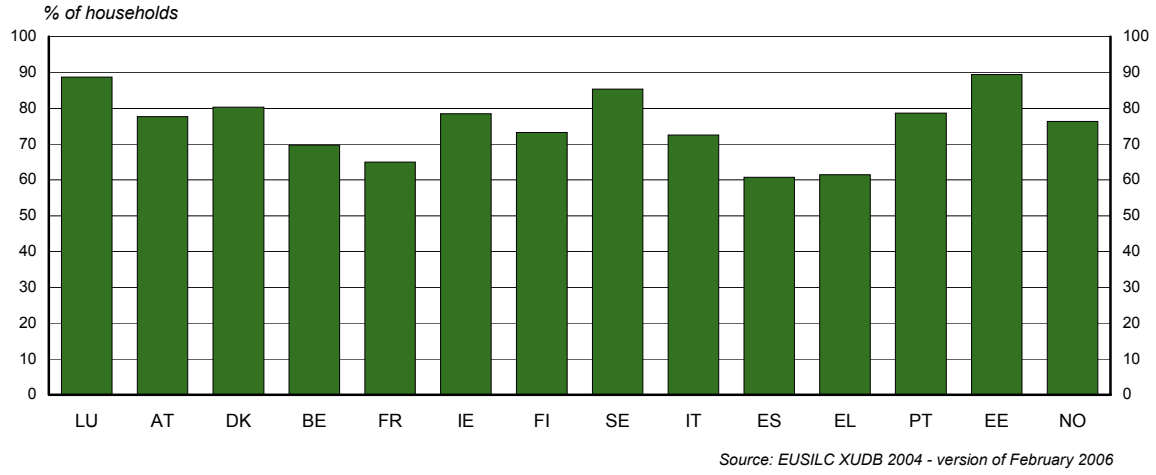
The capacity to afford a meal with meat or fish every other day also varies across countries but far less so – from 2%% being unable to do so in Denmark and Luxembourg but also in Spain to 10% in Greece but also in Austria and to 20% in Estonia. It is also only weakly related to income levels. Indeed, the fact that Estonia is the only country falling above a comparatively narrow range suggests that the relationship may not be continuous and that it is perhaps only when income falls below a particular level that households have problems in affording to eat properly at least every other day.

The capacity to meet unexpected financial costs varies more across countries but in a way which is not altogether in line with income levels. The proportion of households reporting such a capacity, therefore, ranges from 89% in Luxembourg and Estonia to 61% in Greece and Spain, with the proportion in Portugal (79%) being marginally larger than that in Austria (78%) (Fig. 3). This raises a serious questionmark over the use of this variable as an indicator of financial hardship, at least between countries, and suggests perhaps that countries vary in terms of the ability of people to make do with having a relatively low level of income or the extent of precautions they take to avoid financial problems – such as, for example, going without an annual holiday. Accordingly, it perhaps tells us more about these characteristics than about financial strain as such.

Similar arguments apply to the ability to make ends meet, which while it might reflect the purchasing power which households have access to also reflects they capacity to manage the resources they have at their disposable. Although, therefore, the proportion of households reporting great difficulty in making ends meet is largest in Portugal and Greece (15-16%), as well as Italy, it is smallest in Estonia together with Luxembourg (2%) (Table 1). At the other end of the scale, very few households in most countries report being able to make ends meet very easily (the proportion is over 15% only in Denmark and Luxembourg), reflecting perhaps a

natural reluctance to admit to this. However, the relative number reporting that they can do so either easily or very easily varies relatively closely with income levels – from 63% in Denmark to only 7-8% in Estonia and Portugal, as well as Italy – suggesting that this end of the scale is perhaps a more relevant indicator than the other.

Fig. 3 Capacity to face unexpected financial expenses



Source: EUSILC XUDB 2004 - version of February 2006

Variations within countries

Most of the potential indicators of financial strain examined above show a significant variation with the disposable income of households within countries. This applies both in broad terms to households with income above and below the poverty line and to those at different points on the income distribution curve. The extent of the variation, however, differs between the indicators, implying that some are better than others in revealing financial hardship. At the same time, there are also differences in the extent of variation of individual indicators with income levels across countries, which complicates the choice of variable to focus on.

In the case of payment of rent or mortgage or of utility bills, the proportion of households with income below the poverty line reporting being behind with payments is larger than for those with income above the line in all countries, as it is for arrears on payments of hire purchase in all except Greece. This is especially the case for the first two items in France and Italy; for housing costs but less so for utility bills, in Spain and Ireland, and for utility bills, but less so for housing costs, in Estonia and Greece (Table 2). Arrears on hire purchase or similar payments show a different picture with the gap between the proportion of households below the poverty line reporting being behind on payments and the proportion above being especially wide in Italy, Austria, Portugal and Finland (wider than for the other two items) and comparatively narrow in most of he other countries. This suggests that evidence of financial strain may not be satisfactorily captured by looking at one of these indicators alone.

The capacity to afford an annual holiday shows an even greater variation between households with income above and below the poverty line, with a considerably larger proportion of households below the line being unable to meet this expense than above in all countries, with the sole exception of Denmark, where the gap is only 10 percentage points. Here, less than 20% of households with poverty levels of income are unable to afford this, whereas in Greece and Portugal, the proportion exceeds 80% and in Estonia, 90%. In the last, it is also the case that two-thirds of households with income above the poverty line report not being able to afford a holiday and In Portugal, some 55%.

The capacity to afford a meal of meat or fish at least every other day shows much less variation between the two groups of households. Although in Estonia, 40% of households below the poverty line report not being able to do so as against only 14% above the line, in Portugal, the proportion falling into the first category is just 11%, only 8 percentage points larger than for those above the line and in Spain, it is 5%, just 3 percentage points above the figure for those above the line.

As in the case of the ability to afford a holiday, the proportion of households with poverty income levels who report not being able to meet unexpected financial expenses is substantially larger in most countries than the proportion with higher income so reporting. This contrasts with the lack of any systematic variation between this indicator and income levels across countries. In 9 of the 13 countries, therefore, the difference between the two proportions was around 25 percentage points or more, with the proportion of households below the poverty line unable to meet such expenses exceeding 50% in 6 of them. Nevertheless, in Estonia, although the difference between the two household groups is some 20 percentage points, only around a quarter of households with poverty income levels report being in this position.

The ability to make ends meets also differs significantly between households above and below the poverty line in all cases, though countries vary as to whether the ease or the difficulty of doing so gives the greater distinction between the two groups. In the lower income countries, however, it is invariably the proportion reporting difficulties which shows the largest difference, mainly because only a relatively few households even with income above the poverty line report being able to do so easily (Table 3). In a number of the higher income countries, the reverse is the case, with relatively few households with low incomes reporting difficulties (under 25% in the three Nordic countries and Luxembourg).

Whereas, therefore, for comparisons across countries, the ease of making ends meet seems to show up inter-country differences more markedly, this is not the case for comparisons within countries where the difficulty of so doing appears to give the most differentiated results.

More disaggregated data show that the extent of financial strain as indicated by the range of aspects covered in the EU-SILC varies in a continuous way with income. The proportion of households in the top quintile of income distribution (ie the 20% with the highest levels of disposable income in equivalised terms) reporting financial difficulties on almost all of the measures is generally smaller than in the second quintile (the next 20%), which in turn is generally smaller than in the third quintile and so on, with the proportion in the bottom quintile being largest of all in nearly all cases (Figs 4-6 and Tables 4 and 5).

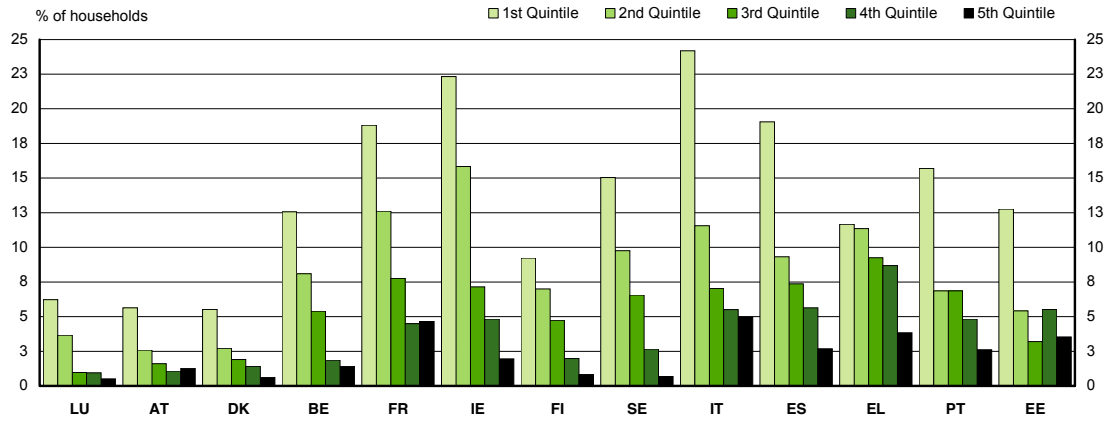
This is less so, however, for arrears on hire purchase or similar instalments than for arrears on housing costs or utility bills. In Greece and Estonia, therefore, the proportion reporting being behind in paying such instalments was larger for households in the third quintile than in the first two. Moreover, although the capacity to afford a decent meal every other day varies with income, the extent of the variation, as implied above, is relatively small in most countries, the exception being Estonia, in particular, though also Greece, France and Austria.

THE FINANCIAL BURDEN IMPOSED BY HOUSING AND DEBT REPAYMENTS

The EU-SILC, like the ECHP before it, also contains information on the extent to which the costs of housing and hire purchase and loan repayments represent a financial burden on households, which potentially provides a further insight into the financial difficulties experienced by households in different countries with differing levels of income. This, however, is arguably less directly linked to deprivation or financial hardship than most of the indicators discussed above, being affected not only by the purchasing power which households have at their disposal but also by lifestyles and attitudes to debt, the ease or difficulty of borrowing, and by the level of rents or mortgages as such, which varies both between countries and between regions and local areas within countries. (It is equally affected, of course, by individual interpretations of the concept of 'burden', though this also applies to the ease or difficulty of making ends meet examined above.)

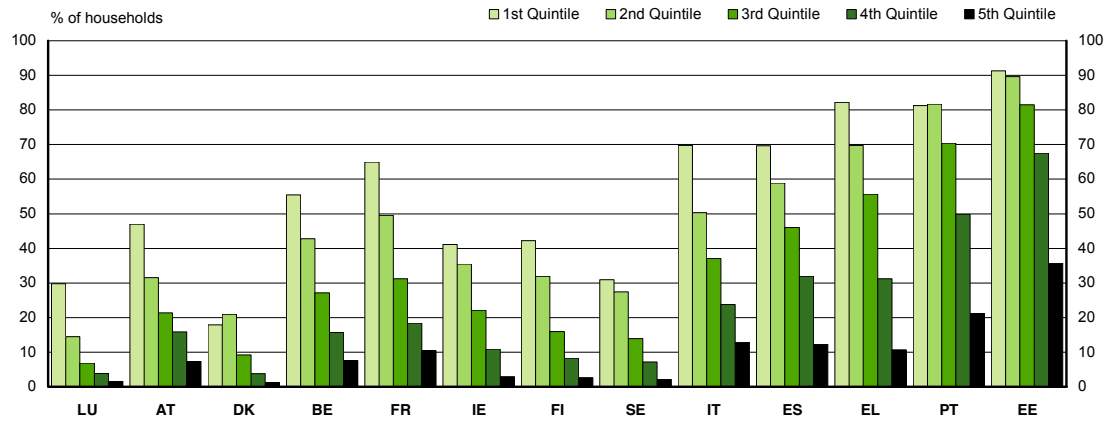
The survey responses on this issue bear this out. The proportion of households considering that both housing costs and debt repayments impose a heavy burden is larger in Luxembourg than in Greece and in Spain and Italy than in Estonia, while a significant proportion of households in the top quintile express the same view in a number of countries, most especially in Belgium (just under 20%), Spain (almost 30% in respect of housing costs and almost 40% in respect of loan repayments) and Italy (around a third in respect of both) (Table 6). Accordingly, it is not clear that these results add to our understanding of the extent of financial hardship across the EU.

Fig. 4 Number of households, by income quintile, reporting arrears on mortgage or rent payments



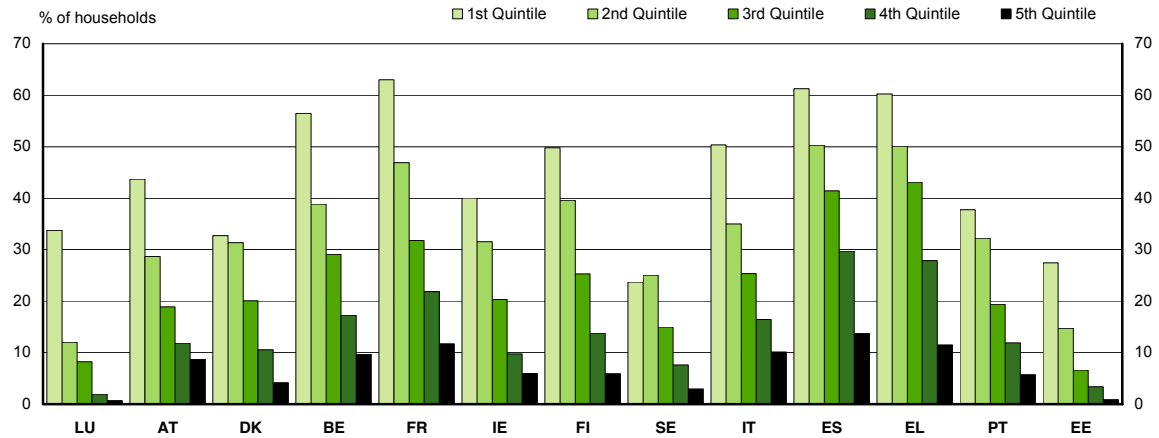
Source: EU-SILC XUDB 2004 - version of February 2006

Fig. 5 Number of households, by income quintile, unable to afford one week's annual holiday away from home



Source: EU-SILC XUDB 2004 - version of February 2006

Fig. 6 Number of households, by income quintile, unable to face unexpected financial expences



Source: EU-SILC XUDB 2004 - version of February 2006

INDICATORS OF HOUSING CONDITIONS

The conditions in which people live are an important aspect of their living standards and a significant indicator of deprivation and social exclusion. While the state of the housing which people occupy tends to reflect their relative levels of income, this is not necessarily the case if income, measured on an annual basis, fails to reflect accumulated wealth or purchasing power, and/or differences across countries in absolute income levels, as well as in the cost and availability of decent housing. The inclusion of housing conditions in addition to income in any overall assessment of living standards or the extent of deprivation is, therefore, of importance.

This is all the more the case since those experiencing the most severe housing problems, those who are homeless, will not typically be included in the households surveys from which information on poverty and deprivation are derived for the simple reason that the people concerned do not live in households as such. The indicator used to measure relative poverty across the EU, therefore, understates the proportion of people with income below the poverty line to the extent that the homeless are excluded – as are people, mainly the elderly, living in communal housing, such as nursing homes, which is liable to add to the degree of underestimation. The scale of the understatement is difficult to assess from the data on homelessness available. Although national surveys and enquiries exist, it tends to be difficult to assess the quality of the data collected and even more so their comparability across countries. There is, accordingly, a need – as pointed out in Atkinson et al (op. cit.) – for harmonised data on this issue and the construction of a suitable indicator on the proportion of the population affected in different countries to supplement the indicators derived from household surveys.

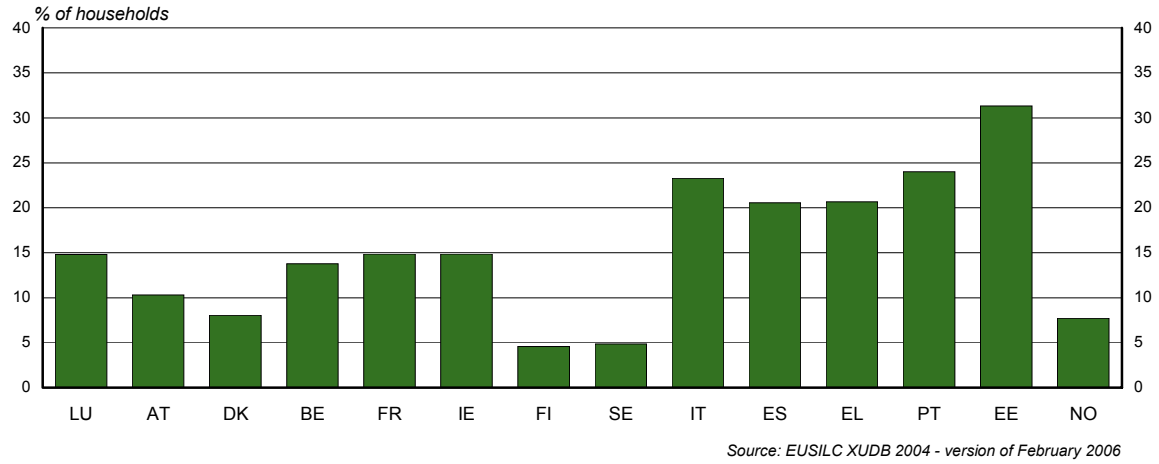
Nevertheless, despite the exclusion of this important socially excluded section of the population, data collected by the EU-SILC enables housing conditions for those who are covered to be taken into account alongside household income. The survey, therefore, includes questions on the physical state of housing – whether the roof leaks, the walls are damp or the window frames or floors are rotten – the ability to keep the house warm (which partly reflects financial resources and fuel costs but also how far the heating system and the state of the house facilitates this), and whether it has a bath or shower and an indoor flushing toilet (for the exclusive use of the household concerned).

Variations across countries

The proportion of households reporting housing with a leaking roof, damp walls and so on varies from 31% in Estonia and 24% in Portugal to only 5% in Finland and Sweden. It, accordingly, shows some tendency to vary with income levels, though the latter two countries, along with Denmark and Norway, have significantly smaller proportions indicating such

problems than a number of other countries with similar or higher income levels, such as Luxembourg, France or Belgium (14–15% in each case) (Fig. 7).

Fig. 7 Number of fouseholds with leaking roofs, damp walls/floors/foundation, or rot in window frames or floor



Source: EUSILC XUDB 2004 - version of February 2006

The proportion reporting difficulties in keeping the house warm, by contrast, shows relatively little variation across countries. Apart from Greece, France and, above all, Portugal (42%), only around 10% or fewer households in every country, including Estonia, indicate such problems.

This is even more the case for baths and indoor flushing toilets, hardly any households in all the countries except one not having access to such basic amenities. The exception is Estonia, where some 22% of all households do not have access to a bath or shower and 19% to an indoor flushing toilet. This suggests that in the EU15 countries at least, the inclusion of this indicator would add very little to an assessment of deprivation, but that perhaps in the enlarged Union and in the new Member States, especially – to the extent that Estonia is at all representative of the situation in these – it is relevant.

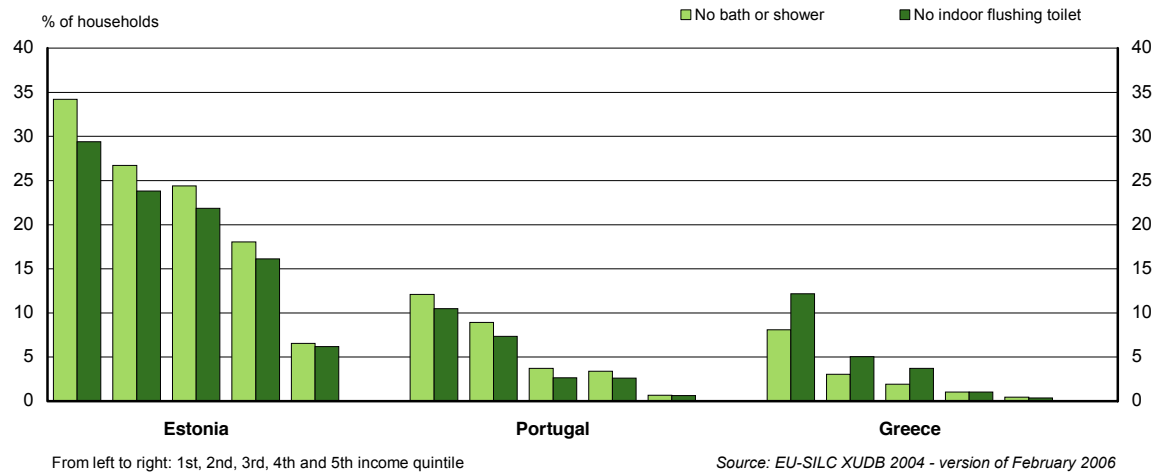
Data from the European Foundation's *Quality of Life* Survey (cited in the Eurostat *Statistics in Focus* referred to above) suggest that Estonia is not alone in these respects, but that the lack of an indoor flushing toilet is relatively widespread as well in Latvia (affecting 20% of households), Lithuania (25%) and, to a lesser extent, Poland (115), and even more so in Bulgaria (30%) and Romania (39%). Problems with leaking roofs, damp walls and so, seem equally widespread.

Variations within countries

As indicated above, even among households with income below the poverty line, very few do not have access to a bath, shower or indoor toilet in most EU15 countries. The largest numbers are in Greece and Portugal, as might be expected, but even here only around 10% of households with poverty level incomes do not have such basic amenities. In Estonia, however, a

third of households with income below the poverty line do not have a bath or shower for the exclusive use of household members and 29% do not have an indoor flushing toilet. Even among households further up the income scale, the proportion lacking these amenities is significant – over 20% for those in the third quintile and over 15% for those in the fourth (Fig. 8 and Table 7).

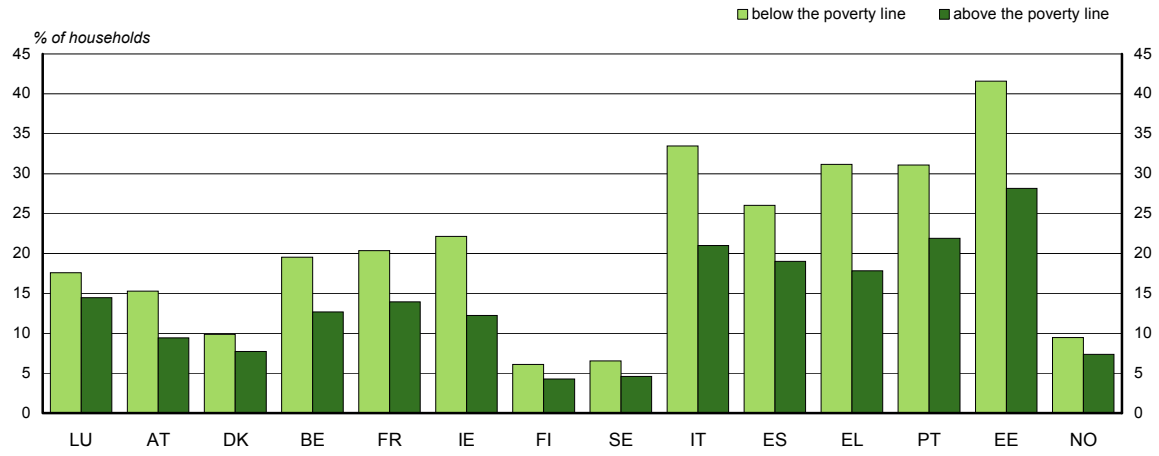
Fig. 8 Number of households, by income quintile, with no bath or shower/no indoor flushing toilet in the dwelling - Estonia, Portugal and Greece



The situation in Estonia in this respect seems to be repeated in a number of the new Member States with relatively low income levels. According to the European Foundation, *Quality of life* survey cited above (*Social dimensions of housing*), carried out in 2003–2004 and published in 2006, 45% of households in the bottom quartile of income distribution in Lithuania, and 31% in Latvia do not have an indoor flushing toilet (the figure reported for Estonia is 21%), and this is also the case for 17% of such households in Hungary and 16% in Poland. The proportions for lower income households are even higher in Bulgaria (55% of those in the bottom quartile) and Romania (63%). In the latter, the figure was also significant (20%) even for households in the top quartile.

