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Abstract

Low pay is conventionally measured in terms of the gross earnings of the individual, related to benchmarks derived from the distribution of earnings such as half or two-thirds of the median. Poverty status, on the other hand, is usually assessed on the basis of the disposable income of the household, adjusted for size and composition. The relationship between the two – low pay and poverty - is by no means straightforward, but improving our understanding of it is critical to policy formulation. In this paper we draw on two data sources to investigate what that relationship looks like empirically in industrialised countries: the Luxembourg Income Survey database and the European Community Household Panel. The extent of overlap between low pay and poverty is found to be often rather more limited at an aggregate level than might generally be expected, but there is also some variation across countries. These results are based on snapshots from cross-section data, and the importance of a dynamic perspective in this context is emphasised, In conclusion, some of the policy implications are explored.

Low Pay And Household Poverty

1. Introduction

A number of major industrialised economies have seen earnings dispersion increase and the incidence of low-paid employment grow over the past two decades (OECD, 1996). Many have expressed their concern that, as a consequence, poverty in work has worsened. It is against this background that minimum wages, for example, have moved back into the spotlight. Much of the debate revolves around the question of whether and to what extent low-paid workers live in low-income households, and hence whether minimum wages are effective as a poverty alleviation device. At the same time, in-work benefits and/or tax credits are being introduced or existing programs expanded, again with the aim of improving the living standards of low-paid workers. In continental Europe, where most countries have seen little or no increase in earnings inequality and where low wage employment remains less widespread than in the Anglo-Saxon countries, the policy debate is somewhat different. There, prompted by the OECD, enhanced wage flexibility is being debated as a possible cure for persistent high unemployment. But there also exists a widespread perception that an expansion of low wage employment would lead to a proliferation of the working poor. It is in this context that this chapter attempts to shed some light on the empirical relationship between low pay and poverty.

Low pay is conventionally measured in terms of the gross earnings of the individual, related to benchmarks derived from the distribution of earnings such as half or two-thirds of the median. Poverty status, on the other hand, is usually assessed on the basis of the disposable income of the household, adjusted for the size and composition of the household. The relationship between the two – low pay and poverty - is by no means straightforward, but improving our understanding of it is critical to policy formulation.

Here we draw on data from the Luxembourg Income Survey database and the European Community Household Panel to show what that relationship looks like empirically in industrialised countries. While most of the results are for full-time employees, the position of part-time employees is also considered. The extent of overlap between low pay and poverty is found to be rather more limited at an aggregate level than might generally be expected, but there is also a good deal of variation across countries. We discuss how this arises, and the factors influencing the extent to which the low paid are to be found in poor households. While

these results are based on snapshots from cross-section data, the importance of a dynamic perspective in this context is then discussed. In the concluding section some of the policy implications and priorities for future research are explored.

2. Measuring Low Pay and Poverty

A variety of approaches can be used to define and measure low pay (see for example CERC 1991, OECD 1996). Significant choices have to be made first about the earnings measure to be employed – is it to be weekly or hourly, is it to be basic pay only or are other payments such as overtime to be included? The population of workers to be covered must also be decided – is it to include part-time as well as full-time employees, and is it to include those who only work part of the year? Finally, how is the low pay benchmark itself to be derived – is some external standard to be sought or a purely relative benchmark based on a point in the earnings distribution itself to be used? If the latter, what point – for example, what proportion of the mean or median? Without rehearsing these issues in detail, probably the most commonly-used approach has been to set the low pay cut-off as a proportion of median gross earnings, most often two-thirds of the median. This has been the benchmark used by for example the OECD in recent comparative studies of low pay across countries. In order to avoid the complications of disentangling the impact