There is more widespread variation with income in the relative number of households reporting problems of leaking roofs, damp walls and so on, including in the EU15 countries. The extent of variation between those above the poverty line and those below, however, is relatively small in many countries. Only in Greece, Italy and Estonia does the difference in the proportion between the two groups of households reporting such problems exceed 10 percentage points, and in the last two countries, as well as in Portugal, the proportion of those above the poverty line with problems of this kind is over 20% (Fig. 9).

Fig. 9 Number of households, below and above the poverty line, with leaking roofs, damp walls/floors/foundation, or rot in window frames or floor



Source: EUSILC XUDB 2004 - version of February 2006

A more disaggregated breakdown of households shows that while the proportion reporting housing defects tends to decline as income rises in all countries – with the partial exception of Portugal, where the proportion is higher for households in the next but bottom quintile ranked by income than for those in the bottom one – the extent to which this occurs is again small in most cases (Table 8). In a number of countries, therefore, especially in those with relatively high levels of income per head, there is little if any difference in the proportion with such problems between households in the top three quintiles (ie those among the top 60% ranked by income). This is the case in all three Nordic countries as well as Luxembourg and Austria. By contrast, in the lower income countries, there tends to be a more pronounced difference. Nevertheless, there is still a questionmark over how far these data can be used as an indicator of deprivation, in the light not only of the pattern of variation in the households reporting problems but also of the fact that even in countries which are not among those with the lowest income levels, such as France, Ireland, Italy and Luxembourg, 10% or more of the households in the top income quintile – the 20% most prosperous in the country – report such problems.

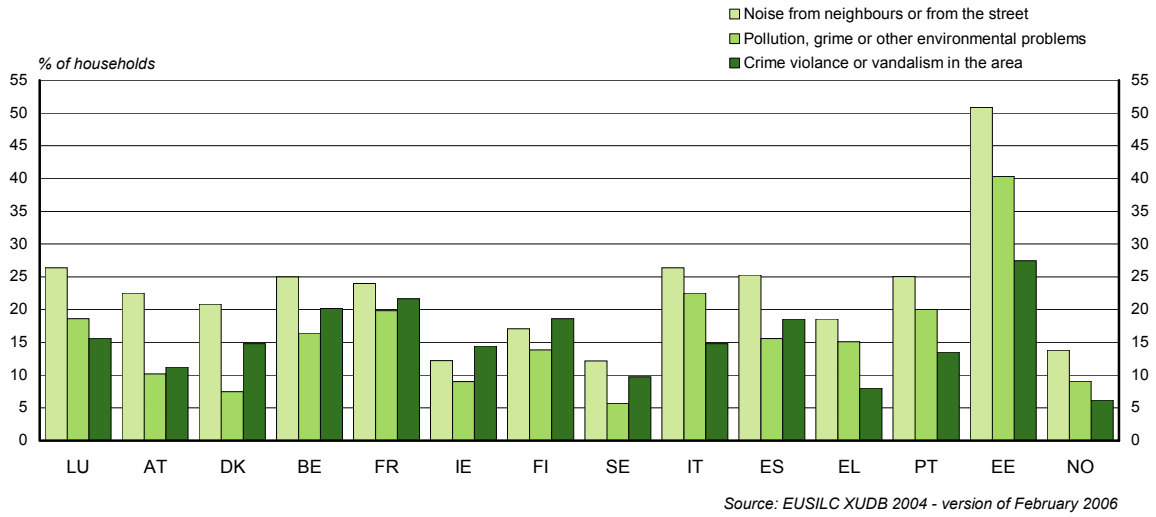
Environmental factors

Data from the EU-SILC also enable environmental problems affecting households to be examined, specifically the extent to which they are subject to excessive noise either from neighbours or from the street, pollution or grime, or crime, violence or vandalism. Such problem would exacerbate those which arise from low levels of income or the other aspects of deprivation considered above.

In practice, there is little sign of any systematic variation across countries in the proportion of households reporting problems of noise in the area they live and income levels. The proportion concerned is much the same – between 23% and 26% – in Belgium, France, Italy, Luxembourg

and Austria as well as in Spain and Portugal and larger than in Greece (19%). Only Estonia (51%) stands out as having a substantially larger proportion of households with this problem (Fig. 10).

Fig. 10 Number of households reporting problems with noise, pollution and crime



Source: EUSILC XUDB 2004 - version of February 2006

Much the same is the case for the proportion of households reporting pollution or grime in the area caused by traffic or industry. Although this is again much larger in Estonia (40%) than in other countries, there is comparatively little difference in the proportion between many of the other countries. It is very similar in Luxembourg as in Portugal (19–20%) and larger than in Greece or Spain (15–16%). At the same time, the proportion is smaller in Denmark and Sweden (6–7%) than elsewhere, which is not unexpected.

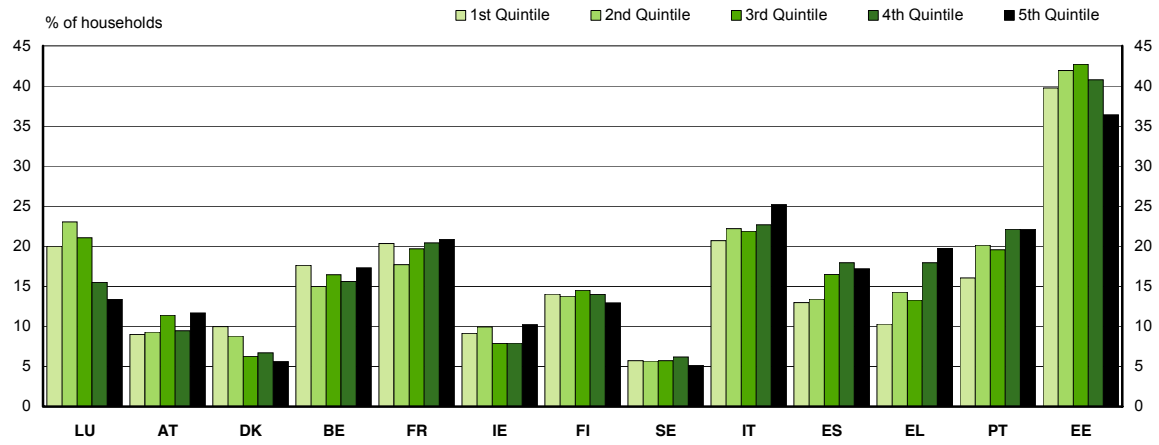
The proportion of households reporting crime, violence or vandalism in the area is also larger in Estonia than in the other countries (27%), but elsewhere it does not seem to reflect income levels in any systematic way. It is relatively large in Belgium and France (20% or more) and smallest of all in Greece (8%).

Equally, there is little evidence of any relationship between these various problems and income levels within countries. The proportion of households with income below the poverty line reporting problems of noise is more than 4 percentage larger than for those above the line only in Denmark and Luxembourg and in Greece and Portugal, the reverse is the case with noise being more of a problem for households above the line than for those below. The same is also true in the latter two countries in respect of both pollution or grime and crime or vandalism. Indeed, for both of these kinds of problem, only in Denmark and Luxembourg – though in the latter only for pollution – do significantly more households with poverty income levels report their existence than others.

The absence of any clear tendency for problem of noise, pollution or crime to decline with income in most countries is confirmed by more disaggregated data. Only in Denmark is such a

tendency evident in respect of all three kinds of problem and in most cases, the proportion of households reporting such problems does not vary systematically across income quintiles (Fig. 11 and Table 9). Moreover, in Greece, Portugal and to a lesser extent in Spain, the tendency goes in the opposite direction, with more households in the upper quintiles reporting problems than those in the lower ones.

Fig. 11 Number of households, by income quintile, reporting problems wth polluation, grime or other environmental problems



Source: EU-SILC XUDB 2004 - version of February 2006

The latter may reflect a tendency perhaps for more prosperous households to be more conscious of such problems than poorer ones or, at least, to perceive them as being more acute, which is a general difficulty of making comparisons of subjective views of reality between individuals. It tends to be even more of a problem if they live in different places – in rural areas as opposed to inner city ones, for example – where attitudes towards noise, pollution or even crime may differ because of differing experiences and norms. The difficulty might be greater again if the people concerned live in different countries.

In sum, therefore, it is not evident what conclusions can be drawn from the above analysis, other than that the extent of the environmental problems considered seem to be more country specific than related to income, and it is hard to assess how far they reflect genuine differences in living conditions.

Concluding remarks

Much of the analysis above of financial strains seems to support the use of other indicators of living standards and the risk of deprivation or social exclusion to supplement those based on relative household income. This is particularly the case if the concern is with absolute problems rather than relative ones. From the examination of potential candidates, some appear more promising than others – the ability to afford an annual holiday, for example, more than a decent

meal or being in arrears in paying rent, mortgage or utility bills more than in paying hire purchase instalments.

On the other hand, the use of indicators of housing conditions seems to be capable of providing little insight into deprivation in most of the EU15 countries but appears to be more relevant in an enlarged Union to identify problems in the new Member States, where a significant number of households still lack basic amenities and where surveys suggest that the housing stock is badly in need of repair and renovation.

Similarly, indicators of environmental problems based on individual perceptions seem to be of questionable use for assessing the real extent of these and their effect on standards of living.

Nevertheless, a final assessment of the usefulness of the various indicators in this context has to await until a complete set of data from the EU-SILC become available for all Member States.

Table 1. Ability to make ends meet

	Ability to make ends meet					
	with great difficulty	with difficulty	with some difficulty	fairly easily	easily	very easily
	% of households					
BE	8	12	21	28	26	5
DK	4	5	10	20	42	21
EE	2	16	29	46	6	1
EL	15	31	25	16	11	2
ES	11	17	32	28	11	1
FR	6	12	16	29	32	4
IE	8	16	29	33	10	4
IT	15	19	40	19	6	1
LU	2	4	12	27	38	16
AT	4	7	26	34	22	7
PT	16	21	37	18	7	1
FI	3	7	20	37	20	13
SE	4	7	22	36	17	15
NO	3	6	15	38	25	13

Source: EU-SILC XUDB 2004 - version of February 2006

Table 2. Selected indicators of financial strains for households below and above the poverty line

		Arrears on mortgage or rent payments	Arrears on utility bills	Arrears on hire purchase instalments or other loan payments	Lack of capacity to afford paying for one week annual holiday away from home	Lack of capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day	Lack of capacity to face unexpected financial expenses
		% of households					
BE	below poverty line	13	12	8	55	14	56
	above poverty line	4	4	3	25	4	25
DK	below poverty line	7	8	8	19	6	34
	above poverty line	2	2	3	9	2	17
EE	below poverty line	12	22	11	92	40	26
	above poverty line	4	11	8	67	14	6
EL	below poverty line	12	41	10	82	24	59
	above poverty line	8	21	11	41	7	33
ES	below poverty line	18	8	11	69	5	60
	above poverty line	6	3	5	37	2	33
FR	below poverty line	21	17	14	67	23	65
	above poverty line	8	6	6	29	7	30
IE	below poverty line	21	13	8	40	8	39
	above poverty line	6	5	2	16	2	15
IT	below poverty line	25	21	32	70	18	51
	above poverty line	7	6	11	32	5	22
LU	below poverty line	7	11	11	36	9	45
	above poverty line	2	3	3	8	2	7
AT	below poverty line	6	4	22	49	23	45
	above poverty line	2	1	9	20	8	18
PT	below poverty line	14	8	19	81	11	38
	above poverty line	5	4	6	55	3	16
FI	below poverty line	9	11	17	43	10	52
	above poverty line	4	6	8	16	3	22
SE	below poverty line	16	13	17	32	9	23
	above poverty line	5	4	8	14	4	13
NO	below poverty line	15	11	18	22	11	36
	above poverty line	7	8	10	9	3	21

Source: EU-SILC XUDB 2004 - version of February 2006

Table 3. Ability to make ends meet for households below and above the poverty line

		Ability to make ends meet					
		with great difficulty	with difficulty	with some difficulty	fairly easily	easily	very easily
		% of households					
BE	below poverty line	20	24	26	18	12	2
	above poverty line	5	10	21	29	29	6
DK	below poverty line	12	11	12	21	30	14
	above poverty line	2	4	9	19	44	22
EE	below poverty line	6	31	31	29	3	0
	above poverty line	1	11	29	51	7	1
EL	below poverty line	32	40	19	8	1	0
	above poverty line	11	29	27	18	14	2
ES	below poverty line	21	24	33	17	4	0
	above poverty line	8	15	31	31	13	1
FR	below poverty line	20	20	22	22	15	1
	above poverty line	4	10	15	31	35	4
IE	below poverty line	16	23	31	23	6	2
	above poverty line	5	13	28	37	12	4
IT	below poverty line	34	26	30	7	2	0
	above poverty line	11	17	42	22	7	1
LU	below poverty line	8	13	34	27	15	2
	above poverty line	1	3	10	27	41	18
AT	below poverty line	12	14	35	25	10	3
	above poverty line	2	6	25	36	24	8
PT	below poverty line	30	26	32	9	2	1
	above poverty line	12	19	38	21	9	1
FI	below poverty line	8	14	30	30	13	5
	above poverty line	3	5	19	38	21	14
SE	below poverty line	8	12	28	33	13	6
	above poverty line	3	6	20	37	18	16
NO	below poverty line	8	11	20	39	18	5
	above poverty line	3	5	14	38	27	14

Source: EU-SILC XUDB 2004 - version of February 2006

Table 4. Selected indicators of financial strains for households by income quintile

	Quintile	Arrears on mortgage or rent payments	Arrears on utility bills	Arrears on hire purchase instalments or other loan payments	Lack of capacity to afford paying for one week annual holiday away from home	Lack of capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day	Lack of capacity to face unexpected financial expenses
		% of households					
BE	1	*13*	*12*	*9*	*56*	*13*	*56*
	2	8	5	6	43	6	39
	3	5	5	5	27	4	29
	4	2	3	2	16	2	17
	5	1	1	0	8	1	10
DK	1	6	7	7	18	5	33
	2	3	3	5	21	4	31
	3	2	2	4	9	2	20
	4	1	1	2	4	0	11
	5	1	1	2	1	0	4
EE	1	13	24	13	91	41	27
	2	5	14	12	90	31	15
	3	3	14	15	82	18	7
	4	6	11	6	67	8	3
	5	4	7	6	36	4	1
EL	1	12	41	10	82	25	60
	2	11	33	12	70	13	50
	3	9	27	14	56	9	43
	4	9	19	10	31	3	28
	5	4	8	8	11	1	11
ES	1	19	8	12	70	5	61
	2	9	5	7	59	4	50
	3	7	4	6	46	2	41
	4	6	3	3	32	1	30
	5	3	1	3	12	1	14
FR	1	19	15	14	65	21	63
	2	13	10	10	49	12	47
	3	8	7	6	31	6	32
	4	4	4	3	18	4	22
	5	5	3	3	10	3	12
IE	1	22	14	8	41	10	40
	2	16	10	5	35	5	32
	3	7	6	3	22	2	20
	4	5	4	1	11	1	10
	5	2	3	1	3	1	6
IT	1	24	20	31	70	17	50
	2	12	10	17	50	9	35
	3	7	7	11	37	6	25
	4	5	5	8	24	4	16
	5	5	3	7	13	2	10
LU	1	6	8	8	30	8	34
	2	4	4	4	14	3	12
	3	1	2	2	7	0	8
	4	1	2	3	4	1	2
	5	0	1	3	2	0	1
AT	1	6	4	19	47	22	44
	2	3	2	15	32	13	29
	3	2	2	11	21	9	19
	4	1	1	6	16	5	12
	5	1	0	3	7	3	9
PT	1	16	9	19	81	11	38
	2	7	5	12	82	6	32
	3	7	5	9	70	5	19
	4	5	3	4	50	1	12
	5	3	3	4	21	1	6
FI	1	9	11	16	42	9	50
	2	7	9	17	32	7	40
	3	5	7	8	16	3	25
	4	2	3	5	8	1	14
	5	1	1	3	3	1	6
SE	1	15	12	17	31	9	24
	2	10	9	17	27	8	25
	3	7	5	8	14	4	15
	4	3	3	5	7	1	8
	5	1	1	1	2	1	3
NO	1	15	11	18	22	10	36
	2	13	12	20	15	5	29
	3	8	9	12	8	3	20
	4	6	8	8	6	3	18
	5	2	2	3	2	1	14

Source: EU-SILC XUDB 2004 - version of February 2006

Table 5. Ability to make ends meet by income quintile

		Ability to make ends meet (% of households)					
	Quintile	with great difficulty	with difficulty	with some difficulty	fairly easily	easily	very easily
		% of households					
BE	1	19	23	27	17	12	1
	2	9	16	27	29	17	2
	3	6	10	26	29	26	4
	4	3	7	18	34	33	6
	5	2	3	9	28	43	14
DK	1	9	10	13	21	33	15
	2	5	7	14	22	36	16
	3	2	5	11	22	43	18
	4	1	2	6	19	46	25
	5	1	1	3	14	50	31
EE	1	6	32	29	29	4	0
	2	2	22	41	33	1	1
	3	1	14	37	45	3	0
	4	0	9	28	58	5	0
	5	0	2	12	64	19	3
EL	1	32	40	19	7	1	0
	2	21	42	25	10	3	0
	3	14	38	28	16	5	0
	4	7	26	32	21	13	1
	5	2	11	22	24	33	8
ES	1	22	24	33	17	4	0
	2	13	22	37	23	5	0
	3	10	19	35	27	9	1
	4	7	14	32	33	13	1
	5	2	7	22	39	26	3
FR	1	18	20	24	23	15	1
	2	6	19	24	28	21	1
	3	4	11	17	37	31	2
	4	2	6	11	34	44	3
	5	2	3	6	25	52	12
IE	1	17	23	31	21	6	2
	2	12	21	33	27	5	2
	3	6	17	34	33	8	2
	4	4	11	29	41	13	3
	5	1	5	19	45	20	9
IT	1	33	26	31	7	2	0
	2	18	26	42	12	3	0
	3	13	19	48	16	4	0
	4	8	14	46	25	6	1
	5	5	8	34	35	15	3
LU	1	6	12	30	25	22	4
	2	2	4	15	33	40	6
	3	1	1	9	35	39	15
	4	0	1	5	25	48	21
	5	1	0	4	16	43	36
AT	1	11	15	36	26	10	3
	2	5	7	34	34	17	3
	3	2	6	26	41	19	6
	4	1	4	22	36	29	8
	5	0	2	13	33	34	17
PT	1	31	25	32	9	2	1
	2	21	29	38	8	4	0
	3	15	22	43	16	3	0
	4	9	19	40	25	6	1
	5	3	8	32	33	21	2
FI	1	8	13	28	30	14	6
	2	6	10	26	37	14	7
	3	3	5	22	40	18	12
	4	1	3	16	40	25	15
	5	1	1	10	35	29	24
SE	1	8	12	28	34	12	7
	2	7	10	30	31	13	9
	3	3	7	23	41	16	11
	4	2	3	18	41	20	17
	5	1	1	11	33	25	30
NO	1	8	10	20	38	18	5
	2	5	7	18	37	23	9
	3	2	6	18	41	22	11
	4	1	4	13	41	28	13
	5	0	2	5	33	35	25

Source: EU-SILC XUDB 2004 - version of February 2006

Table 6. Financial burden of housing costs and loand by income quintile

		Financial burden of the total housing cost			Financial burden of the repayment of debts from hire purchases or loans		
	Quintile	A heavy burden	Somewhat a burden	Not burden at all	A heavy burden	Somewhat a burden	Not burden at all
		% of households					
BE	1	44	35	22	53	31	16
	2	34	38	28	48	36	16
	3	30	36	35	35	39	26
	4	21	36	43	22	51	28
	5	18	29	54	19	34	47
DK	1	11	18	71	16	23	61
	2	7	19	74	11	27	62
	3	5	17	79	7	20	73
	4	4	19	77	4	20	77
	5	2	13	84	2	10	88
EE	1	52	36	11	35	53	12
	2	48	44	8	39	49	12
	3	37	52	10	35	55	10
	4	28	57	15	21	66	13
	5	11	60	28	18	70	12
EL	1	30	63	7	36	53	11
	2	25	69	6	30	63	7
	3	21	73	7	26	66	8
	4	16	76	8	20	64	16
	5	11	75	14	16	65	20
ES	1	55	41	3	66	32	2
	2	52	45	3	59	39	2
	3	48	49	3	59	37	3
	4	40	56	4	51	45	4
	5	28	67	5	39	55	6
FR	1	31	32	37	41	25	35
	2	23	33	43	29	26	45
	3	17	30	53	21	27	53
	4	14	27	59	18	21	60
	5	11	21	68	13	18	69
IE	1	30	44	26	36	49	15
	2	25	46	28	32	49	19
	3	23	50	27	19	56	25
	4	17	51	31	19	49	32
	5	12	44	44	14	46	41
IT	1	66	32	2	68	31	1
	2	58	40	1	51	47	2
	3	52	46	1	46	52	3
	4	46	53	2	39	58	4
	5	35	62	3	32	63	6
LU	1	50	36	14	50	40	9
	2	30	55	14	20	58	21
	3	25	51	24	27	48	25
	4	21	55	24	15	47	38
	5	15	46	39	10	50	40
AT	1	23	52	25	50	44	6
	2	16	58	27	40	54	6
	3	12	61	27	35	53	13
	4	9	58	33	20	64	16
	5	6	55	39	16	56	28
PT	1	39	50	11	37	51	12
	2	34	52	14	28	59	14
	3	30	52	17	36	51	12
	4	22	58	20	23	62	15
	5	13	50	37	11	55	34
FI	1	25	51	24	26	40	33
	2	28	50	22	27	42	31
	3	21	54	24	17	51	32
	4	18	54	27	9	51	39
	5	11	53	36	6	44	50
SE	1	20	37	43	36	31	33
	2	21	37	43	27	37	36
	3	13	40	48	14	42	44
	4	10	37	53	11	37	52
	5	4	30	65	5	30	64
NO	1	13	35	52	18	35	48
	2	9	38	53	15	46	38
	3	6	39	55	11	40	49
	4	6	36	58	7	42	51
	5	2	27	71	3	31	66

Source: EU-SILC XUDB 2004 - version of February 2006

Table 7. Number of households with bath/shower and indoor toilet in the dwelling for Estonia, Greece and

		Bath or shower in dwelling		Indoor flushing toilet for sole use of household	
	Quintile	Yes	No	Yes	No
		% of households			
EE	1	66	34	71	29
	2	73	27	76	24
	3	76	24	78	22
	4	82	18	84	16
	5	93	7	94	6
EL	1	92	8	88	12
	2	97	3	95	5
	3	98	2	96	4
	4	99	1	99	1
	5	100	0	100	0
PT	1	88	12	89	11
	2	91	9	93	7
	3	96	4	97	3
	4	97	3	97	3
	5	99	1	99	1

Source: EU-SILC XUDB 2004 - version of February 2006

Table 8. Number of households with leaking roofs, damp walls/floors/foundation, or rot in window

	quintile				
	1	*2*	*3*	*4*	*5*
	% of households				
BE	19	14	14	13	9
DK	10	9	8	7	7
EE	42	35	33	29	18
EL	32	24	22	16	9
ES	26	24	20	18	13
FR	21	17	12	13	11
IE	22	19	13	10	10
IT	33	26	23	19	15
LU	19	18	13	12	13
AT	15	11	9	8	8
PT	30	33	23	19	16
FI	6	5	4	4	4
SE	5	5	5	4	4
NO	9	9	7	9	5

Source: EU-SILC XUDB 2004 - version of February 2006

Table 9. Number of households reporting problems with noise, pollution and crime by income quintile

	Quintile	Noise from neighbours or from the street	Pollution, grime or other environmental problems	Crime violance or vandalism in the area
		% households		
BE	1	28	18	21
	2	25	15	19
	3	24	16	21
	4	23	16	20
	5	25	17	21
DK	1	28	10	17
	2	21	9	15
	3	20	6	15
	4	19	7	14
	5	16	6	14
EE	1	51	40	26
	2	50	42	24
	3	51	43	29
	4	53	41	28
	5	49	36	31
EL	1	14	10	5
	2	17	14	8
	3	19	13	9
	4	21	18	8
	5	21	20	10
ES	1	23	13	16
	2	25	13	18
	3	26	17	18
	4	26	18	21
	5	27	17	20
FR	1	27	20	23
	2	26	18	23
	3	24	20	22
	4	21	20	20
	5	22	21	21
IE	1	15	9	17
	2	14	10	14
	3	11	8	12
	4	11	8	15
	5	10	10	14
IT	1	26	21	16
	2	27	22	14
	3	26	22	14
	4	27	23	15
	5	26	25	15
LU	1	32	20	15
	2	29	23	19
	3	26	21	16
	4	25	16	12
	5	21	13	17
AT	1	24	9	13
	2	21	9	11
	3	24	11	10
	4	21	9	11
	5	23	12	12
PT	1	19	16	11
	2	25	20	10
	3	24	20	14
	4	29	22	16
	5	28	22	16
FI	1	17	14	20
	2	18	14	19
	3	17	15	20
	4	18	14	19
	5	15	13	15
SE	1	15	6	11
	2	14	6	11
	3	13	6	10
	4	11	6	8
	5	9	5	9
NO	1	16	10	6
	2	14	8	5
	3	13	9	7
	4	15	10	6
	5	11	8	6

Source: EU-SILC XUDB 2004 - version of February 2006

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9. THE SITUATION OF ROMA IN CENTRAL AND EASTERN EUROPE[61]

Introduction

Roma[62] who, according to experts, are supposed to originate from India, live almost all around the world. A large part of this heterogeneous ethnic group live in Europe, in nearly all European countries with an estimated number of around 7-8 million[63]. Most of them reside in Central and Eastern Europe, an estimated number of the Roma in the new Member States is between 1.2-1.4 million, while further 2.0-2.8 million Roma will become citizens of the EU with the accession of Romania and Bulgaria in 2007.

In all Central and Eastern European countries Roma fall far behind the majority of the population in many aspects of everyday life. Living conditions, housing, income, employment status, poverty, access to services and education are all areas in which the situation of Roma is significantly worse than that of the majority population who live in the same places as Roma – ie as their neighbours. The extent of poverty and inequalities in income depends on a number of underlying socio-economic factors, and this applies more to such disadvantaged social groups as the Roma than others. The analysis here considers issues relating to poverty and income in a broad sense, including living conditions. The aim is to describe the situation of Roma in Central and Eastern Europe in terms of a number of key socio-economic indicators in order to give a realistic picture of the present conditions and future possibilities as regards one of the largest ethnic minorities in the EU.

Certainly, the situation of Roma cannot only be discussed by means of socio-economic indicators since one of the most important problems they face is discrimination and persecution in many areas of everyday life. Discrimination of Roma is widespread in many EU countries and this has become a focus of particular attention so far as Roma are concerned. The implementation of anti-discrimination laws and the establishment of equality bodies in EU Member States have given all ethnic minorities, including Roma, more recourse against discrimination. In addition, the monitoring activities of the EUMC (European Monitoring Centre on Racism and Xenophobia), the launching of the Decade of Roma Inclusion and the increased efforts of NGOs to fight for the rights of Roma and improve opportunities for them have all

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[62] Roma are also known as Gypsies, but the term *Roma* is usually used as an autonym (a self-assignment) and *Gypsy* as an exonym (ie a term used by other people but not Roma themselves). *Gypsy* is often considered as a pejorative term by Roma, therefore it is better to refer to this ethnic group as Roma. Despite their homogenous designation, Roma are a heterogeneous group with different origins, languages and traditional trades and lifestyles.

[63] Estimates vary greatly, for ranges of the estimates which have been made by country see Table 1.

serve to raise awareness of the position of Roma across Europe. The main focus, however, has been on combating discrimination, though the EU, especially through the Structural Funds and the PHARE programme, have also provided practical support for improving the situation of ROMA (for more on this see European Commission 2005).

Since previous studies and reports have tended to concentrate on the issue of discrimination and equal opportunities, the analysis here is focused less on this and more on the social and economic aspects of the situation of Roma.

SOURCES OF DATA, METHODOLOGICAL CONSIDERATIONS

There are Roma living in all the Central and Eastern European (CEE) countries, and in all of these countries their living conditions and the opportunities open to them are appreciably worse than those of the majority population. Nevertheless, this everyday experience cannot easily be examined in systematic ways by means of statistical data, since there are few country-specific, let alone cross-country comparable, data sources available which can be used for this purpose. The lack of data is, therefore, one of the most important issues surrounding any study on the Roma in the EU and one which makes it difficult to obtain a complete understanding of their current situation.

Among the various available sources, the United Nations Development Programme (UNDP) provides the most appropriate database on this: in 2004, UNDP compiled the largest set of data ever gathered on the Roma entitled *Vulnerable Groups in Central and South Eastern Europe* (for the publication *Faces of Poverty, Faces of Hope* and downloadable dataset see UNDP 2005). The survey was conducted in numerous Central Eastern European (CEE) and South Eastern European (SEE) countries (Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Romania, Slovakia, and Serbia, Montenegro and Kosovo are included separately) among Roma and the people living in close proximity to them. The idea behind the survey design was that the majority population living in the same neighbourhoods as Roma ought to face the same socio-economic environment and therefore serve as a benchmark against which to assess the situation of Roma. An additional advantage was that it surveyed a sample of both households and individuals and examined a wide range of topics relating to the social and economic situation of Roma population, in particular, their living conditions, income, employment, education and schooling, housing and health conditions etc.

Before the above-mentioned research, UNDP published a remarkable study on the same topic in 2002 entitled *The Roma in Central and Eastern Europe: Avoiding the Dependency Trap* (for the publication and downloadable dataset see UNDP 2002.) This covered five CEE and SEE countries (Bulgaria, Czech Republic, Hungary, Romania and Slovakia), each of which as surveyed on the

socio-economic situation of the Roma population living there. The content of the research was very similar to that in 2004, focusing on all the relevant issues relating to Roma, their demographic characteristics, employment and unemployment, income, extent of poverty, education, health status, interactions with other ethnic groups and political representation.

Other relevant studies on the topic have been published by the World Bank (e.g. Revenga et al 2002, Ringold et al 2005), the European Union and the European Roma Rights Centre (e.g. European Commission 2004). However, the information contained in these studies seems less comprehensive than in the UNDP database, partly because they tend not to cover all the countries which are relevant, though they do provide some additional information and deal with a few other aspects.

Demography, language, segregation

THE SIZE OF THE ROMA POPULATION IN CENTRAL EASTERN AND SOUTH EASTERN EUROPE

It is often difficult to determine the number of people belonging to any ethnic minority, partly because of problems of obtaining data, partly because of problems of deciding who should be included. This problem is even more acute in the case of such a heterogeneous group as the Roma in CEE and SEE. Various estimates can be obtained according to different methods. The ways are through self-declaration (which is, for example, used by censuses), assessments of the group itself and estimates of others (such as, for example, on the basis of the assessment of interviewers in surveys).

According to census data, which are based on self-declaration, the total number of the Roma in Central Eastern and South Eastern Europe (CEE and SEE) is less than 1.5 million. However, it is usual for censuses to underestimate the size of disadvantaged minority groups, such as the Roma. There is, therefore, a need to consider other sources. According to expert estimates the real figure can reach, or even, exceed 5 million. The largest Roma population in CEE and SEE is in Romania, where the most reliable expert estimates put their number between 1.5 and 2 million, which is 7-9% of the total population. This means that 4 out of 10 CEE and SEE Roma live in Romania and that accordingly the country is host to the largest, or at least one of the largest, Roma communities in the world.

Nevertheless, the largest number of Roma within the population in CEE and SEE is in Slovakia and Bulgaria, where, according to expert estimates, they make up nearly 10% of the resident population, which corresponds to 480-520 thousand in the case of Slovakia and 550-800 thousand in that of Bulgaria. (Table 1)

Table 1 Number and proportion of Roma population in Central Eastern and South Eastern Europe by census and estimation (in thousands and percent)

	Roma population by census (in thousands)[a)]	Estimation for Roma population (in thousands)[b)]	Proportion of Roma population (%)[b)]	Distribution of the Roma population in the region by countries (%)[c)]
Romania[g)]	535	1500–2000	2–8	38
Bulgaria	371	550–800	8–10	14
Hungary	190	520–650	5–8	13
Serbia	108	450–500	6	10
Slovakia[g)]	90	480–520	8–10	10
Czech Republic	12	175–200	1.7–2	4
Albania[d)]	–	120–150	5	3
Kosovo	43	100–150	–	3
Macedonia[f)]	54	135	3–8	3
Croatia	9	40–100	1–2.5	2
Bosnia–Herzegovina[e)]	9	50–60	1	1
Montenegro[g)]	3	20–28	4–5	1
Total	*1434*	*4040–5293*	–	*100*

Source:

[a)] UNDP 2005, except for: Bosnia–Herzegovina (Needs Assessment: Roma Education Fund 2005) and Slovakia (UNDP 2002). Census data date back to 1991 in Bosnia–Herzegovina and Kosovo, 2001 in Bulgaria, Czech Republic, Croatia, Hungary and Slovakia, 2002 in Macedonia, Romania and Serbia and 2003 in Montenegro.

[b)] Needs Assessment: Roma Education Fund (2005); except for Slovakia (UNDP 2002); data relate to 2001–2003

[c)] Own calculation based on the means of the estimated number of Roma population by country

[d)] ERRC (1997)

[e)] ERRC (2004)

[f)] Together with internally displaced persons (IDPs)

[g] Census and estimation together

MAIN DEMOGRAPHIC CHARACTERISTICS

Surveys report (UNDP 2002, UNDP 2005) that the Roma population differs from the majority population in terms of the main demographic trends, in particular, birth rates (higher than average), the timing of marriage (earlier than the average), family structure (larger families and households) and age profile (lower rates of Roma among older age groups and higher rates among the younger cohorts).

In Romania, Slovakia, Hungary and the Czech Republic Roma households have on average 3–4 children, but it can be much higher in some cases, for example, in poor Roma settlements in Slovakia, the average number of children per family is nearly 8. The number of children per Roma mother is also higher than that of the majority of women across the region. In Romania, the total fertility rate, i.e. births per woman, for Roma is 2.6, while the corresponding figure for others is 1.2 (and 1.3 for ethnic Hungarian women living in Romania). In the Czech Republic,

married Roma women have on average 5 children by the end of their reproductive lives (at age 45-49) compared with an average of 2.2 children for other women in the country.

Parallel to this, there is much evidence that life expectancy, infant mortality and morbidity are significantly worse for Roma than for the majority population in CEE countries. (UNDP 2002) For instance infant mortality rates are roughly double the national averages in the Czech Republic, Slovakia and Hungary, and nearly three times higher in Romania. (Puporka and Zádori 1998, UNDP 2002)

As a result, the shape of the age pyramids for Roma in the region (Bulgaria, Czech Republic, Hungary, Romania, and Slovakia) is similar to the shapes in developing countries (a large number of children and young people and fewer people in the older age groups). It also means that the Roma population, on average, is very young in the region, with a median age of 19.3 years, while the corresponding figure is 33.6 years for the total population. (UNDP 2002)

Further demographic characteristics in line with the above features are a different family structure and household size than those of the majority population. In Romania, Hungary and Slovakia at least 4 out of 10 Roma in the 16 to 19 age group are already married and at least 7 out of 10 in the 20 to 24 age group. In Bulgaria, though the proportions are slightly lower, the pattern is similar (33% being married among 16 to 19 year-old and 69% among 20 to 24 year-olds). In the Czech Republic, however, the proportions are significantly lower, though still high (15% and 54%, respectively) (UNDP 2002). Certainly, large numbers of children and large sizes of family are a corollary of early marriage.

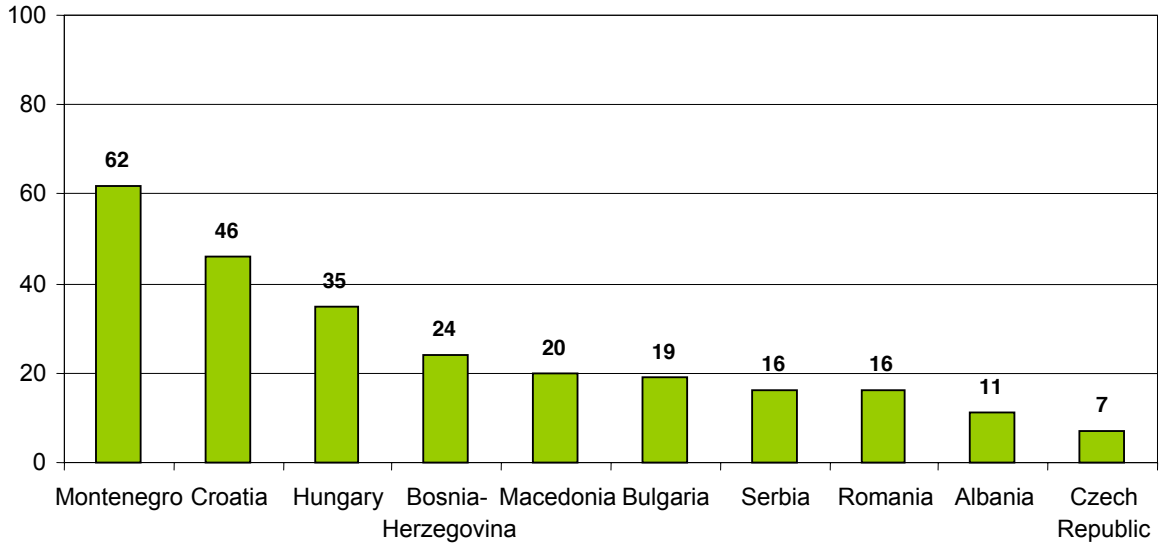
Various effects results from these basic characteristics, such an increasing number of Roma in these countries and a growing proportion of Roma in the population as a whole, and even more so among the population of working age in the coming decades. However, unless the current level of education of the Roma improves rapidly much of this additional potential labour force is likely to be unemployable or employable only as unskilled workers with low productivity and low wages. A further effect is that having families at a young age reduces the chances of women being able to stay in the education system for longer.

INTEGRATION, SEGREGATION

Spatial segregation and language are among the most apparent indicators of the extent of integration or separation of a minority group. If spatial segregation is measured by the proportion of Roma households living in a settlement with a dominant Roma population (where at least 50% of the population is considered Roma), there are marked differences in the extent of this across the region. Among the CEE and SEE countries examined here, the largest share of segregated Roma households is in Montenegro (62%), whereas the smallest is in the Czech

Republic (7%). There is a considerable difference in this across the new EU Member States, with five times more Roma households living in segregated communities in Hungary (35%) than in the Czech Republic, but also across the candidate countries, with nearly 50% of Roma families living in a segregated community, as against under 20% in Bulgaria and Romania (data based on *Faces of Poverty* survey) (Fig. 1).

Fig. 1 Share of Roma households living in a settlement with a dominant Roma population (%)



The use of a minority language in the family is another indicator of integration and segregation. On the one hand, using a minority language is a key aspect of ethnic identity and the cultural heritage, but, on the other, its use can heighten problems of integration into mainstream society.

Examining the differences between countries on the language used at home, from the evidence collected by the *Faces of Poverty* UNDP survey, a dichotomy can be seen between those in the north and those in the south of the region, which in practice means a difference between the developed and less developed countries. In most of the Balkan countries, the majority of Roma use a Roma language at home, while in Central Europe, Roma predominantly speak the majority language, except for Slovakia, where around half do (Table 2).

Table 2. The most frequent used language at home among Roma households (%)

	language	Roma population (%)
Albania	Albanian	0
	Roma	100
Serbia	Serbian	23
	Roma	73
Montenegro	Serbian	2
	Roma	72
Croatia	Croat	18
	Roma	71
Macedonia	Macedonian	21
	Roma	64
Bulgaria	Bulgarian	21
	Roma	55
Romania	Romanian	41
	Roma	54
Bosnia-Herzegovina	Bosnian	39
	Roma	46
Slovakia	Slovakian	41
	Roma	45
Czech Republic	Czech	62
	Roma	32
Hungary	Hungarian	93
	Roma	7
Kosovo	Albanian	95
	Roma	5

Kosovo represents a more marked exception, with only 5 out of 100 families using Roma at home and all the others speaking Albanian. This is in stark contrast to the Roma respondents in Albania participating in the survey, so that the situation in Kosovo seems not only to differ from the pattern in neighbouring Balkan countries, but is also the reverse of that in Albania itself. A possible explanation might be the special and strong relationship between the two countries, since the majority of the population in Kosovo is Albanian, and given Kosovo's ambition for independence, getting closer to Albania by using the Albanian language seems to override consideration of ethnic affiliations.

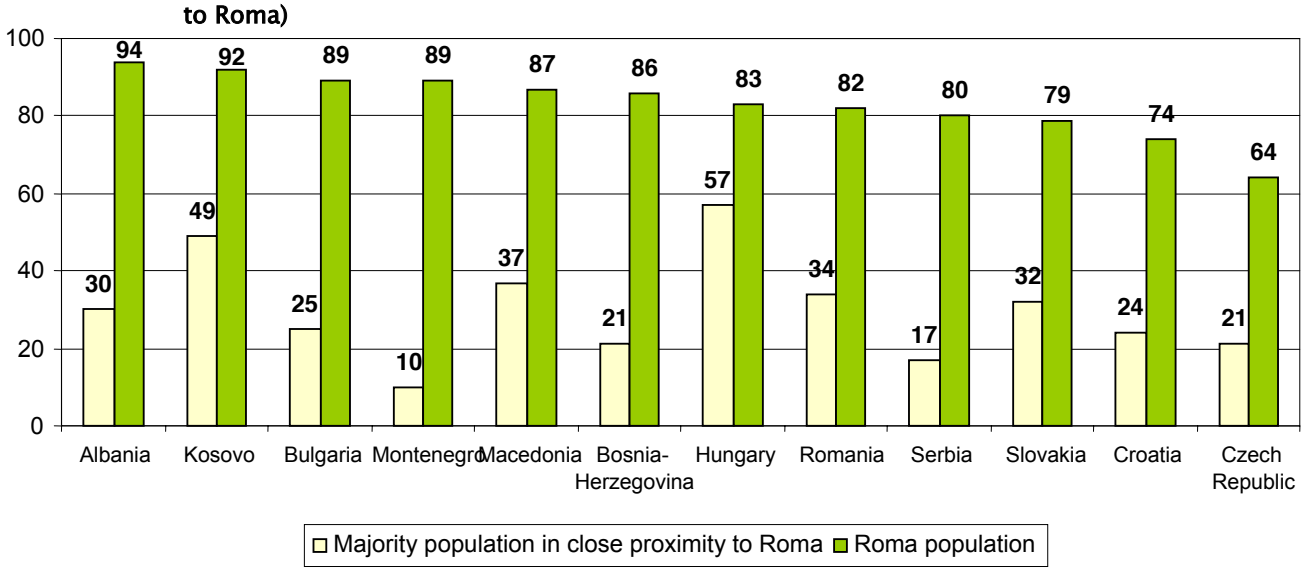
Although both of the indicators above are intended to measure the extent of segregation or integration of Roma in the countries concerned, this seems to differ between them. The language indicator suggests that the more developed a country, the smaller the proportion of people speaking Roma at home, but the residential segregation indicator does not fit this pattern and is much more country specific than region specific.

Education

The level of education of the Roma in the region is extremely low compared with the EU25-average in general, with the majority population in the candidate countries or with the majority population living in close proximity to Roma. According to the data from the UNDP survey *Faces of Poverty*, almost 90% of Roma aged 15 or over have at most 8 years elementary schooling as the highest level of education attained in Albania, Kosovo, Montenegro and Bulgaria. Moreover, the proportion is 70-80% in most of the other countries examined. The Czech Republic has the lowest proportion, but even here the figure is 64%.

The share of the low educated among Roma is 2 to 9 times larger than among the majority population. In this regard, the most extreme situation is in Montenegro, where elementary schooling was the highest level of education the majority population living in close proximity to them. A smaller but still substantial gap is also evident in Serbia, Bosnia-Herzegovina and Bulgaria, where this is the highest education level for around four times more Roma than non-Roma. The smallest difference between the Roma and the neighbouring population in this respect is in Hungary, where the gap is less than two to one, but where this is primarily because of the larger proportion of non-Roma with low education (57%) rather than because of a small number of Roma with only elementary schooling (Fig. 2).

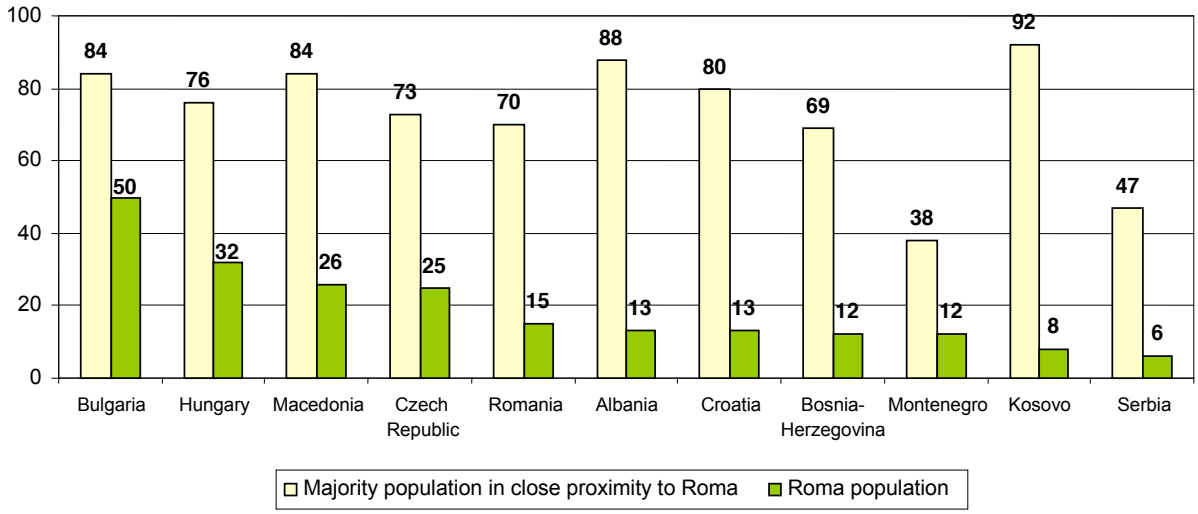
Fig. 2 Share of population 15 years old and above with 8 years elementary school as highest attained education level (% of among Roma and majority population in close proximity to Roma)



Segregation within schools and the education system is a major issue underlying the very low education level of Roma, which is of key importance for their vulnerability in the region as well as for their chances of social inclusion. The data from the UNDP's *Faces of Poverty* survey shows that a significantly large proportion of Roma children attend a class or school in which the majority of pupils are of the same ethnic origin.

School segregation occurs most frequently in Bulgaria, where every second Roma pupil attends a school in which the majority are Roma. The proportion is smaller in other countries but is still significant in many of them. Every third Roma child in Hungary and every fourth in Macedonia and the Czech Republic, therefore, are effectively separated from class mates who are not of Roma origin. At the same time, an even larger proportion of non-Roma children living in the same neighbourhoods as the Roma attend schools where the majority is from the same, ie non-Roma, ethnic group, which follows the same logic but which ends up in segregation (Fig. 3).

Fig. 3 Share of Roma and non-Roma living in close proximity to Roma aged 6 to 22 attending schools or colleges where the majority have the same ethnic affiliation (%)



A special form of segregation in education is when Roma children are directed to a so-called school or class with a special curriculum, usually designed for those with learning difficulties. This "method" has been frequently used in most of the countries of the region, to an increasing extent over the past 10-15 years. In Hungary for example the number of children in special schools or classes established for the mentally disabled or disadvantaged students increased over the decade following after the transition and in 2003, every fifth Roma child was attending such a school or class (Kemény-Janky-Lengyel 2004).

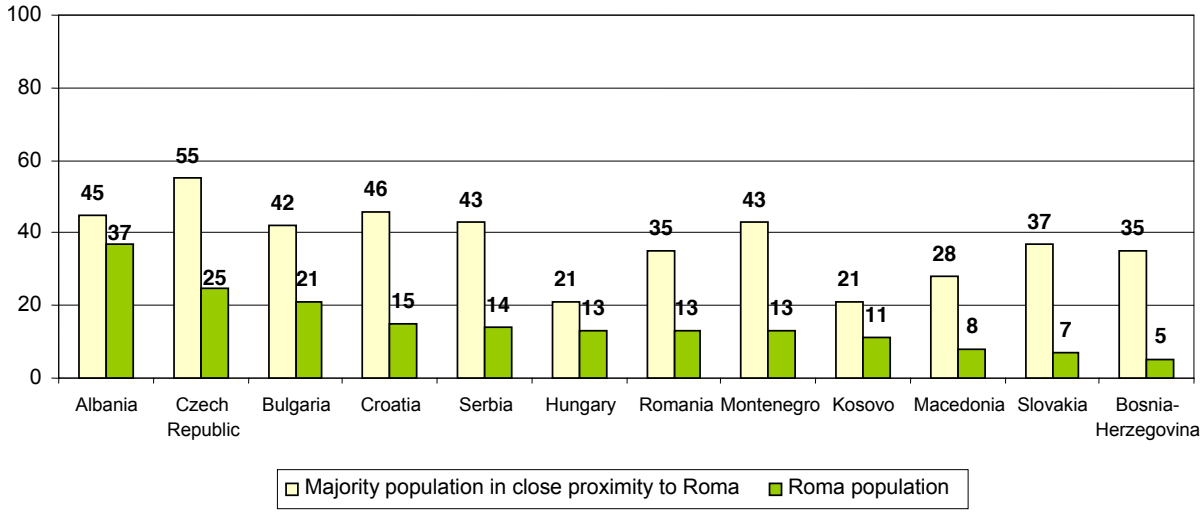
According to a report published by the European Roma Rights Centre (ERRC), the same applies in the Czech Republic, Slovakia and Bulgaria: Roma children are over-represented in schools or classes which are for the mentally disabled or disadvantaged children. This situation can be regarded as a parallel education system operated for Roma children in many areas of the region. With the exception of Hungary, concrete government action aimed at desegregation of the school system has yet to be initiated. (Stigmata 2005)

Employment, unemployment, labour market

The situation in the labour market is similar to that in education. The dataset from the *Faces of Poverty* survey indicates that activity rates among the Roma population are extremely low in the region: only 1-2 out of 10 Roma aged 15 or over have earnings from economic activity (defining activity to include that in both the formal and informal economy). The situation is better only in the Czech Republic and Albania, where somewhat higher proportions of Roma are in paid employment, though only slightly so. The proportion is smallest in the less developed countries in the former Yugoslavia (Bosnia-Herzegovina, Macedonia, Kosovo) (Fig. 4).

In general, activity rates among the majority living in the same neighbourhoods as Roma are also very low, but, for the most part, there are greater differences in this respect between countries than in the case of Roma. The smallest difference between the activity rate of Roma and the neighbouring non-Roma population can be observed in Hungary and Kosovo, though in both cases this reflects the low level of activity among the non-Roma rather than a high rate among the Roma. In these cases, therefore, as well as more generally, employment problems cannot be attributed to discrimination alone but also have to do with the underdevelopment of the regions in which the Roma live and with a lack of jobs. In contrast, the majority population in the Czech Republic, Croatia, Serbia, Montenegro and Bosnia-Herzegovina have an activity rate 30 percentage points or so higher than that of the Roma (Fig. 4).

Fig. 4 Share of active earners aged 15 and above among Roma and majority population in close proximity to Roma (%)



On a broad definition of unemployment, every fourth Roma of working age was unemployed in Hungary and Romania, every third in the Czech Republic, every second in Bulgaria and two out of three in Slovakia in 2001. A great many Roma who are in paid employment work in the black economy: at least 4 out of every 10 of those in Hungary, Bulgaria and Slovakia and 7 out of every 10 in Romania. The situation is somewhat better in the Czech Republic, where the figure is around two out of every. Moreover, here as well as in Hungary, this is coupled with a lower rate of unemployment. While unemployment among Roma is lowest in Romania, this is combined with an extremely large number working illegally which implies that the situation is much less favourable than the unemployment figures suggest (UNDP 2002).

Poverty, income and living conditions

The small share of active earners among Roma leads directly to a lower level of income and poor living standards. Poverty can be measured in different ways. Both a subjective and objective, or absolute, poverty indicator is used below and additional information is provided by indicators on access to basic services.

According to a subjective indicator of poverty, as measured by a survey covering Hungary, Romania and Bulgaria conducted in 2000, the Roma seem to have passed through the decade following the transition with a greater sense of pessimism than the non-Roma population, who also experienced a decline in living standards. The smallest proportion of people reporting a decline in living standards was in Hungary, where this, nevertheless, amounted to more than 5 out of every 10 non-Roma and 7 out of 10 Roma (Table 3).

Table 3. Self-evaluation of the change in living standard between 1988 and 2000 (%)

		got better or remained the same	a bit worse	got much worse	total
Bulgaria	non-Roma	17	24	59	100
	Roma	12	13	75	100
Hungary	non-Roma	46	36	17	100
	Roma	30	29	41	100
Romania	non-Roma	29	27	45	100
	Roma	13	19	68	100

Source: Ladányi-Szelényi 2002

Income of under USD 4.30 a day in purchasing power parity[64] terms can be used as a measure of absolute poverty. According to the *Faces of Poverty* survey, the proportion of Roma with income of less than in Albania, Kosovo and Romania (at least two-thirds of the Roma in each case), while around half of the Roma have income below this in Serbia, Macedonia and Bulgaria and the proportion is slightly smaller in Montenegro and Bosnia-Herzegovina. The smallest proportions are in the economically more developed Central European countries and Croatia (Table 4).

Poverty rate ratio (the share of Roma with poverty-level income relative to non-Roma with this level of income) is the highest in Montenegro and Bulgaria, where eight times more Roma are living under the poverty line than non-Roma, despite the fact they live in the same locality. Wide differences are also evident in the other Balkan countries, while the gap is narrowest in the Central European countries. (Table 4) This pattern is similar to that shown by labour market indicators and suggests that disparities in income levels (or labour market conditions) between countries are more important in explaining differences between the situation of Roma and that of the majority population than other factors.

[64] Using USD 4.30/day as an absolute poverty threshold is based on the practice of the UN and UNDP, which suggest this methodology in Millennium Development Goals. For instance see MDG Reports 2004:16. We apply this indicator because cross-country poverty figures for Roma in the countries examined here are available only from UNDP's survey

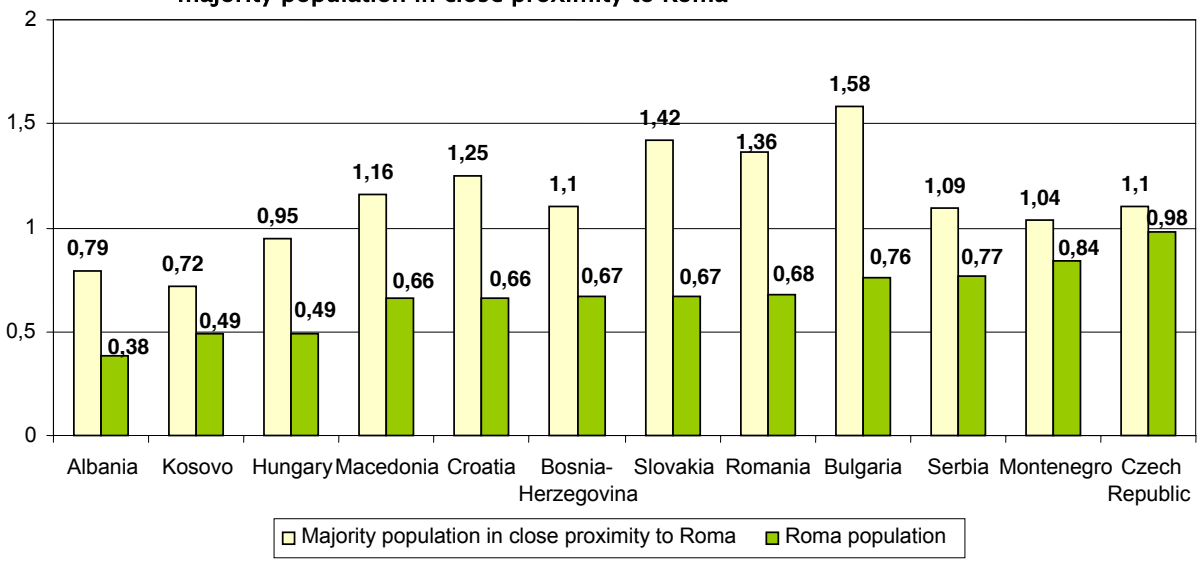
Table 4. Income based poverty among Roma and majority population in close proximity to Roma (percent of the respondents under the USD 4.30 PPP income based poverty line)

	Majority population in close proximity to Roma	Roma population	Poverty rate ratio (poverty rate of Roma/neighbouring majority)
Albania	14	79	5,6
Kosovo	49	72	1,5
Romania	20	67	3,4
Serbia	9	58	6,4
Macedonia	11	52	4,7
Bulgaria	6	49	8,2
Montenegro	4	33	8,3
Bosnia-Herzegovina	3	26	8,7
Croatia	2	11	5,5
Hungary	5	8	1,6
Czech Republic (11 USD)	9	25	2,8

Other indicators, specifically of relative poverty, confirm the overrepresentation of Roma among the lowest income households. For instance, according to the TARKI Household Monitor survey for Hungary, 12% of the population in the country as a whole have income below 60% of median income according to the latest data for 2004. In households where the head is a Roma, this proportion rises to 37%. This proportion, however, seems to have declined significantly in recent years, from 70% in 2000 and 51% in 2003 (Gábos–Szivós 2006). (It should be noted that it is difficult to estimate similar figures for other countries because of lack of data on median income.)

The poor living conditions of Roma can also be seen through such indicators as the number of people per room. According to this (based on the *Faces of poverty* UNDP survey) in all the countries examined, Roma live in worse conditions than the majority population living in close proximity to the Roma, which is almost a consequence of their lower level of income situation and larger number of household members. The UNDP survey reports that on the number of rooms per household member for Roma is below 1 in all the countries examined, so in every country there is on average more than one person per room in such households. Roma in Albania, Kosovo and Hungary have the poorest housing conditions, with at least two people living in every room in Roma households. Conditions are best in the Czech Republic, where the average is close to one person per room and where there is only a marginal difference between the Roma and the majority population (Fig. 5).

Fig. 5 Rooms per household member in the households of Roma and majority population in close proximity to Roma



Indicators on access to basic services show perhaps the most depressing picture of the disadvantaged situation of Roma across the region as compared with the neighbouring majority population. Roma, therefore, have far less access to essential drugs, secure housing (defined by the condition of the dwelling), acceptable sanitation (defined by the existence of a bathroom or toilet within the dwelling), and a supply of clean running water than their non-Roma neighbours (Table 5 – data based on *Faces of Poverty* survey).

Table 5. Access to basic services: share of Roma and majority households in close proximity to Roma not having access essential drugs, secure housing, improved sanitation and improved water source (%)

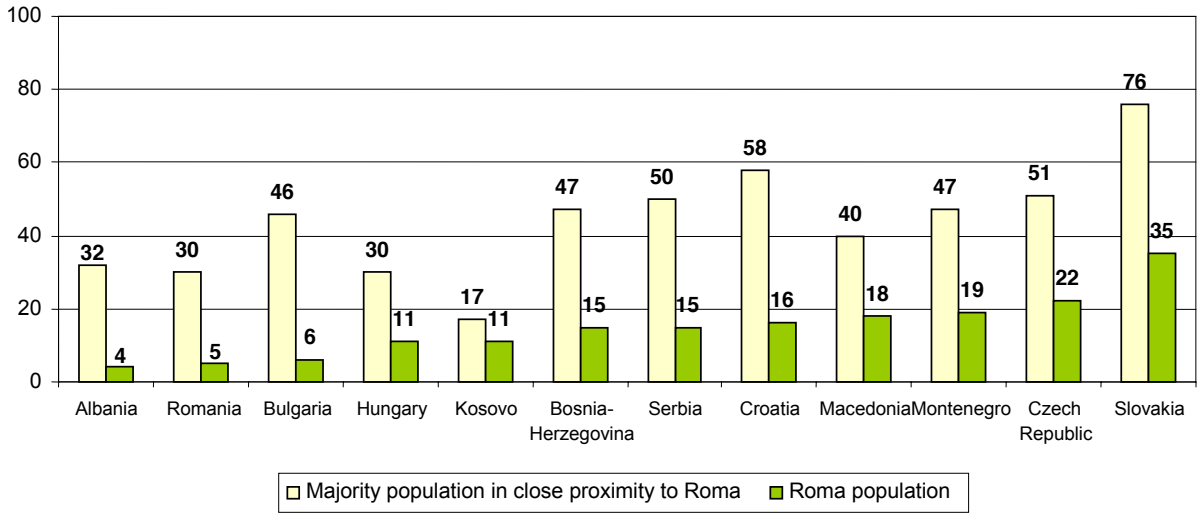
	Majority population in close proximity to Roma	Roma population
Albania – essential drugs	12	41
– secure housing	0	7
– improved sanitation	4	72
– improved water source	3	28
Bosnia-Herzegovina – essential drugs	29	71
– secure housing	5	36
– improved sanitation	11	68
– improved water source	1	11
Bulgaria – essential drugs	32	75
– secure housings	4	33
– improved sanitation	26	81
– improved water sources	0	10
Croatia – essential drugs	13	50
– secure housing	2	10
– improved sanitation	4	60
– improved water source	1	29
Czech Republic – essential drugs	8	27
– secure housing	4	14
– improved sanitation	6	10
– improved water source	5	8
Hungary – essential drugs	50	74
– secure housing	19	36
– improved sanitation	24	46
– improved water source	9	34
Kosovo – essential drugs	47	86
– secure housing	–	–
– improved sanitation	45	72
– improved water source	–	–
Macedonia – essential drugs	42	79
– secure housing	5	36
– improved sanitation	12	59
– improved water source	0	1
Montenegro – essential drugs	9	64
– secure housing	2	11
– improved sanitation	2	68
– improved water source	0	18

Table 5 cont'd

Romania – essential drugs	42	77
– secure housing	4	29
– improved sanitation	53	88
– improved water source	33	68
Serbia – essential drugs	22	60
– secure housing	5	50
– improved sanitation	6	50
– improved water source	1	8

The same is true of access to telecommunications, which nowadays is perhaps as essential as the housing aspects mentioned above. In terms of the number of telephone lines or cellular subscribers per 100 people, Roma are, therefore, in a much worse situation than the majority population living close to them. The smallest differences are in Kosovo and Hungary, where again this largely reflects the poor level of provision for the non-Roma population rather than a high level of access of Roma themselves (Fig. 6 – UNDP 2005).

Fig. 6 Telephone lines or cellular subscribers per 100 people among Roma and non-Roma living in close proximity to Roma



Source: *UNDP 2005*

Conclusions

From the surveys carried out and the statistical data which have been compiled, the situation of Roma in CEE and SEE countries is in virtually every aspect of life significantly worse than that of the majority population in the countries concerned, including that of those living in the same neighbourhood or in close proximity to them. At the same time, these differences cannot be attributed to just one or two factors alone, such as discrimination or a generally low level of education among the Roma community. It is equally the case that regional disparities, the economic difficulties of the CEE and SEE countries and demographic characteristics are also factors underlying the survey findings.

In general, in terms of many aspects, the Balkan countries are in most cases not only disadvantaged compared with the new EU Member States but also have more disadvantaged Roma populations than in the other countries. Since Roma for a number of reasons have higher fertility and mortality rates and a lower level of education than non-Roma in the region, they are also characterised by a larger number of children and young people, lower levels of pay and productivity and larger proportion working in the black economy.

Further and more detailed analysis of their relative situation in the countries concerned has to await the availability of more complete and reliable data which are comparable across countries, which as emphasised at the outset are difficult to obtain. Nevertheless, such data and the research into key economic, social and political issues which they make possible are of major importance if Roma are to be satisfactorily integrated into the societies of the countries in which they live and if they are both to contribute to and enjoy the benefits of the economic development of the region.

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10. THE POSITION OF ETHNIC MINORITIES ACROSS THE EU[65]

Introduction

Assessing the relative position of those belonging to ethnic minorities in different parts of the EU in terms of their access to education, employment, decent housing and a similar standard of living as the population at large is by no means easy. Although there is piecemeal evidence that many of the people concerned suffer significant disadvantage in all these areas, data are lacking to formulate anything close to a complete and reliable picture of the actual situation. This is partly because of the understandable reluctance of many governments, given the use to which such data have been put historically, to countenance the inclusion in official surveys or statistical enquiries generally of questions on the ethnic or racial origin of respondents. It is also, however, because of the inherent difficulty of collecting the necessary information from people who have little incentive to reveal that they belong to a minority group in a context where the group concerned might be subject to discrimination and unequal treatment. Accordingly, any assessment of their position has to rely either on indirect means of compiling the data required or on special surveys and case studies targeted specifically on this particular issue. The surveys carried out in the recent past into the position of Roma in central and southern eastern European countries, which are described elsewhere in this report, are examples of the latter.

The concern here is twofold. First, it is to set out what can be learned from the indirect data available on the position of ethnic minorities, in this case on their access to employment and jobs suited to their qualifications from the statistics collected by the EU Labour Force Survey which distinguish nationality. Secondly, it is to review recent studies which have been carried out on this issue and to present the data which they have compiled to illustrate the extent of the disadvantage experienced by ethnic minorities in different areas across the EU. This is intended to compliment the analysis of the position of Roma in particular countries presented elsewhere, though unlike this analysis, it is often not possible to distinguish between different minorities and all of the groups concerned are implicitly assumed to be in the same position, which is usually not the case in practice.

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The employment circumstances of non-nationals

The only data which exist across the EU which relate to the ethnic origin of those in employment are the statistics distinguishing nationality collected as part of the EU Labour Force Survey. From these it is possible to identify those living and working in different Member States who are nationals of countries outside the EU. Such people can be regarded as belonging to an ethnic minority, though in many cases they are predominantly made up of those who have migrated into the EU in the recent past and indeed the data concerned are often used to examine the position of immigrants. They give an incomplete picture of ethnic minorities – or even of recent immigrants – to the extent that these are not necessarily non-nationals of the Member State in which they live since many will have taken nationality of the country concerned. Indeed, many are likely to be second or even third generation migrants who were born in the EU but still belong to an ethnic minority. The Roma, who have lived in Europe for many centuries, illustrate this point very well

The extent to which non-nationals can reasonably be regarded as a proxy for ethnic minorities varies considerably across the EU, according in part to the regulations governing nationality in different countries. In some Member States, therefore, it is relatively quick and easy for migrants to assume the nationality of the country they have moved to, in others, such as Germany, it is more difficult and more protracted. In the latter countries, therefore, there is likely to be a closer correspondence between non-nationals and ethnic minorities. In the former, a very loose one. Nevertheless, the position of non-nationals (or more specifically of nationals from countries outside Europe) might still reflect, or at least be indicative of, the position of ethnic minorities, to the extent that they are likely to be a subset of the latter. This is essentially the assumption adopted here, primarily because there is little practical alternative if the aim is to build up a picture of the employment circumstances of ethnic minorities across the EU. It should be emphasised, however, that it is an assumption and one which is based on no real evidence of how far the two groups correspond in reality. This should be kept firmly in mind when interpreting the results of the analysis.

ACCESS TO EMPLOYMENT OF NON-NATIONALS

The average employment rate of non-nationals living in the EU – the proportion of those aged 15-64 in employment – is considerably lower than that of nationals. (The term 'non-nationals' is used here and below to denote those who are nationals of countries outside Europe and 'nationals' to denote those with EU nationality.) In 2005, it was 55.5% as against a rate of almost 65% for those of EU nationality. The difference, however, was very much concentrated among women, for whom the gap was over 13 percentage points as opposed to one of 5.5% for men. The difference was also larger in the EU15 countries taken separately than in the EU as a

whole (almost 12 percentage points as against just 9 points), reflecting the as yet relatively few non-nationals living in the new Member States (which are, therefore, excluded from the present analysis) coupled with their low employment rate among nationals (which accordingly pulls down the EU average for nationals without altering the rate for non-nationals) (Table 1).

These differences in employment rates are common to all EU15 Member States except those in the south. In Greece, Spain and Portugal (there are no data for Italy), in stark contrast to elsewhere, the proportion of non-nationals of working age who are in employment is significantly larger than that of nationals, among men as well as women. In the rest of the EU15, the employment rate in 2005 of men and women taken together ranged from being around 10 percentage points lower than that of nationals in Ireland and Austria and 15 percentage points lower in the UK to just under 20 percentage points lower in Germany and France, around 25 parentage points lower in Belgium and the three Nordic countries and over 30 points lower in the Netherlands.

These differences have tended to narrow over recent years. In the EU15 as a whole, the gap between the employment rate of nationals and non-nationals was reduced from just over 15 percentage points to just under 12 between 2000 and 2005. The reduction, however, was partly a result of a widening difference in the opposite direction in the three southern countries and was not common to all Member States in the rest of the EU15. In Germany, the gap widened by around 2.5 percentage points and in the Netherlands by 4 points. Only in Belgium and the UK did the gap narrow by more than 2 percentage points.

Similarly large differences are found in average unemployment rates between nationals and non-nationals. In 2005, the average rate of unemployment among nationals in the EU15 was just under 8%. The average rate for non-nationals was almost 17%, with the gap being much the same for women as for men. (It should be noted that employment rates tend to give a more complete picture of the relative access of non-nationals to employment since they take account of differences in participation rates as well as in unemployment and, as such, any tendency for non-nationals to be discouraged from actively seeking work at all because of the problems involved in finding a job.)

It is also relevant that people from other European countries who are resident in the EU do not have a similarly lower employment (or unemployment) rate than nationals. In 2005, therefore, the average employment rate of those from another part of Europe living in an EU15 Member State was much the same as that of nationals, as it was in nearly all of the countries.

DIFFERENCES IN EDUCATION LEVELS

These differences in employment and unemployment rates do not necessarily reflect underlying differences in access to employment. They could, in particular, be a consequence of differences in the age composition of non-nationals as opposed to nationals or in education levels. Since the gap between nationals and non-nationals is evident across the age range, differences in age composition are not a major factor, although the gap tends to be relatively wide among younger age groups which might reflect a greater tendency for non-nationals among these to be in full-time education. This could well be the case since the latter are likely to include a large number of recently-arrived migrants who have moved to the EU with the specific intention of studying or receiving training. Differences in education levels are a more plausible source of the gap in employment rates given that the likelihood of someone being in work is closely related to their level of education and given also that the average education level of non-nationals in the EU tends to be significantly lower than of nationals.

In the EU15 as a whole in 2005, therefore, around 28% of men aged 25-64 with EU nationality had only a basic level of education, in the sense of no qualifications beyond lower secondary level – or compulsory schooling. This compares with a figure for non-nationals of 42%. Similarly, some 28% of men in this age group had tertiary education (a university degree or the equivalent), while the figure for non-nationals was only 19%. The difference for women was much the same in respect of the proportion with basic schooling (just under 33% as opposed to almost 47%) and only slightly smaller for those with tertiary education (almost 26% as against just under 20%) (Table 2).

This difference is repeated in varying degree across EU15 Member States, though less so in Spain and Portugal, where a relatively large proportion of nationals have only basic schooling, as well as Ireland and Sweden – and in Denmark for men – where a relatively large proportion of non-nationals have tertiary education (reaching over 40% for men in Ireland and over 50% for women).

EMPLOYMENT RATES BY EDUCATION LEVEL

Although these differences in education levels might explain some of the gap in employment rates between nationals and non-nationals, they are only part of the explanation. This can be seen in the fact that for each education level, the proportion of nationals of working age in employment is significantly larger than for non-nationals in most EU15 countries. The gap, moreover, is especially pronounced for those with the highest education level.

In the EU15 countries taken together, therefore, the proportion of men aged 25-64 with EU nationality and only basic schooling who were in employment in 2005 averaged just under 71%,

over 5 percentage points more than non-nationals with the same level of education. For men with tertiary education – university graduates or the equivalent – the proportion in employment was 88% for nationals and just 75% for non-nationals (Table 3).

For women, the gap in employment rates between nationals and non-nationals was much the same for those with basic schooling (7 percentage points instead of 6) but for those with tertiary education, it was even wider (almost 22 percentage points – only just over 60% for non-nationals as opposed to 82% for nationals).

These differences are repeated in the majority of EU15 Member States. With the exception of the three southern countries, Greece, Spain and Portugal, non-nationals with a given level of education had a significantly lower employment rate than nationals with the same level. In most Member States, moreover, the gap between employment rates was wider for those with tertiary education than for those with lower education. This is particularly the case for women. In Belgium, Germany, France and the Netherlands, therefore, women non-nationals with tertiary education had an employment rates that was over 30 percentage points lower than for nationals. (The gap is equally wide in Finland and Sweden, though here the numbers involved are relatively small so the data may not be reliable.) By contrast, in the UK, the gap is only 6 percentage points, much lower than elsewhere in the EU15, which may be a reflection of a difference in the nationality, or ethnic origin, of the non-nationals concerned from that in other countries rather than, or as well as, a more favourable context for integration.

A gap also exists for women with tertiary education in the three southern countries. Although for those with lower education levels, non-nationals have a higher employment rate on average than nationals, this is not the case for those with tertiary education. In all three countries, non-nationals with this level of education have a lower employment rate than nationals and while the difference is smaller than in the countries listed above, it was still substantial in 2005 (almost 20 percentage points in Greece and Spain and around 13 percentage points in Portugal).

It is arguable that these differences in employment rates reflect different attitudes and cultural norms towards women working among non-nationals – even among those with university education – than among EU nationals more than any obstacles to them accessing employment. This possibility, however, does not seem consistent with the much higher unemployment rate among non-nationals with tertiary education who are actively seeking work than among nationals. In 2005, therefore, whereas unemployment among non-nationals with this level of education averaged under 5% for non-nationals it was 13%. (For those with basic education, the rates were 11% and 20%, respectively).

It is equally the case, as noted, that employment rates among men from outside Europe with tertiary education, for whom the same argument about attitudes and cultural norms does not hold, also tend to be significantly lower than for EU nationals and this holds in nearly all Member States. In Germany, the employment of non-nationals with this education level was some 15 percentage points lower, in France and the Netherlands, around 25 percentage points lower and in Belgium, 30 points lower. Even in the UK, where the gap was smaller than elsewhere in the north of the EU, the difference was still 10 percentage points. Moreover, as for women, non-nationals with tertiary education in Spain and Portugal, unlike those with lower education, also had a lower employment rate than nationals (in Spain, 8 percentage points lower, in Portugal 16 points lower). Only in Greece were a larger proportion of non-nationals with this education level in employment than nationals.

Examining the situation by broad age group indicates that the gap in employment rates between nationals and non-nationals tends to be wider for the younger members of the potential work force with tertiary education than the older members. In the EU15 as a whole, some 92%of men aged 25-64 with EU nationality and tertiary education were in work in 2005 as opposed to only just under 76% of non EU nationals, a difference of some 16 percentage points as against one of 11 percentage points for men aged 40-64 with this education level. (For those with basic education, the difference was around 9 percentage points for men aged 25-39 and just under 7 percentage points for those aged 40-64.)

For women, the difference is even more pronounced. Whereas the employment rate of nationals aged 25-39 with tertiary education averaged around 84% in the EU15, for non-national, it averaged only 57%, a gap of 27 percentage points and over twice the difference for women aged 40-64 (13 percentage points). These differences are broadly repeated in nearly all Member States.

A potential qualification to the above findings should, however, be borne in mind. Although an attempt has been made in the LFS, from which these data derive, to harmonise education levels, in the sense of assigning the level attained in countries outside Europe to the equivalent level in the EU, this is by no means straight-forward. Tertiary qualifications obtained in other countries, therefore, may not be equivalent to those obtained in the EU. It is questionable, however, whether they are systematically of a lower level in terms of the competencies and skills that they are associated with. Nevertheless, there is a need for caution when interpreting the results presented here.

THE KINDS OF JOB WHICH NON EU NATIONALS ARE EMPLOYED IN

In view of the lower average education level of non-nationals than of EU national, it is only to be expected in those moving into the EU from third countries, it would be expected that they would be employed disproportionately in relatively low skilled activities. This indeed seems to be the case. In EU15 Member States as a whole, non-nationals accounted for 25% of total employment in private households (working as domestic servants and so on) in2005, for around 13% of employment in hotels and restaurants and for 8% of employment in construction. In Spain, almost half of those employed in private households were non-EU nationals and in Greece, just over 60%, while in the former as well as in Austria, non-EU nationals made up around 20% of employment in hotels and restaurants.

Perhaps a more relevant question from the perspective of the social integration of non-nationals is not so much whether they are employed disproportionately in low-skill jobs *per se*, but whether the jobs concerned are in line with their abilities, as indicated in particular by their educational levels. This can be considered by examining the jobs – or occupations – which non-nationals with particular education levels perform and how far they differ from those performed by nationals. The most interest in this regard is in those with high education levels and how far they tend to be employed in jobs which either accord with or fall short of their apparent capabilities or level of education.

The evidence suggests that a significant proportion of non-nationals with tertiary education occupy jobs which do not match their qualifications (though the above observation on the comparability of the qualifications obtained in other countries with those obtained in the EU should be kept in mind). Under 10% of men aged 25-64 of non-EU nationality and with tertiary education were employed in managerial positions, under two-thirds the proportion of nationals with this education level, while some 32% were employed as professionals, three-quarters of the proportion of nationals (Table 4).

Much the same is also true of women. In particular, the proportion of non-nationals working as professionals was only just over half the proportion of nationals. Conversely, a much larger proportion of both men and women with non-European nationality with this level of education were employed in elementary occupations (ie low skill manual jobs) than nationals – an average of 13% of men and almost 17% of women as opposed to only just over 1% in the case of nationals. Equally, the proportion of non-nationals with tertiary education employed in sales and service jobs (as shop assistants for example) in the EU15 was almost 3 times as large as for nationals in the case of women and twice as large in the case of men. Over a third of women from outside the EU with university degrees or the equivalent and almost 20% of men,

therefore, worked in relatively low skill manual or non-manual jobs. These figures are over four times as high as for nationals.

A similar pattern holds in individual Member States. In France, for example, almost 17% of men who were nationals of countries outside Europe and had university degrees of the equivalent worked in low skill manual jobs in 2005 as against under 1% of nationals with the level of education, while in Spain, the figure was over 20% as against only 2% of nationals. In Spain, the difference in the pattern of employment for women graduates between national and non-nationals was even more stark. While only just over 2% of nationals with tertiary education worked in low skill manual jobs, the figure for non-nationals was 36%. In Greece, almost 42% of women from outside Europe with this education level worked in this type of job in contrast to under 1% of nationals. In addition, over 62% of women graduates with EU nationality were employed as professionals but under 11% of non-nationals.

More direct evidence on the relative position of ethnic minorities

As emphasised at the outset, the above analysis of the position of non-nationals in the labour market is a relatively tenuous means of examining the situation of ethnic minorities across the EU. It is, however, because of lack of data on ethnicity, the only way to cover the EU as whole, and although a significant number, perhaps even the large majority, of people belonging to an ethnic minority are nationals of the country in which they live and, accordingly not included in the statistics for non-nationals, the latter may, nevertheless, give an indication of their relative position.

The concern here is examine more direct evidence on the situation of ethnic minorities across the EU from recent studies and surveys of the most important aspects of their position, including education and housing as well as employment, though employment is considered first in order to complement – and support – the analysis above.

EMPLOYMENT AND UNEMPLOYMENT

Because of the unwillingness of governments across the EU to collect such data, relatively few statistics exist on employment or unemployment rates of ethnic minorities. There are, however, some data for Denmark, the Netherlands and the UK – Member States which not only collect such statistics but which have set explicit objectives to reduce the apparent disadvantage on the labour market which ethnic minorities experience. The national data available broadly confirm the results of the above analysis.

In Denmark, therefore, the activity rate (ie the number employed plus unemployed as a percentage of working-age population) of immigrants from countries outside Europe, or more

specifically, non-Western countries, averaged just 53% in 2004, some 25 percentage points lower than the rate for those of Danish origin (see table). Although the rate for descendants of former migrants from outside Europe was higher than for immigrants, at 63%, it was still some 15 percentage points below the rate for ethnic Danes. Moreover, although the latter gap narrowed in the late 1990s in the context of economic growth, it widened again between 2001 and 2004 as economic growth slowed down.

Economic activity rate in Denmark by ancestry, 1997-2004

	1997	1998	1999	2000	2001	2002	2003	2004
Persons of danish origin	78.9	79	79.2	79.2	79.5	79.6	78.6	78.4
Immigrants	54.8	55.3	56.2	55.6	56.3	56.1	55.6	56.6
Immigrants from western countries	65.8	65.6	65.3	65	65.5	65.3	64.3	63.7
Immigrants from non-western countries	47.9	49.1	50.8	50.3	51.4	51.4	51.3	53.2
Descendants	67.3	67.9	69.4	70.3	71.1	70.7	68.3	66.8
Descendants from western countries	75.9	76.2	76.4	77.1	77.4	77	75.1	74.7
Descendants from non-western countries	59.3	61	64.2	65.7	67.1	67	64.6	62.9

In the Netherlands, unemployment among ethnic minorities is officially estimated to have averaged 16% in 2004 as opposed to an overall rate of only just over 6% (data published in the Employment Reform Programme for 2006 for the Netherlands) Both the unemployment rate for ethnic minorities and the gap with the overall rate were greater than in 2003 (when the rate for the former was just over 14% and the overall rate just over 5%).

In the UK, the difference in the average employment rate for the population as a whole and that for ethnic minorities was 15.7 percentage points in 2003, according to official figures, the gap for women – in line with the above analysis being wider than for men (see table). The gap narrowed slightly between 2001 and 2003.

Employment rate gaps in the UK: difference in the rate for ethnic minorities relative to the overall rate (percentage point difference)

	2001	2002	2003
Total population	-16.7	-16.5	-15.7
Women	-19.7	-19.8	-18.8
Men	-13	-12.7	-12

EDUCATION

Ensuring equal access to education can play a major part in reducing the risk of social exclusion among ethnic minorities, not least because it has an important influence on employment prospects and earning capacity. (Despite the fact, as shown above, that the employment rate of non-nationals with tertiary education is substantially below that of nationals, it is still significantly higher than for those with lower education.) The evidence from studies carried out on the position of children from ethnic minority groups across the EU in respect of education

indicates that their attainment levels tend to be significantly lower and their drop-out rates higher. Moreover, the evidence also suggests that segregation of such children in special schools, or, more generally, in schools in which there are relatively few children of the majority population, is marked in many countries. This, therefore, is not just a feature of the treatment of Roma children, as indicated elsewhere in this report, but applies to ethnic minorities more widely.

Effective segregation is a result both of a growing concentration of ethnic minorities into certain areas, such as in inner cities, or of the policy of some authorities to concentrate foreign-born children in certain schools, with the intention in part of catering for their language difficulties. Whatever the intention, parents of other children tend to avoid placing them in such schools. (OECD, 2006).

It is also the case that children from ethnic minorities, not just Roma, are over-represented in special schools in many EU countries. For example, in Austria, while children of non-Austrian origin made up just over 9% of pupils in schools in the academic year 2001-2002, they accounted for almost 21% of children in special schools (Caritas Europe, 2006). In the French community in Belgium, over 18% of foreign children are reported to be in special schools. (According to the EUMC report on Belgium, special schools are intended for children 'with character and/or personality problems'. Children are assessed for referral to such schools and recommendations are made to parents in this regard, who have the right to agree or not. In practice, those from ethnic minorities tend to be deterred from disagreeing so that recommendations are invariably followed – EUMC comparative study, June 2004).

In Germany, too, foreign children are systematically disadvantaged, according to a study by the German Union for Education and Science. Since the 1980s, twice as many foreign children have attended special schools than German children (German Union for Education and Science, 2006). In addition, children from immigrant families finish school at an earlier age with significantly lower qualifications than German children. In 2001, over 20% of the 75 thousand of so children of foreign nationality finishing school left without formal qualifications as compared with under 9% of German children, while 29% obtained the general certificate of secondary education as opposed to 42% of Germans. Moreover, only around 11% of foreign children attained the right to study at university as compared with almost 26% of German children. Equally, some 39% of young people from countries outside Germany leaving vocational schools in 2001 did not receive a school-leaving certificate compared with just under 20% of Germans (EUMC comparative study, June 2004).

Similarly, in Denmark, children from ethnic minorities are twice as likely to drop out of school as Danes, while in vocational education, their drop-out rate is around 60% higher and even at

universities, their drop-out rates is almost 25% as against 13% for Danes (EUMC comparative study, June 2004).

The same is true in the Netherlands, where more children from ethnic minorities leave school without qualifications than Dutch children, the tendency being especially marked among Turkish and Moroccan children (EUMC comparative study, June 2004).

In France, the probability of a 6th-form student leaving the education system without qualifications is around 15% in the case of those from immigrant families as compared with under 9% for those from French students. In the Flemish part of Belgium, just over 42% of non-Belgians left secondary school without obtaining a certificate in 2000 as opposed to just 18% of Belgians(Etude et Direction de l'Evaluation et de la Prospective, 2003).

HOUSING

In many European countries, the housing market has undergone considerable change over recent decades. In particular, access to housing has become more market-driven, in part as a result of the process of privatisation of public housing in many countries as well as in Central and Eastern Europe and the reduction or removal of housing subsidies. The stock of public housing available for those with low income levels and in need of accommodation has, therefore, diminished significantly. This has hit migrant families in particular, not only directly but indirectly as a result of increased pressure on the low end of the rental market.

In a number of areas across the EU, property owners have taken advance of the situation of immigrants, especially those who have no legal right to stay in the country, and demand unreasonably high rents for r poor quality dwellings. In Germany, for example, various studies of the housing market have shown that immigrants pay considerably higher rents than German nationals for poorer housing because of landlords demanding 'discrimination supplements' (Edgar, Doherty and Meert, 2004). A similar study for Austria found the same thing (Biffl and Bock-Schappelwein, 2003).

In Spain, a 2004 study found that 10% of Portuguese, Algerians and Moroccans lived in sub-standard private rental accommodation, while this was also the case of 12% of Turks and 16% of those from sub-Sahara Africa (Edgar, Doherty and Meert, 2004). In Belgium, hundreds of premises that have been declared uninhabitable are being let to illegal immigrants at very high rents. In Italy, immigrants are often forced by the difficulty of acquiring a deposit or references into the informal rental sector where over-crowding, poor quality housing and excessive rents are the norm (Sunia Ancab – Lega Coop 2000).

The lack of access to decent housing for many immigrants leads to concentrations of immigrants and ethnic minorities in specific areas. In the UK, for example, more than 50% of

Pakistani and Bangladeshi households in England are in the 10% most deprived wards and a third of Black Caribbean households are in these areas as opposed to only 14% of white households (Edgar and Meert, 2005). In France, 58% of all immigrants live in just three French regions – 37% in the Paris region, 11% in Rhone-Alpes and 10% in Provence-Alpes-Cote d'Azur. The concentration is even greater in some municipalities: in Bobigny, Montreuil and Aubervilliers, 50% of the people living there are immigrants and in Mureaux, Val-Fourré and Trappes on the outskirts of Paris or in Minguettes outside Lyon, around 75% of the population are of African origin. (Caritas, 2006, Conseil Economique et Social, 2003).

Many women immigrants are at particular risk of homelessness because of domestic abuse or abandonment. In Denmark, a survey conducted in 2000 found that 32% of women at crisis centres were of non-Danish origin and 35% were from minority ethnic groups (Research and Information Centre for Social Work, 2000), while in Germany, statistics from the women's housing coordination authority showed that some 50% to 80% of the occupants of women's shelters in large cities such as Berlin, Hamburg and Munich in the early part of the present decade were immigrants (Busch-Geetsema 2003).

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Tables

Table 1. Employment rates by nationality of men and women aged 15-64, 2005 [1)]

	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK	EU 15
Total	**61.0**	**75.5**	**65.3**	**60.3**	**63.2**	**62.8**	**67.1**	**:**	**:**	**73.2**	**67.6**	**67.6**	**69.2**	**72.6**	**71.5**	**66.4**
men	67.7	80.1	71.1	74.5	75.0	68.4	76.2	:	:	80.0	73.5	73.4	70.9	74.6	77.3	73.2
women	54.1	70.8	59.3	46.2	51.2	57.4	58.0	:	:	66.4	61.8	61.9	67.4	70.5	65.8	59.5
Nationals	**61.9**	**76.3**	**66.7**	**59.8**	**62.5**	**63.5**	**67.0**	**:**	**:**	**74.1**	**68.3**	**67.5**	**69.5**	**73.5**	**72.1**	**67.0**
men	68.3	80.5	72.1	73.8	74.5	68.6	75.9	:	:	80.7	74.1	73.3	71.1	75.3	77.8	73.6
women	55.4	72.0	61.2	46.0	50.2	58.5	58.1	:	:	67.5	62.5	61.8	67.8	71.6	66.5	60.4
Non-EU nationals	**35.1**	**51.1**	**48.2**	**69.0**	**70.5**	**44.5**	**56.9**	**:**	**:**	**41.4**	**57.7**	**72.7**	**45.2**	**46.0**	**57.9**	**55.3**
men	49.2	61.9	58.9	85.1	79.8	58.7	68.0	:	:	54.0	64.8	79.4	54.0	50.9	65.8	65.7
women	20.6	43.9	37.0	50.8	61.2	29.8	44.9	:	:	29.1	50.4	66.3	37.7	41.7	50.5	44.7

1) Data for new Member States and accession countries because the number of observations is too small to be reliable.
Source: Eurostat, EU Labour Force Survey

Table 2. Population aged 25-64 by education level, 2005 [1)]

	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK	EU 15
Women																
Nationals																
Low	35.1	19.8	16.7	42.4	52.8	33.8	33.4	:	:	31.6	27.8	72.2	18.7	14.1	34.1	29.6
Medium	33.1	44.9	62.8	38.0	18.9	39.6	37.5	:	:	40.6	57.4	13.0	41.6	52.0	36.5	46.3
High	31.8	35.3	20.4	19.6	28.3	26.6	29.1	:	:	27.9	14.8	14.8	39.7	33.9	29.4	24.1
Non-EU nationals																
Low	54.1	33.9	54.2	41.4	42.6	64.4	13.7	:	:	45.2	49.0	59.0	31.3	26.4	22.5	45.5
Medium	23.0	37.3	31.0	42.1	32.4	19.8	32.6	:	:	37.7	36.6	28.1	44.7	36.6	51.7	34.5
High	23.0	28.7	14.7	16.6	25.0	15.7	53.8	:	:	17.0	14.4	12.9	24.0	37.1	25.8	20.0
Men																
Nationals																
Low	34.3	17.5	10.1	43.0	52.4	30.1	39.8	:	:	24.7	14.5	76.4	22.8	18.1	24.8	25.4
Medium	35.9	52.5	59.8	34.9	19.2	45.9	34.0	:	:	42.1	64.5	13.3	47.5	57.2	45.2	49.4
High	29.8	30.0	30.1	22.0	28.5	24.0	26.2	:	:	33.2	21.0	10.3	29.7	24.7	30.0	25.2
Non-EU nationals																
Low	49.0	27.7	40.9	53.4	48.6	58.3	19.8	:	:	37.6	37.1	63.1	28.9	27.1	20.4	41.3
Medium	27.8	31.2	42.9	35.8	30.1	24.3	38.6	:	:	43.2	51.0	23.2	49.3	38.9	55.4	39.4
High	23.2	41.0	16.1	10.8	21.4	17.5	41.6	:	:	19.2	11.9	13.7	21.8	34.0	24.2	19.3

1) Data for new Member States and accession countries because the number of observations is too small to be reliable.
Source: Eurostat, EU Labour Force Survey

Table 3. Employment rates of men and women by nationality and education level for selcted age groups [1)]

		BE	DK	DE	EL	ES	FR	IE	NL	AT	PT	FI	SE	UK	EU
Men															
25-39															
Nationals	Low	76.3	73.9	68.4	87.6	84.7	76.9	79.1	85.7	74.7	88.0	69.8	76.5	66.1	79.8
	Medium	90.2	89.1	83.8	89.0	87.2	89.1	92.8	93.3	90.0	82.0	85.9	87.8	89.9	87.6
	High	94.5	91.6	93.8	88.0	88.2	88.8	94.7	94.0	93.4	91.2	93.7	89.2	94.8	91.7
non-EU nationals	Low	48.1	76.1	54.7	95.1	82.8	62.7	75.0	55.1	41.6	85.6	48.1	34.0	57.0	70.8
	Medium	21.6	73.4	53.8	95.6	89.6	66.7	68.0	58.2	100.0	89.8	76.9	54.4	78.0	73.7
	High	55.5	26.3	76.1	100.0	83.6	68.7	78.2	62.9	70.4	57.4	78.4	58.5	79.2	75.7
40-64															
Nationals	Low	57.0	66.3	60.0	74.0	72.9	61.8	72.5	71.6	56.4	74.7	58.8	73.5	57.5	66.6
	Medium	77.7	81.9	72.2	82.2	84.2	75.3	86.2	79.0	71.3	81.3	73.7	83.2	82.3	77.0
	High	85.0	88.1	83.7	87.8	87.4	83.4	91.6	84.7	80.7	89.2	82.8	88.2	86.6	85.1
non-EU nationals	Low	54.7	38.1	51.0	87.0	84.3	51.6	54.6	23.8	7.3	79.4	79.0	46.2	47.0	60.1
	Medium	77.8	92.1	64.9	72.0	89.7	65.2	69.9	61.0	77.5	100.0	67.5	49.3	80.5	75.2
	High	68.1	58.5	69.2	100.0	73.7	75.5	75.4	66.6	76.6	84.1	66.6	65.9	83.5	74.2
25-64															
Nationals	Low	61.9	68.3	62.9	77.8	77.1	66.0	74.3	75.8	61.2	79.7	61.1	74.1	59.6	70.7
	Medium	83.2	84.6	76.5	85.7	85.7	80.7	89.7	84.8	79.2	81.7	78.8	85.1	85.2	81.2
	High	89.3	89.6	87.0	87.9	87.8	86.2	93.3	88.3	85.5	90.2	86.7	88.6	90.0	87.9
non-EU nationals	Low	50.4	72.4	53.2	93.2	83.2	55.8	66.6	45.8	28.8	83.3	60.3	40.2	52.8	66.4
	Medium	41.8	79.5	58.2	89.1	89.6	66.2	68.2	59.0	93.2	92.0	74.8	52.2	78.9	74.2
	High	59.9	47.0	72.5	100.0	79.8	71.4	77.5	64.4	73.1	74.8	72.5	62.9	80.6	75.1
Women															
25-39															
Nationals	Low	45.5	55.8	52.5	46.3	48.7	53.1	46.0	60.4	64.8	72.8	64.1	55.7	37.5	52.8
	Medium	75.9	79.8	71.6	60.3	66.5	72.6	71.1	81.3	78.9	78.8	71.5	80.7	72.8	72.6
	High	91.6	88.1	82.6	77.9	79.2	81.9	86.8	91.4	88.6	91.1	82.0	86.9	87.5	83.9
non-EU nationals	Low	16.4	11.6	30.7	70.5	58.5	28.4	19.1	23.8	46.1	82.7	15.7	24.6	19.1	40.7
	Medium	30.9	46.8	43.4	51.1	74.4	34.4	40.1	34.1	57.0	60.0	53.3	36.3	51.6	53.9
	High	30.5	69.9	36.4	39.9	59.7	37.0	63.3	44.1	38.5	77.0	46.4	34.8	78.6	57.0
40-64															
Nationals	Low	36.1	52.3	46.0	34.9	33.3	52.0	38.2	44.7	41.4	58.4	53.4	57.5	53.1	45.0
	Medium	59.7	71.4	62.2	46.1	58.6	67.5	60.5	65.5	58.9	74.0	72.4	76.8	78.5	66.7
	High	74.9	83.0	78.2	76.2	78.8	76.0	79.5	76.6	79.6	84.3	82.9	89.6	86.3	80.2
non-EU nationals	Low	15.1	36.9	29.3	50.7	56.7	33.1	26.8	11.0	8.5	70.1	40.7	34.4	32.0	38.2
	Medium	0.0	81.4	49.6	84.0	84.7	44.0	47.9	37.9	86.1	65.5	43.5	53.9	62.6	63.9
	High	26.3	84.3	56.1	70.1	62.7	61.0	57.1	44.8	78.8	71.7	48.6	63.5	84.3	67.0
25-64															
Nationals	Low	37.9	53.1	47.6	37.1	37.5	52.2	40.1	48.2	46.4	63.0	54.9	57.2	49.6	46.9
	Medium	66.8	74.6	65.6	53.5	62.6	69.6	65.6	72.3	67.1	77.1	72.1	78.3	76.1	69.1
	High	83.0	85.2	79.9	77.2	79.0	79.2	83.8	83.4	84.1	88.3	82.5	88.5	86.9	82.1
non-EU nationals	Low	15.8	21.8	30.1	57.9	57.8	31.4	21.0	19.1	28.4	78.5	23.5	27.8	24.1	39.6
	Medium	25.4	54.7	45.7	65.3	78.0	37.5	41.6	35.5	67.2	61.3	50.2	44.1	55.2	57.2
	High	29.3	73.9	43.2	59.2	60.7	45.7	62.2	44.3	57.1	75.5	47.4	44.5	80.7	60.5

1) Where data are not shown, they are not available or too small to be reliable.
Source: Eurostat, EU Labour Force Survey

Table 4. Division of men and women with tertiary education between broad occupations by nationality in the EU15, 2005

	Men		Women	
	Nationals	non-EU nationals	Nationals	non-EU nationals
Armed forces	1.0	0.1	0.1	0.0
Managers	16.3	9.7	8.3	6.8
Professionals	43.5	32.3	42.8	23.8
Technicians	19.2	13.8	27.9	23.2
Office staff	4.2	4.0	11.3	9.8
Sales+service	3.2	6.5	6.7	17.2
Agricultural	1.3	0.7	0.4	0.1
Craft+related	7.3	14.8	0.7	1.4
Machine operators	2.5	5.3	0.5	1.0
Elementary	1.4	12.8	1.2	16.7

Source: EU Labour Force Survey

11. RECENT POLICY DEVELOPMENTS AFFECTING INCOME DISTRIBUTION

Introduction

While fighting poverty and social exclusion are widely shared goals in the European Union, responsibility for policy to achieve this lies firmly with Member States. While the latter 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 policy goals vary significantly across countries. This variation reflects not only differences in the scale and nature of problems encountered in this area (i.e. the extent and depth of poverty and social exclusion), but also differences in underlying political and economic circumstances (e.g. in the resources available and the state of public finances), institutional differences with respect to the design of tax and benefit system, as well as differences in social values (e.g. towards redistribution and poverty relief).

It is difficult, therefore, to detect common trends in the policy changes affecting income distribution and the relative position of those on low incomes brought about by governments across the EU and the four acceding and candidate countries in the last couple of 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 population groups with differing levels of income and in different circumstances. The purpose of the review was on the one hand to examine the policy efforts being made by governments across Europe to tackle the problems of low incomes identified in this report, and on the other hand 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 policy measures which have taken place 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 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. The introduction of refundable tax credits in a number of countries has gone some way towards addressing this problem.

The main policy changes since 2005 are outlined below country by country, starting with the EU-25 countries, followed by the four acceding and 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-25 countries

In ***Belgium***, the minimum income guarantee for the elderly GRAPA (*Garantie de revenue aux personnes agées*), introduced in 2004, was substantially increased by €90 per month for single persons in 2005, bringing the guaranteed minimum income to €776 per month (i.e. a mere €1 below the 2004 official poverty line). The corresponding increase was €60 per month for those cohabiting. An estimated 70,000 individuals were expected to benefit, at a budgetary cost of €57 million per year.

On the other hand, in 2006 the terms and conditions under which a surviror's pension can be combined with income from work were redefined. In the new system, a joint income test will be applied to the sum of surviror's pension plus earnings, and a lower withdrawal rate of 50% will take effect for incomes above the threshold.

More generally, a consensus has been established on the need to link future increases in the value of pensions to the growth in wellbeing among the working population, rather than merely to inflation as is currently the case. Nevertheless, the exact nature of the relevant mechanism is still to be decided.

In August 2006, child benefits were supplemented by a lump sum for back-to-school costs (*Allocation de rentrée scolaire*). The allowance, paid once per year on top of the standard child benefit, varies by age. Families receive €50 for each child at primary school (aged 6-12), and €70 per child at secondary school (aged 12-18). The allowance is universal, paid to all children irrespective of income or employment status of parents, at an estimated cost to the budget of €87.6 million.

With respect to in-work benefits, the social security contributions rebate for low earners (*Bonus à l'emploi / Werkbonus*) became more generous, while at the same time the rate at which the

rebate diminishes as earnings rise, known as taper, was reduced. Under the new scheme, low-paid workers are entitled to a maximum rebate of €105 per month, which means that those working for the minimum wage will be fully exempted from social security contributions. The level of the rebate is then gradually reduced until gross earnings reach a level of about €2,000 monthly, when it is fully withdrawn.

Finally, the phasing-in of the 2001 tax reform was completed in 2005, when the tax credit for earnings from self employment was increased, the middle tax brackets were broadened further, the value of the single person allowance was aligned to that of the married person allowance, and the tax deductibility of work-related expenses was enhanced. The latter, which has taken immediate effect as of 2006, is estimated to boost the net income of those earning less than €1,500 a month by €32 per year.

In the *Czech Republic* most of the changes affecting the income distribution concerned taxation. In 2005, the tax allowance for dependent children (CzK 25,560 or €917) has been replaced by a tax credit (CzK 6,000 or €215). Those earning too little to pay any tax are now entitled to a refundable "child tax bonus". At the same time, married couples with dependent children may opt for joint taxation. In 2006, the base rate and the second lowest tax rate were reduced from 15% to 12% and from 20% to 19% respectively. Moreover, all other tax allowances became tax credits (e.g. the single person's tax allowance of CzK 38,040 or €1,364 became a tax credit of CzK 7,200 or €258). Note that the difference between tax allowances and tax credits is that the former reduce taxable income, while the latter reduce the amount of tax due.

Another important development has been the faster rise of the minimum wage vis-à-vis the subsistence minima used to determine social assistance benefits. While in January 2005 a couple with two children were marginally better off on benefits and out of work than if both adults were employed on the minimum wage, since July 2006 a small work incentive had been restored.

Finally, most benefits in the period under consideration were adjusted in line with inflation, with the exception of the birth grant which was greatly increased in April 2006 (by 100% for single births, by 150% for twins).

In *Denmark* the income distribution remained rather stable. The general tax freeze, in force since 2001, capping all tax rates and *ad valorem* taxes, continued slowly to reduce the tax pressure (i.e. tax receipts as a proportion of gross national income). Other than that, adjustments to the tax system have been marginal.

No major changes have taken place as regards income transfers. In an effort to tighten work incentives, the calculation of social assistance entitlements for long-term recipients has become more unfavourable, which must have worsened the material circumstances of some

recipients. On the other hand, efforts to support elderly persons on low incomes, such as the increases to the supplement paid to those relying on the state old age pension alone, and to the special help for heating costs, have worked in the opposite direction.

Social services remained free of charge or heavily subsidised. Child care fees have recently been reduced from 33% of provider costs to 25%.

In ***Estonia*** tax-benefit policies operated against a background of rapid growth (10.5% in 2005), falling unemployment (5.4% in the third quarter of 2006), and a budget surplus. In this context, the standard tax rate has been gradually reduced from 26% in 2004 to 23% in 2006, and is scheduled to reach 20% in 2009. Furthermore, the personal tax allowance was increased from EEK 16,800 (€1,074) in 2004 to EEK 24,000 (€1,534) per year in 2006. At the same time, the tax allowance for dependent children was increased to EEK 24,000 (€1,534) per child per year and became payable from the second child (rather than the third, as was previously the case). There was no change to social contributions, except for unemployment insurance contributions which were in 2006 reduced to 0.6% and 0.3% of earnings for employees and employers respectively (from 1% and 0.5% respectively).

In terms of social benefits, the minimum income guarantee used to calculate entitlement to means-tested social assistance, after a period of 7 years when it was left unchanged in nominal terms, was increased in 2005 from EEK 500 (€32) to EEK 750 (€48) per month. In 2006 a supplement of EEK 200 (€13) per month was introduced for single parents in receipt of social assistance.

Pension benefits increased in real terms by ad hoc improvements on top of indexation, (based on a formula taking into account consumer prices and social contribution receipts). In 2005 the increase was 18.2% (6.7% through indexation + 11.5% ad hoc), while in 2006 it was 14.3% (9.7% + 4.6%).

Standard child benefits were in the period under consideration left unchanged in nominal terms at EEK 300 (€19) per month. However, additional benefits for numerous families were considerably increased, from EEK 50 (€3) to EEK 100 (€6) per child in the case of families with 3 children, from EEK 50 (€3) to EEK 150 (€10) per child in the case of families with 4 or more children. Benefits for disabled children, paid as supplements to the standard child benefit, were also increased by 25% in 2006. In the same year, birth grants were increased from EEK 3,750 (€240) to EEK 5,000 (€320), while the duration of parental leave was prolonged from 11 to 14 months. On the other hand, unemployment assistance, payable on a means-tested basis to those no longer eligible for unemployment insurance, has remained unchanged at its 1999 level of EEK 400 (€26).

Finally, in 2005 the minimum wage was about 33% of the average wage, while in 2006 it was increased by 12% to EEK 3,000 (€192) a month – a rise that may have protected its relative value vis-à-vis the average wage, although reliable estimates are not yet available.

In *Germany* the tax reform phased in between 2000 and 2005 gradually reduced the base rate from 22.9% to 15% and the top rate from 51% to 42%, while the personal allowance was raised by nearly a quarter. As a result of the reform, disposable incomes increased throughout the income distribution, although those at the top gained far more in relative and especially absolute terms.

To compensate for the loss in tax revenue, the standard rate of VAT is set to increase to 19%, up from its current level of 16%. Critics have argued that this amounts to poorest households paying for the earlier tax cuts from which they did not benefit.

On the other hand, the abolition of the home-owner cash grant, the introduction of a top rate of 45% for incomes over €250,000 and improvements to the child care tax allowance and the tax credit for domestic services are expected to have a mildly progressive effect.

Furthermore, social contributions for health insurance were raised by 0.5 percentage point in 2006.

In terms of social benefits, no significant changes followed the completion of the controversial Hartz reforms, providing among other things for tighter eligibility conditions for access to unemployment benefits and social assistance, as described in last year's Annual Report.

In *Greece* the most notable change was a law enacted in April 2006 extending the benefits received by the so-called "multi-children families", hitherto defined as those with at least four children, to families with three children. "Multi-children families" are eligible for comparatively generous cash benefits, while enjoying favourable tax treatment and preferential access to higher education, public sector jobs, licences for setting up a small business etc. Note that public support to families with one or two children (i.e. the families where the overwhelming majority of all children in the country live) remains meagre at the extreme.

In terms of cash benefits, non-contributory retirement benefits such as *ΕΚΑΣ* (the income-tested supplement to low pensions), means-tested social pensions, and basic farmer pensions were all revalued by 7% in nominal terms. In contrast, contributory social insurance pensions were raised by 4% in nominal terms. Since the progressive revaluation of pension benefits was terminated in 2005, the same rate of increase applies across the board.

Moreover, the contributory unemployment benefit, left unchanged at €311.25 monthly since 2004, is to be raised to €367.50 in 2007, and to a further €404 monthly in 2008. Finally, a lump-sum birth grant of €2,000 was introduced for mothers giving birth to a 3rd child.

In *Spain*, no significant policy innovations took place in the period under consideration. However, differential revaluation of taxes and benefits could have some impact on the distribution of incomes. Specifically, income tax brackets and other elements of the system (such as tax allowances and tax credits) were not fully updated in line with inflation. On the other hand, the lower thresholds for social contributions were increased above inflation.

In terms of cash benefits, the minimum pensions were also increased in real terms. That was also the case with unemployment assistance, which is indexed to the minimum wage and was therefore revalued by 11.4% in 2005 and a further 5.4% in 2006 in nominal terms, compared to an inflation rate of 3% to 4%.

In terms of social services, where public provision is inadequate, beneficiaries can have their private expenses reimbursed. The level of reimbursement varies with beneficiaries' income and level of dependence.

In *France* the most significant policy change affecting income distribution was the income tax reforms introducing tax cuts and the refundable tax credit *Prime Pour l'Emploi*. In 2006 the lowest and highest marginal tax rates stood at 6.8% and 48% respectively, down from 10.5% and 54% respectively in 2000. The effect of the cuts, combined with the shift to the proportional elements in the tax system (for example, the *Contribution Sociale Généralisée*), has been unambiguously regressive.

The introduction of *Prime Pour l'Emploi* has only partly mitigated this effect, although the amount of the tax credit has been raised to 4.6% of full time earnings at the minimum wage in 2005 (up from 2.2% in 2001). In 2006 a tax cap was introduced, refunding any tax paid by individuals in excess of 60% of their income (adding up income, wealth and local taxes).

Tax changes to take effect in 2007 involve among much else a reduction in the number of income brackets, a further cut of marginal rates, as well as a significant improvement to the *Prime Pour l'Emploi*, at an estimated fiscal cost of almost €5 billion. These changes will increase disposable incomes throughout the income distribution, although higher incomes are expected to benefit disproportionally in absolute as well as relative terms.

With respect to social benefits, a significant recent development concerns the guaranteed minimum income programme *Revenu Minimum d'Insertion*. For several reasons, including earlier changes in unemployment insurance and unemployment assistance restricting eligibility to the relevant benefits, the number of RMI recipients has risen by over 20% over the last few years, reaching 1.27 million in 2005. Until now, RMI recipients returning to work could combine earnings with full benefit for 3 months and 50% of benefit for another 9 months. From 2007 this arrangement, intended to preserve work incentives, will be replaced by a lump sum payment of €1000 on taking up a new full-time job (i.e. at least 78 hours per month) plus a

monthly payment of €150 for a year. The change is expected to reduce the incomes of most persons affected, especially those living in large families.

In *Ireland* the main changes were incremental. The income band at the standard rate of tax increased faster than wage growth, affecting better paid workers. On the other hand, the basic state pension was increased relative to earnings, while the early childcare supplement (i.e. the child benefit for families with children under 6), unemployment and illness payment rates, and the Family Income Supplement were all increased in real terms.

The net overall effect of the above changes was to reduce the risk of relative poverty (at 60% of median income) by about 1.5 percentage points. This represented an 8% reduction in the overall risk of poverty. Moreover, the aggregate poverty gap was reduced by about 15%, indicating that the effectiveness of policy in improving the incomes of those in poverty was somewhat greater than in reducing the head count.

In *Italy* no substantial changes to the tax-benefit system took place recently, despite the change in government following the general election of April 2006.

Tax credits to support low-income families were reinstated in place of tax allowances, family allowances were improved, and the personal income tax schedule was redesigned. Under the latter, those with an annual taxable family income of over €35,000 face an increased tax burden, while dependent workers in large households with children earning between €10,000 and €35,000 are set to gain.

Otherwise, the duration of unemployment benefit was in 2006 increased to 7 months for jobless workers aged below 50, and to 10 months for those above that age (up from 6 months prior to the change).

Finally, employers hiring unemployed workers who had been previously covered by the *Cassa integrazione guadagni* have been made eligible for a 50% reduction in social contributions for a period of 36 months.

In *Cyprus*, the minimum wage was raised by 6% in nominal terms to CY£384 (€664) per month on engagement and to CY£408 (€706) after six months of employment. Further increases are envisaged raising the value of the minimum wage to 50% of the median national wage by 2008.

The public assistance scheme was reformed in 2006. Recipients can now continue to draw benefit for 12 months after taking up employment (100% of benefit in the first four months, 66% in the subsequent four, and 33% of benefit in the remaining four months). Moreover, extra lump sum payments (for house repairs, for purchase of tools and equipment, or for vocational training) and income disregards have been raised. Finally, male single parents can now become eligible, while emergency benefits to non-recipients of ordinary public assistance may also be

paid. Note that the annual rate for a couple with two children aged below 14 is currently CY£5,435 (€9,403) per annum.

As this Annual Report was drafted, a government "emergency plan to improve social cohesion" was still debated in parliament. If approved, the plan will be immediately effective and 95% of its total cost (CY£17.8 million or €30.8 million) will be financed out of the 2006 Budget. The plan provides for targeted assistance to low-income elderly households, additional help to families receiving public assistance, extra help to public assistance recipients aged 65+ living alone, as well as emergency assistance to those living in mountainous areas.

In *Latvia* tax rates remained constant in recent years, but tax allowances were increased since 2005. In 2006 the personal allowance was fixed at LVL 384 (€551), while that for dependents at LVL 264 (€379). Further increases are envisaged for 2007. Similarly, social security contributions were unaltered, although the upper earnings ceiling was increased from LVL 19,900 in 2004 (€28,539) to 20,700 LVL (€29,686) in 2006.

Child benefit rates remained constant in nominal terms since 2003. Since over that period inflation fluctuated around the 7% mark, the real value of child benefit was substantially eroded. Furthermore, in response to a Constitutional Court ruling declaring unconstitutional the previous practice limiting provision of infant care benefit to non-working mothers, half the benefit will also be paid to mothers returning to work. Infant care benefit is payable to families with a child aged less than 12 months.

The guaranteed minimum income monthly level was also gradually increased from LVL 18 (€26) in 2004 to LVL 24 (€34) in 2006. Finally, the minimum wage was raised from LVL 80 (€115) in 2004 to LVL 90 (€129) in 2006, protecting its real value over the two-year period.

In *Lithuania* the flat income tax rate was significantly reduced in July 2006 from 33% to 27%. Moreover, the share of social insurance contributions compulsorily placed in private pension funds was increased from 2.5% in 2004 to 4.5% of earnings in 2006, while further increases are envisaged for the future.

In 2006 the basic contributory pension was raised from LTL 200 (€58) to LTL 230 (€67), while the earnings-related component of the public pension, indexed to the average wage, also increased correspondingly. Furthermore, a non-contributory old age pension was also introduced in 2006, payable to elderly persons lacking sufficient contributions. A similar arrangement applied since 2005 with respect to disability pensions.

With respect to other social benefits, a range of changes took place. The upper age limit for payment of non-contributory child benefit was gradually increased from 3 years in 2004 to 9 years in 2006. Unemployment benefit was increased and linked to previous earnings in 2005. Those without a work record may be eligible for the flat-rate component only. The heating

allowance within housing benefit was also increased in 2006. Moreover, the level of the minimum income guarantee was raised to LTL 185 (€54), up from LTL 155 (€45) a year earlier.

Finally, the minimum wage was significantly increased from LTL 500 (€145) in 2004 to LTL 600 (€174) in 2006.

In *Luxembourg*, the minimum wage, pensions and other social benefits are all indexed to inflation, while tax brackets and allowances are generally not. Other than that, a notable policy change was the increase of social contributions for health insurance from 2.55% to 2.7% in 2005.

In *Hungary* family benefits were reformed in 2006. The previous system, comprising of a universal family allowance, a means-tested child benefit and a child tax credit, was amalgamated to a significantly improved family allowance, while the means-tested child benefit was abolished and the child tax credit was restricted to families with three or more children up to a certain level of income. Associated in-kind benefits, such as free or subsidized school meals and textbooks, continued to be available on a means-tested basis and on the same terms as before.

Amendments to the regular social benefit (similar to a minimum income guarantee) took place in the period under consideration. In September 2005 eligibility criteria were widened to include inactive groups with no previous employment. In July 2006 the income threshold for eligibility was raised from 80% to 90% of the minimum pension. Beneficiaries taking up a job are allowed to receive 50% of the benefit during the first three months and 25% of the benefit, while in the next three months.

In 2006 the payment of a 13th monthly pension a year was fully phased in. partly as a result of this, pensions increased on an annual basis by 5.5% in 2005 and 4.2% in 2006, compared to 2.5% in 2004.

In a bid to reduce the budget deficit, currently at 5.4% of GDP, an austerity package was introduced in autumn 2006. Income taxes, VAT rates and social contributions will all go up, while user fees will be charged for access to health care and higher education. Social benefits will not be affected in the first instance.

In *Malta*, the most significant development is the pension reform about to come into force (January 2007). The reform is projected to improve the relative position of elderly persons on low incomes, especially the disabled and those with a long record of unpaid work. In terms of other cash benefits, maternity grants, child benefits, unemployment benefits and sickness benefits, as well as existing old age pensions, have all been revalued slightly above the rate of inflation. Finally, in terms of tax, a reduced rate of 15% for part-time work was introduced, expected to benefit working women in particular.

In the ***Netherlands***, there have been important changes affecting health insurance. Under the 2006 Health Insurance Act (ZVW), the two systems (public insurance and private insurance) were amalgamated into one mandatory privatised system. The reform implies higher contributions for those who were eligible for subsidized private insurance or for low-cost public insurance under the old system (i.e. mainly employees, part-time workers and the elderly).

On the other hand, the overall tax burden diminished substantially due to increased tax allowances (*algemene heffingskorting*), the abolition of one property tax (*gebruikersdeel OZB*), and the reduction of social contributions for special health costs (*AWBZ-premie*). Moreover, the introduction of a care allowance (*zorgtoeslag*), changes to child care finance and the abolition of school fees for 16- to 17-year olds also increased disposable income, although their effect on the income distribution was more ambiguous.

However, for the first time in several years the incomes of poor households also increased substantially in real terms in 2006. That was mostly because indexation of minimum social benefits was restored, after several years in which they had been allowed to fall behind in relation to prices and wages. At the same time, stricter rules for all social benefit claimants were also introduced.

In ***Austria***, the tax reform initiated in 2004 was fully phased in a year later. Additional tax reductions worth €1.0 billion (0.4% of GDP) took effect in 2005. As a result, those earning less than €15,770 a year paid no tax. Hence, more than 2.5 million tax units (or 43% of the total) were exempted. Moreover, the income threshold for entitlement to the refundable tax credit or negative tax worth up to €110 per year was also raised. Compared to the 2003 baseline, the absolute tax reduction was highest (€671) for those with an annual taxable income of €11,000. On the whole, the 2004/5 reform may have made the Austrian tax system more progressive.

With respect to social contributions, a general increase of 0.1 percentage points for health insurance was introduced in 2005, while the corresponding increase for pensioners in was 0.6 percentage points. Moreover, the upper earnings threshold was raised to €52,500 annually in 2006, or by 8.7% compared to 2004.

In terms of social benefits, pensions were revalued by less than the rate of inflation, and therefore lost some of their value in real terms. However, in a context of low inflation, the amounts involved were small. Moreover, distributional effects were mitigated by the fact that lower and average pensions increased faster than higher ones, while the supplement to minimum pensions was fully protected from inflation. Otherwise, the benefit to carers (*Pflegegeld*) was in 2005 raised by 2%, the first such increase since 1995.

Finally, it is worth noting that in 2005 Austrian provinces were granted authorisation to increase hospital charges to in-patients from €8 to €10 daily.

The combined effect of the above changes could be a small deterioration of the relative position of those at the bottom of the income distribution.

In *Poland* benefit-tax policies operated against a background of good economic performance marked by a high rate of growth and low inflation, political change following the general election of 2005, and the continuing emigration of thousands of young persons to other EU countries.

Specifically, a top marginal tax rate of 50% was introduced in 2005 for incomes over PLN 600,000 (€157,800). However, the effect of this measure may be largely symbolic, as it is expected to affect no more than about 4,000 tax payers. In the run-up to the election, the conservative coalition that emerged victorious had pledged to lower income tax rates, but no change has yet taken place. In 2006, the government also pledged to increase social expenditure, mainly on family benefits, by over PLN 1.6 billion (€420 million or 0.2% of GDP).

In an effort to reverse, or at least halt, the decline of the minimum wage relative to average earnings to 35% in 2005, new indexation rules were introduced. The new formula is the sum of forecast inflation rate plus two-thirds of forecast GDP growth. Note that the minimum wage is currently fixed at PLN 850 monthly (€224). Employers are allowed to pay young workers and the long-term unemployed less than the minimum wage.

Finally, Poland has recently signed an agreement to end the punishing double taxation of Polish nationals working in the UK. Approximately 240,000 Poles have migrated to Britain since May 2004. Polish migrant workers are taxed in Britain, usually at the standard rate. Before the agreement, their remittances were also taxed in Poland, typically at the 40% marginal tax rate, since the lower bound of the relevant income bracket (PLN 74,048 or €19,500 a year) corresponds to only about £250 a week in the UK. Ending double taxation is expected to remove disincentives to Polish workers sending remittances to their families back home.

In *Portugal*, the most significant recent policy changes were the introduction of a means-tested supplement to pensions (CSI), the introduction of an additional tax bracket with a marginal rate of 42% for annual incomes in excess of €60,000, the substantial revaluations of minimum guaranteed incomes and social pensions relative to average earnings, and of minimum wages relative to inflation. Moreover, changes to the minimum guaranteed income scheme in 2005 extended the requirement of registering at an employment centre to unemployed claimants aged over 30. Overall, these changes are expected to have a mildly progressive redistributive effect.

In *Slovenia* the center-right government, which had assumed power in autumn 2004, proposed in November 2005 a set of reforms, the centrepiece of wich was the introduction of a flat tax. Following massive demonstrations organized by the trade unions, the flat tax proposal was

quietly abandoned. In August 2006 the government announced it planned changes to personal income tax. The number of tax brackets will be reduced from 5 to 3, while the top marginal tax rate will be cut from 50% to 39%. The plan could be revised during the parliamentary process. If enacted, it will be effective as of January 2007. Tax changes are expected to increase disposable incomes throughout the income distribution, although higher incomes are expected to benefit disproportionally more.

With respect to social benefits, since September 2006 the right to social assistance has become conditional on agreeing to accept a work offer. Moreover, a draft law currently debated in parliament provides for regular indexation of all benefits except pensions to changes in the cost of living. Note that since July 2005 pensions are indexed to the growth of net wages. Preparations are also under way for legislation aimed to unify income testing procedures across all relevant social benefits. Finally, the allowance paid to large families was increased in April 2006 to SIT 82,000 (€342) for families with 3 children and to SIT 100,000 (€417) for families with 4 children. Prior to the change, the benefit was paid at a single rate of SIT 70,000 (€292) to all families with 3 or more children.

In *Slovakia* major reforms with respect to taxation, labour market policies, social assistance, pensions and family benefits had taken place in 2004 and were described in last year's Annual Report. Later changes were less significant, despite the fact that the general election of August 2006 brought about a change in government.

In the run-up to the general election campaign, one of the issues highest on the political agenda was the flat tax introduced in 2004, fixing at 19% the rate of personal income tax, corporate tax and VAT. The victorious coalition, led by the social democrats, had pledged to abolish flat rate taxation. However, once sworn in, the new government seems to have settled for a more modest programme of adjustments to VAT (a lower rate of 10% applies to prescription medicines and health services), and the abolition of user charges for medical tests (SKK 20 or €0.60) and hospital treatment (SKK 50 or €1.45 daily).

Ways to inject an element of progressivity without altering the general structure of the flat tax are also sought. One such measure would be to grant personal tax allowances selectively, on the basis of an income test. For instance, the government is considering the gradual reduction of personal allowances (at SKK 95,616 or €2,750 per year in 2007) for those with an annual gross income above SKK 678,000 (€19,500), and their complete withdrawal from those earning more than SKK 1,062,000 (€30,540).

Other measures under consideration include the plan to abolish the existing option of earmarking 2% of corporate tax for NGOs and civil society organizations, as well as the favourable treatment of NGOs which can currently have up to SKK 300,000 (€8,625) per year

exempted from tax. NGOs providing social care could be negatively affected by these changes, should they be introduced.

A Christmas bonus to old age pensions has also been introduced in 2006. This time round its amount varied between SKK 1,500 (€43) and SKK 2,000 (€58). Future amounts will be decided as resources permit.

With respect to disability pensions, a recent ruling of the Constitutional Court declared earlier cuts affecting over 24,000 pensioners in violation of the Constitution. Following that, the eligibility rules in force until the end of 2003 were reinstated as of November 2006. Those affected have been given a three-year period to apply for a reassessment of their disability status. No decision has been made so far on compensation for losses caused by the 2004 reform.

Support to families with children has also been made more substantial. The birth grant has been increased from its current level of SKK 4,460 (€128) to SKK 15,460 (€445) as of January 2007. Note that the grant is universal, but covers the first child only. Moreover, eligibility for parental benefit, paid at a rate of SKK 4,440 (€127) monthly to families with a child aged up to 3 years, will be extended to working parents who place their child in public day care. Child allowance, paid on a universal basis at a rate of SKK 540 (€16) per child per month, has not been revalued.

On the contrary, social assistance benefits are indexed to prices. In June 2006, the subsistence minimum for a single person was fixed at SKK 4,980 (€143) per month. Note that some population groups, such as pensioners and the long-term unemployed, may receive benefits below the subsistence minimum.

In October 2006 the government proposed to social partners an increase to the minimum wage to SKK 7,500 (€216), up from its current rate of SKK 6,900 (€198). Trade union experts estimate that up to 10% of all workers are affected by the measure. In-work and activation benefits will also increase in line with the minimum wage.

In *Finland* the tax reform initiated around the start of the decade continued its course. The Finnish tax system is dual: a proportional tax schedule operates at the municipal level, a progressive one by central government. In 2005 and 2006 the marginal rates at which income is taxed by central government fell further by 1 to 2 percentage points. The top rate now stands at 32.5%, down from 38% in 2000.

For their part, municipal governments have gradually raised the personal tax allowance from €925 in 1999 to €3,850 in 2005. However, to compensate for that, at the same time they have had to increase their flat tax rate. The recent shift away from central government (progressive)

taxation and towards municipal (proportional) taxation must have reduced the progressivity of the tax system viewed as a whole.

The 2005 reform of capital taxation may turn out to be as important as income tax reform. The imputation method, introduced in 1993, that had made dividends practically tax-free and had contributed to the growth of income inequality, was replaced by a partial return to the double taxation of dividends. On the other hand, the capital gains tax rate was reduced to 28% and the corporation tax rate to 26% (both from 29%). Moreover, the wealth tax, paid at 0.8% of net assets in excess of €250,000 in 2005, was entirely abolished in 2006. Taken together, the effect of changes in capital taxation may well prove regressive.

In terms of social benefits, a major pension reform took effect in 2005. The reform aims to lengthen average working lives by 2-3 years in order to improve the long-term viability of the system. It provides for a higher accrual rate for workers aged 63-67, the abolition of the cap on the maximum pension for those with a long employment record, and the calculation of pensionable earnings over the entire career rather than over the last 10 years, as was previously the case. Furthermore, in an effort to ease pressure on social contributions, social partners and the government agreed in 2006 to relax restrictions on investing pension fund reserves.

In ***Sweden***, the most significant policy change was that tax allowances were extended in 2005, as both the allowance for pension contributions to the statutory system and the basic allowance for low- and middle-income earners were increased. Moreover, the threshold below which no wealth tax is due was also raised substantially, while inheritance and gift taxes were abolished.

With respect to social benefits, minimum parental leave benefits became more generous and eligibility was extended, while the ceiling for eligibility to sickness cash benefits was also raised substantially. Under the terms of the 2006 budget, the government increased public spending on families with children in the form of higher child supplements for students, higher housing allowances, higher advance maintenance allowances, and a new supplement for the second child.

Following the general election of September 2006, there has been a shift in direction. The incoming centre-right coalition government introduced a number of benefit reductions and tax cuts. Those out of work stand to lose out, while working families are expected to be better off as a result of these changes. In view of that, the relative position of those at the bottom of the income distribution is projected to deteriorate.

In the ***UK*** several elements of the benefit-tax system are linked to the change in average earnings. In the period under consideration that implied an increase of 4.4%. This was applied to the rate of means-tested benefit for pensioners (the guarantee credit in the Pension Credit) and the child amount in the child tax credit. In 2006 the family and baby elements of the child

tax credit were not indexed and neither were the maximum payments for childcare within the working tax credit, nor the income thresholds within these two tax credit programmes. However, the proportion of childcare costs covered by the working tax credit rose form 70% to 80%. In most cases the effect of this would have outweighed the non-indexation of the maximum payment.

On the other hand, the council tax (a lump sum tax depending on a one-off property valuation) increases as part of a political process: local authorities set the tax within centrally imposed effective limits. The average increase in 2006 was about 5%. Council tax benefit covers the cost of this tax for many in the bottom 20%. With respect to income tax and national insurance contributions, there were no major changes except that allowances and thresholds are indexed to prices, which led to some fiscal drag increasing the tax burden somewhat.

In terms of social benefits, there was very little change except via the differential updating described above and the fact that uprating uses an index from the previous year. In times of rising inflation this has a detrimental effect on the real level of benefits and thresholds. The effect is very small in the period considered. Indeed, since inflation and earnings growth are relatively low, the differences between (a) no uprating, (b) price uprating and (c) earnings uprating have a rather small impact on poverty and income inequality in a single year. One notable change has been the massive increase in the income disregard for child tax credit / working tax credit assessment from £2,500 to £25,000 (i.e. from approximately €3,720 to €37,200).

Finally, in 2006 the minimum wage increased in real terms by 5.9% for those aged 22+, by 4.7% for those aged 18-21 and by 10.0% for those aged 16-17.

The net overall effect of the above changes on poverty and inequality is estimated to be very small.

The acceding and candidate countries

In *Bulgaria* a series of policy changes have been recently implemented or announced. In 2005 the corporate tax rate was lowered from 19.5% to 15%. Income tax rates were also cut (the base rate from 12% to 10%, the top rate from 29% to 24%). Tax allowances for dependent children were raised to BGN 360 (€184) for one child, BGN 780 (€399) for two children and BGN 1,140 (€583) for three or more children. Pension contributions were also significantly reduced, from 29% of earnings in 2005 to 23% in 2006. Most of the advantage of the lower fiscal burden accrued to employers.

With respect to benefits, pensions were increased by 7% in 2006 (i.e. twice as fast as the forecast rate of inflation). The minimum income guarantee, used to calculate eligibility for

means-tested benefits, was raised to BGN 55 (€28) in 2005, having been frozen at BGN 40 (€20) since 2001. The period of eligibility for unemployed recipients of social assistance was in 2006 limited to 18 months. The child benefit rate was also adjusted in 2005. The nominal increase was 20%, but this benefit corresponds to no more than 7% of the net wage, so its contribution to total family income is limited.

A variety of active labour market policies involved just over 50% of the registered unemployed in public work programmes. The largest such programme offered temporary, low-skill employment to 92,000 unemployed recipients of social assistance benefits. The main objectives of these programmes are to transfer income to the jobless poor and to promote work incentives.

Finally, the minimum wage was raised rather substantially from BGN 120 (€61) in 2004 to BGN 180 (€92) in 2006, and therefore gained in value relative to average earnings.

In *Croatia*, no significant changes have taken place recently with respect to taxes and/or social contributions. Exemptions from profit tax in war-affected areas have been abolished, indirect taxes on cigarettes and coffee have been increased, and a lower rate of VAT at 10% has been introduced in tourist areas – a measure that would be illegal under EU law.

In terms of cash benefits, the basic level of social assistance remained unchanged at kuna 400 (€54) per month. Moreover, changes to maternity allowances and child benefits were announced in September 2006 and are to be implemented from January 2007. Finally, as of February 2006, pensions are again indexed according to the Swiss formula: benefits are uprated twice a year by the average of the growth of wages and prices. This replaces the more generous full wage indexation introduced only 14 months earlier.

In *Romania* significant changes to income tax, especially the introduction of a flat rate at 16%, had already taken place in 2005 and were reported in last year's Annual Report.

Other measures sought to compensate for the effects of tax reform on low-income groups. An earnings-related second tier was added to the base rate of unemployment benefit in 2005. Note that, compared to other population groups, households headed by unemployed persons have the lowest income per capita.

Due to better indexation and the application of a more generous formula, pension benefits improved relative to average wages in 2006. However, at 36% of average wages and 82% of the minimum wage, average pensions remain low.

The parental leave benefit, paid at a flat rate, was removed from social insurance and is now funded by tax. Benefit take-up seems to have improved as a result, especially among the self-employed and farmers. Moreover, worth twice as much as the minimum wage, parental leave

benefit is more popular among lower-income parents, while higher-income parents tend to shun the benefit in favour of a swifter return to employment.

User charges for access to publicly-provided medical care have also become more extensive. This has given rise to concerns about the health and employment effects on those at the bottom of the income scale.

The eligibility threshold for heating benefit was raised by 50% in 2006, which resulted in a better coverage of low- to medium-income families. The impact of this policy may be significant for families struggling to remain above the poverty line.

In *Turkey* the most significant change involved the enactment of the Social Security and Universal Health Insurance Law, aimed to reduce the social security deficit and eliminate discrepancies between different types of workers. The law provides for a unitary penson regime for those first employed after 1 January 2007, a minimum retirement age 58 for women and 60 for men, a minimum contribution requirement of 9,000 days, a lower accrual rate and improved benefits for those remaining in employment after the minimum retirement age. Otherwise, it also introduces universal health insurance to fill in the gaps of the existing system, as well as a range of temporary benefits such as sick pay.

Tax policy changes included a reduction in the corporate tax rate to 20% (from 30%), a schedule of lump-sum taxes for those earning less than 2.5 times the minimum wage, tax relief for those building their own home or taking out a mortgage, and a reduction of the VAT rate for textiles from 18% to 8%.

In terms of social benefits, in June 2006 social assistance was extended to poor families with disabled children, poor persons over 65, and unemployed, blind or severely disabled persons earning no income, receiving no social benefits or alimony and owning no assets.

Moreover, the value of scholarships provided to 150,000 poor students will be raised by 27% in January 2007.

Finally, in January 2006 the minimum wage was raised by 8.65% in nominal terms, compared to an inflation rate of 9.4%.

Summary tables of policy changes

Belgium					
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)**
Increase of GRAPA	2006	Elderly (65+)	Increase	No change	Little change
Indexing of social benefits	2005	All households collecting social benefits	Increase	Little change	Increase
School bonus (allocation de rentrée scolaire)	2006	All household with young children	Increase	Little change	Little change
Werkbonus: Reduction of employees SSC	2005-2006	low paid workers	Increase	No change	Little change
Tax reform – tax exempted quotas/brackets	2005	All taxpayers	Little change	Increase	Decrease
Tax reform – increase in tax exempted quota	2005	Married couples	Increase	Increase	Little change
Earned income tax credit (self employment income only)	2005	low paid workers	Increase	Little change	Little change
Lump sum deductions for work related expenses	2006	Employees	Increase	Little change	Little change
Survivor pensioner regime	2006	Working age survivor pensioners	No change	Small decrease	Little change
Net overall effect of the above changes	n/a		Increase	Increase	Little change

Czech Republic					
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)**
Change in calculation of income tax for family with children	2005	low income family with children	little change	very little change	uncertain
Change in income tax policy	2005	married couples who take care at least of one child at household	little change	little change	uncertain
Change in income tax rate of employees and self - employed	2006	low paid employees- self-employed with low income	increase	very little change	very little change
Change in calculation of income tax for all taxpayers	2006	all taxpayers	little change	very little change	uncertain
Increase in minimum wage relative to subsistence minimum and to gross average earning	2005 1.1.2006 1.7.2006	low paid-unemployed beneficiaries of social benefits	little change	no change	uncertain
Increase in birth grant	1.4.2006	family with newborn child	very little change	no change	uncertain
Decrease in rates of income tax of business companies	2004-2006 rates of tax base[66]: year rates in % 2004: 28 2005: 26 2006: 24	business companies	uncertain	uncertain	

[66] Tax base of business companies being duty pay income after deduction of expenses

Czech Republic					
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)**
Net overall effect of the above changes			increase	little change	uncertain

Denmark					
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)**
Social assistance ceiling	2003	Persons receiving social assistance for more than 6 months	decrease	No change	decrease
Tax reduction in middleincome tax and increased in tax deduction for employed	2004	All but employed most	Little increase	increase	Little change
Increase in pensions supplement to state old age pension	2005	Pensioners with only state old age pension	Increase	No change	Small increase
Net overall effect of the above changes			No change	Little increase	No change
Germany					
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)**
Cuts in income tax	2000–2005	All tax payer	Little change	increase	decrease
Increase in income tax allowance	2000 -2005	Low-income tax payer	Little change	Little change	Little change
VAT increase	2007	All	decrease	decrease	Small decrease
Last reform (tax credits abolished, additional top tax rate)	2007	All tax payer	Little change	decrease	increase
Changes in capital income tax	2001	Mostly high incomes	Little change	increase	decrease
Other recent reform:					
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	?
Estonia					
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)**
Income tax rate decreased from 24% to 23%	2006	all income earners	increase	increase	little change
Income tax annual allowance increased from EEK 20400 to EEK 24000	2006	all income earners	increase	increase	small increase
Supplementary non-taxable allowance extended to families with 2 children	2006	families with 2 or more children	small increase	increase	little change
Unemployment insurance contribution reduced from 1% of wage to 0.6%	2006	all wage earners	increase	increase	little change
Increase in state pensions	2005-2006	recipients of old age, invalidity and survivors pensions	increase	little change	small increase
Increase in supplementary quarterly benefits for families with 3+ children	2006	large families	increase	little change	increase
Payment of parental benefit extended by 3 months	2006	families with small children	increase	increase	little change
Increase of benefits for disabled children	2006	families with a disabled child	increase	increase	little change
Increase in minimum wage	2006	low paid	increase	no change	increase
Net overall effect of the above changes			n/a	n/a	n/a

Greece					
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)**
Contributory unemployment benefit, left unchanged at €311.25 monthly since 2004, to be raised to €367.50 monthly in 2007, and to a further €404 monthly in 2008.	Jan 2007 Jan 2008	jobless workers with the necessary contributions	increase	no change	small increase
ΕΚΑΣ (the income-tested supplement to low pensions) revalued by 7% in nominal terms.	Jan 2006	low-income recipients of social insurance pensions	increase	no change	small increase
Income-tested social pension raised by 7% in nominal terms.	Jan 2006	old age persons on low income and no access to a social insurance pension	increase	no change	small increase
Non-contributory basic farmer pension raised by 7% in nominal terms.	Jan 2006	pensioners in rural areas	increase	no change	small increase
Social insurance pensions raised by 4% in nominal terms. Since the progressive revaluation of pension benefits was terminated (in 2005), the rise applies across the board.	Jan 2006	all social insurance pensioners	little change in real terms	little change in real terms	no change
3rd child birth grant introduced. Mothers giving birth to a 3rd child receive a lump sum of €2,000.	Jan 2006	families with a newborn 3rd child	uncertain	uncertain	uncertain
Benefits in kind to “multi-children families” extended to families with three children only.	Jan 2007	families with three children	uncertain	uncertain	uncertain
Net overall effect of the above changes			small increase	no change	little change

Spain					
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)**
Income tax: failure to index in line with real inflation	2005 2006	Tax payers and those just below exemption limit	Little reduction	reduction	Small increase
Social contributions: increase of higher and lower limits	2005 2006	Employees and self-employed	Some reduction	Some increase	Reduction?
Minimum pension: increase above inflation	2005 2006	Pensioners with low pension	Increase	unchanged	probable increase
Unemployment assistance: increase above inflation	2005 2006	Long-term and young unemployed	Slight increase	No change	Probable slight increase
Net overall effect of the above changes	n/a				
France					
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)**
Cut in income tax rate cuts / tax credit (PPE)	2000 – 2006	Tax liable households	Little change	increase	Decrease
New tax reform (tax shield, new tax schedule)	2007	Tax liable households	Little change	increase	Decrease
Introduction and extension of the tax credit (PPE)	2001-2007	Employed households	Increase	Little increase	Increase
reduced period of entitlement to unemployment benefits	2003-2005	Unemployed workers	decrease	Little change	decrease
back to work" plan	2004-2006	Low-skill workers	increase	Little change	increase
Other recent reforms:					

Social assistance / RMA	2004	Low-income households	Little change	No change	Uncertain
Child benefits	2004	Families with children	Increase	Increase	Small increase
Sickness insurance	2004+	all	Decrease	Decrease	Small decrease
Ireland					
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)**
Increase in basic state pension relative to earnings	2005, 2006	elderly (60+)	increase	little change	increase
Early childcare supplement (= increase in child benefit for families with child(ren) under 6)	2006	families with children aged under 6	increase	increase	increase
Unemployment & illness payment rates	2005-6	unemployed, ill, disabled, lone parents	increase	no change	increase
Family Income Supplement, increases greater than indexation	2005-6	low paid workers with children	no change	no change	no change
Std rate tax band increased faster than wage growth	2005-6	higher paid workers	no change	increase	reduce
Net overall effect of the above changes	2005-6	All	increase++	increase+	increase

Italy					
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)**
Personal income tax reform	2007	All taxpayers	Slight increase	Slight decrease	Little change
Cash transfers to families with children	2007	Households with children with income below a given threshold	Slight increase	Slight decrease	Little change
Tax deductions	2007	Households with children and dependent spouse with income below a given threshold	Slight increase	Slight decrease	Little change
Minimum Income Guarantee (RMI)	2005	In a selected number of municipalities the experiment of RMI was extended until April 2006.	Little chance	No change	No change
Increase in the duration of unemployment benefits	2006	Increase in the unemployment benefit duration from 6 to 7 months for the unemployed below 50 and from 6 to 10 months for workers aged 50 and above.	Little change	No change	No change
Reduction in employers contributions	2006	Employers hiring unemployed or long term unemployed workers in CIG (Cassa integrazione guadagi): 50% reduction in contribution rates for 36 months.	Little change	No change	No change
Net overall effect of the above changes	n/a	n/a	Slight increase	Slight decrease	Little change

Cyprus					
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)**
Minimum wage raised by 6% in nominal terms to CY£384 (€664)* on engagement and to CY£408 (€706) per month after six months of employment. Further increases envisaged so that by 2008 the minimum wage should reach 50% of the median national wage.	January 2006	minimum wage earners	increase	no change	increase
Public assistance scheme reformed (Law 95(I) 2006). Recipients are now permitted to continue to claim benefit for 12 months after taking up employment (100% of benefit in the first four months, 66% in the subsequent four, and 33% of benefit in the remaining four months). Moreover, the income disregards applied when calculating the amount of benefit recipients are eligible for have been raised. Lump sum payments under the scheme (for house repairs, purchase of tools and equipment, and for vocational training) have also been raised. Finally, male single parents may now be eligible for the scheme, while emergency payments to non-recipients of ordinary public assistance may be paid. Note that currently the annual rate for a single person is CY£2,678 (€4,633) per annum, and for a couple with two children aged below 14 is CY£5,435 (€9,403) per annum.	January 2006	recipients of public assistance	increase	no change	increase

Government "emergency plan to improve social cohesion" debated in parliament (discussed in more detail in part 3).	November 2006 (if approved)	low-income groups	increase	no change	increase
Net overall effect of the above changes			increase	no change	small increase
** CY£1 = €1.73 (1 November 2006).*					
Latvia					
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)**
Increase in the personal exemption	2006	Income earners	Increase	Increase	Increase
Dependents allowance	2006	Income earners	Increase	Increase	Increase
Increase in maximum taxable income for social security	2006	Top income earners	No change	Little change	Little change
Reduction in real child benefit	2006	Families with children	Decrease	Decrease	Uncertain
Infant care benefit for working mothers	2006	Working mothers with infants	Increase	Increase	Uncertain
Increase in guaranteed minimum income level	2006	Families in poverty	Increase	No change	Increase
Increase in minimum wage	2006	Low income earners	Increase	Little change	Increase

Lithuania					
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)**
Unemployment benefit was increased and related to the previous wage of unemployed person	2005	Unemployed	Increase	No change	little increase
Since mid of year 2005 Social (non-contributory) disability pension is paid to disabled (I and II group) people who are not eligible to contributory disability pension.	2005	Disable	Little increase	No change	little increase
Reduce income tax rate on wages	2006	Employees	Little increase	Increase	decrease
Increase in basic contributory pension component	2006	Pensioners	Increase	No change	little increase
Social (non-contributory) old age pension is paid to retired people who are not eligible to contributory old age pension.	2006	Old age pensioners	Little increase	No change	little increase
Age limit for non-contributory child benefit was increased.	2006	Families with children	Little increase	Little increase	No change
Compensation of expenditures no apartments heating was increased	2006	Poor families	Little increase	No change	Little increase
State supported income was increased	2006	Poor families	Little increase	No change	Little increase
Minimum wage was increased	2006	Low wage earners	Little increase	No change	Little increase
Salaries for public medical care employees was increased	2006	Medical staff	No change	No change	No change
Net overall effect of the above changes	n/a				

Luxembourg					
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)**
Increase of health care social contributions (from 2.55% in 2004 to 2.7% in 2005)	01/01/2005	Nearly everybody	Little decrease	Little decrease	Uncertain
Increase of the pension, the social assistance (RMG) and the minimum wage (2%) in line with the increase of the wages between 2001 and 2003[67]	01/01/2005	60 years and more and low income	Increase	Little increase	Little increase
Failure to index tax allowances/ rates band not in line with inflation	01/01/2005	All "tax households" that pay income tax	Little change (decrease)	Little change (decrease)	Little change
Failure to index tax allowances/ rates band not in line with inflation	01/01/2006	All "tax households" that pay income tax	Little change (decrease)	Little change (decrease)	Little change
Net overall effect of the above changes			Little change	Little change	Little change

[67] Every two years, pensions (old age, survivor, and disability), the minimum wage and the minimum guaranteed income (social assistance) are indexed on the increase of the wage observed between t-4 and t-2.

Hungary					
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)**
Income tax rate decrease	2006	Middle income	none	increase	increase
VAT rate 25-20, 15-20	2006				
Social contribution increase, health 4-6, unemployment1.0-1.5	2006				None
Combination of work and child care allowance	2005/ 2006	Mothers with no previous employment	Little increase	No change	Little increase
13th month pension	2003-2006	Pensioners	Increase	No change	None
Reform of the family support system	2006	All families with children	Increase	Decrease	Little increase
Changes in the regular social benefit	2006	Deprived families	Little increase	No change	Little increase

Malta					
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)**
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
Netherlands					
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)**
Indexation of minimum benefit levels and minimum wages	2006	Minimum income beneficiaries and minimum wage earners	Increase	little change	increase
Abolition of user's part in immovable property taxation	2006	All households	Increase	increase	Little change
New Health Insurance act	2006	All citizens	Decrease	Little change	decrease
Care allowance	2006	Low income groups	Increase	Little change	increase
Decrease of special health costs contribution	2006	All citizens	Decrease	decrease	Little change
Change in financing of child care	2006	Households with children	Increase	increase	Little change
Abolition of school fee for the 16-17 years old	2006	Families with 16-17 year old children	Little change	increase	decrease
General tax reduction measures	2006	All citizens	Little change	increase	increase
More strict rules for all social benefit claimants	2006	Minimum income beneficiaries, unemployed, disabled workers	Decrease	Little change	decrease
Net overall effect of the above changes	n/a		Increase	increase	Little change

Austria					
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)**
2nd stage of income tax reform 2004/05	2005	all tax-payers	little increase	little increase	No change
Increase upper-contribution limit for social contributions	2005, (2006)	Higher paid	No change	little decrease	little increase
Increase health insurance contributions pensioners	2005	Pensioners	little decrease	No change	little decrease
Indexation pensions	2005, 2006	Pensioners	little decrease	No change	little decrease
Indexation minimum pension-top-up singles	2006	Pensioners, social assistance recipients above 60 (females)/ 65 (males)[68]	little increase	No change	little increase
Indexation of care benefit	2005, 2006	People in need for care	little decrease	No change	little decrease
Increase for out-of-pockets payments for stay in hospital	2005	People staying in hospital	little decrease	No change	little decrease
Net overall effect of the above changes	n/a		little decrease	No change	little decrease

[68] Benefit amounts tied to minimum pension-top-up.

Poland					
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)**
Additional top income tax rate	2005	High incomes	No change	Little change	Little change
New minimum wage indexation	2005	Low paid	increase	Little change	increase
Changes in family and social policies	2004-2006	all	increase	Little change	increase
Tighter conditions for disability benefits	2006+	all	Small decrease	Small decrease	Little change
Portugal					
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)**
Creation of the Solidarity Supplement for the elderly (CSI)	2006	Poor elderly (65+)	increase	No change	Increase
Changes in the Minimum Income Programme (RSI)	2005	Poor	Little increase	No change	Little increase

New additional personal income tax bracket for the highest incomes	2006	Top Incomes	No change	Little decrease	Little increase
Changes in the Social Security Contributions of self-employed workers.	2005	Self-employed workers.	No change	Little decrease	Little increase
Real increase in Minimum Income Transfers (RSI)	2005 / 2006	Poor	increase	No change	Little increase
Increase in minimum wage relative to average earnings	2005 / 2006	Low Paid Workers	increase	No change	Little increase
Increase in social pensions relative to earnings	2005 / 2006	Poor Eldery (65+)	increase	No change	Little increase
Reduction in IRS specific deductions for the highest pensions income	2007	Richer Pensions	No change	Decrease	Increase
Net overall effect of the above changes	n/a		Increase	Little decrease	Increase
Slovenia					
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)**
Change in indexation rule for pensions	2005	pensioners	increase	Increase	increase
Increase in large family allowance for families with 3+ children	2006	large families	increase	Increase	increase
Net overall effect of the above changes	n/a				

Note: the effect of the second policy measure on the income of the target group (group affected) is very small, almost negligible.

Slovakia					
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)**
Abolishment of payment for health check and hospital care (20 and 50 SKK) in combination with decrease of VAT for drugs and health care services	2006 2007	elderly (60+) large sized families with children	increase	little change	increase
Decrease of 2% earmark corporate tax for NGOs	2007	clients of social NGOs	decrease	no change	decrease
Increase in minimum wage relative to average earnings	2006	Low paid	Increase	No change	increase
extension of parental benefits to working parents who place their children to public care facilities	2006	low paid working parents	increase	no change	increase
increase in minimum wage in combination with increase of some labour market benefits	2006	low paid and registered unemployed	increase	no change	increase
Net overall effect of the above changes	n/a		increase	no change	increase

*Note***:** *majority of reforms in tax system, labour market policies, social assistance, pensions and family benefits took place in 2004. Throughout 2005 no major changes as compare to 2004 were introduced that would have significant impact on income distribution. After the new government took power in August 2006, its focus has been mainly on making adjustments to the existing system, in some cases (disability pensions) going back to the situation prior January 2004.*

Finland					
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)**
Increased income allowance in municipal taxation	2000 – 2005	Wage workers	Little change	No change	increase
Increase in municipal (flat) income tax	2000-2006	Tax payers	Little change	decrease	increase
Cut in State (progressive) income tax	2001-2006	Tax payers	little change	increase	decrease
partial double taxation of dividends	2005	Mostly high incomes	little change	decrease	increase
Decrease in capital income tax and corporate tax, Wealth tax abolished	2005-2006	high incomes	little change	increase	decrease
Other recent reforms:					
Change in tax on voluntary pensions	2005	Pensioners	Little change	decrease	Little change
Major pension reform	2005+	pensioners	Little change	Little change	Little change
Social service and health care improvements	2004-2007	Low-income households in need of social services	Increase	Little change	Increase

Sweden					
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)**
Increase in parental leave benefits	2005	Families with small children	Increase	Some increase	Increase
increase in the allowance for pension contributions to the statutory system	2005	All groups with taxable incomes	Increase	Increase	Unchanged. Some low income earners do not benefit but ceiling on allowance limits the benefit for high income earners
increase of basic allowance for low and middle income earners	2005	Low and middle income earners	Increase	No change	Some increase but not all with low income pay tax
introduction in 2003 of 2 % indexing of level when central state income tax starting to be paid only by 1 % in 2005	2005	Above median to high income earners	unchanged	Some decrease	Minimal increase
7. increase of level at which wealth tax is paid to 3 000 000 SEK for a couple	2005	Wealthy people	Unchanged	Increased somewhat	Decreased somewhat
Net overall effect of the above changes	2002-2005	All	Increase	Increase	Increase
introduction in 2003 of 2 % indexing of level when central state income tax starting to be paid only by 1 % in 2005 *and* in 2006	2006	Low and middle income earners	No change	Some decrease	Negligible increase
Increased basic allowance	2006	All households	Modest increase	Modest increase	No change
Increased benefits to families with children; child benefits, housing benefits etc	2006	Families with children	increase	Some increase	increase
Net overall effect of above changes	2005-2006	Famililes with children	increase	Some increase	increase
Tax deductions for union and unemployment	2007	All trade union members and	Some decrease	Some decrease	Negligible change

insurance membership fees abolished		members			
Reduced ceiling for benefit purposes in sickness insurance	2007	Sick high income persons	No change	Possible slight decrease	Negligible increase
Earned income tax allowance	2007	All with earnings	Very modest increase	increase	Decrease
Reduced wealth and property tax	2007	Wealth and property owners	Negligible	increase	Decrease
Increased housing allowance for pensioners	2007	Pensioners	Little increase	No change	Little increase
Reductions in unemployment benefits	2007	Unemployed	decrease	No change	Decrease
Change in parental leave insurance: Home care allowance and special bonus for families sharing the parental leave benefits equally	2007	Families with small children	Difficult to identify	Difficult to identify	No change
Net overall effect of the above changes	2007	Unemployed and employed	decrease	increase	decrease
Shaded rows refer to measures already reported in 2005 with relevance for the present					
UK					
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)**
Price indexation of most elements	2006	all	Depends on growth in original incomes: little change	Depends on growth in original incomes: little change	Little change/uncertain
Earnings indexation of pension credit	2006	60+ women; 65+ men	Increase (small)	No change	Small increase
Earnings indexation of child tax credit maximum child amounts	2006	Low/middle income families with children	Small increase	No change	Small increase
Freezing of family and baby elements in CTC	2006	Low/middle income families with children. Biggest net effect in small families, and those with babies	Small decrease	No change	Small decrease
Freezing of childcare limits in WTC	2006	Low/middle income families with children and at least one parent in employment. Biggest	Small decrease	No change	Small decrease

		net effect on those with expensive childcare			
Increasing proportion of childcare costs met by WTC from 70% to 80%	2006	Low/middle income families with children and at least one parent in employment	Increase	No change	Small increase
Council tax increases above inflation	2006	All but low income	Small decrease for those not taking up/eligible for council tax benefit	Decrease	Increase
Increase in income that is disregarded during the year for CTC/WTC assessment from £2,500 to £25,000 (sic)	2006*	All except high income families	Uncertain – will increase payments and hence income for some but timing and incidence are unclear	Uncertain – will increase payments and hence income for some but timing and incidence are unclear	Uncertain: on average an increase, probably
Minimum wage increases by more than inflation	2006	Low paid employees	Increase (small because tax credits are withdrawn except for young/single childless people)	No change (except for low paid partners of high income people)	No change
Net overall effect of the above changes					Uncertain
** The policy is introduced in 2006 but won't have an effect until 2007 or 2008 since it relates to the amount of CTC/WTC that families must pay back if their incomes rise.*					

Acceding and candidate countries

Bulgaria

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)
Decrease of income tax rates	2005	Tax payers	Little increase	Increase	Decrease
Decrease of corporate tax rate	2005	Entrepreneurs	No change	Increase	Decrease
Increase in minimum wage relative to average earnings	2005	Low paid workers	Increase	No change	Increase

Increase in Guaranteed Minimum Income	2005	Low income persons	Increase	No change	Increase
Increase in child benefit relative to average income	2005	Families with children	Little increase	Little increase	No change
New criteria for universal disability benefit	2005	Disabled	Increase	Increase	Little increase
Significant decrease of pension contribution	2006	Employed, self-employed and employers	Little increase	Increase	Decrease
Tax deductions in income tax for families with children	2006	Families with children	Increase	Little increase	Increase
The state guarantee health insurance contributions for low income groups	2006	Uninsured low income persons	Increase	No change	Increase
Increase in average pension relative to average income	2006	Old-age persons	Increase	No change	Increase
Increase in maternity benefit for uninsured mothers	2006	Uninsured mothers	Increase	No change	Increase
Increase of child benefit for second child	2006	Families with children	Little increase	Little increase	No change
Limits on the period of receipt of means-tested social assistance	2006	Low income persons	Decrease	No change	Decrease
In kind assistance for children at school	2006	Families with children	Increase	No change	Increase
Net overall effect of the above changes	N/a	N/a	Increase	Little increase	Increase
Croatia					
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)**
Repayment of pensioners' debt	2006	Pensioners	Slight increase	Increase	Decrease
Pension indexation	2006	Pensioners	Little change	Little change	Little change
Net overall effect of the above changes	n/a		Little change	Little change	Little change

Romania					
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)**
Change in the formula for unemployment allowance corresponding to an increase of the amount	2005	unemployed	increase	No change	increase
Increase in average pension relative to average wage	2006	pensioners	Slight increase	No change	slight increase
Change in eligibility criteria for parental leave benefit from insurance based to income tax payment	2006	Parents with children up to 2 yrs old	increase	little change	increase
Reduction in the basic medical services covered by public health insurance**	2006	Insured persons	decrease	decrease	decrease
Raise in eligibility income level for means tested Heating Benefit	2006	Low income families	increase	No change	increase
Net overall effect of the above changes	n/a		Slight increase	No change	increase

Turkey					
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)**
Minimum wage raised by 8.65% in nominal terms (inflation for 2006: 9.4%).	January 2006	minimum wage earners	decrease in real terms	no change	little change
Salaries of government employees to be raised by 4% + 4% in January and July 2007. A compensatory pay rise may be granted if that turns out to be below inflation.	January 2007	government workers	no change	no change in real terms	no change
A fixed sum income tax schedule introduced for those earning less than 2.5 times the minimum wage.	January 2007	poor	increase	no change	little change
Corporate tax reduced to 20% (from 30%).	January 2006	corporations	no change	increase	decrease
Building tax exemption for pensioners owning a house smaller than 200m^2 and earning in 2005less than 150,000 YTL (€79,500)* from real estate.	Decemb er 2005	pensioners	no change	increase	decrease
Building tax exemption extended to the disabled, provided their only house is smaller than 200 m^2.	January 2006	disabled people	small increase	uncertain	little change
Mortgage interest on house loans up to 100,000 YTL (€53,000) made tax deductable.	April 2006	home buyers	no change	increase	decrease
VAT on textiles reduced to 8% (from 18%).	March 2006	textile consumers and producers	uncertain	uncertain	uncertain
Social assistance paid to (a) poor families with disabled children, (b) poor persons over 65, (c) the unemployed, blind or severely disabled	June 2006	low income disabled, elderly and unemployed persons	increase	no change	increase / little change

earning no income, receiving no social benefits or alimony and owning no assets.					
Social Security & Universal Health Insurance Law, discussed in detail in part 3.	January 2007	whole population	uncertain	uncertain	uncertain
Debts of social health insurance schemes to state hospitals cancelled, causing the latter serious financial difficulties.	Februar y 2006	patients in state hospitals	uncertain	uncertain	uncertain
Price of pharmaceuticals raised by 5% monthly for 6 months (pharmaceuticals indexed to exchange rates by law, enacted in 2004).	July 2006	the uninsured	decrease	no change	little change
Housing loan-purchase scheme on favourable terms for low- and middle-income families introduced in Istanbul. 3,116 houses handed over in 2005.	Decemb er 2005	the poor, the low and the middle income groups	increase	no change	increase / little change
Eligibility rules for access to the Istanbul housing loan-purchase scheme relaxed with respect to both age and income of applicants to increase the number of applications.	April 2006	the poor, the low and the middle income groups	increase	no change	increase / little change
Scholarships provided to 150,000 poor students raised by 27%.	January 2007	poor students	increase	no change	little change
Home tuition provided to sick children staying at home for at least 6 months.	January 2006	sick children	increase	uncertain	little change
Net overall effect of the above changes			small increase	increase	little change
** 1 YTL = €0.53 (1 November 2006).*					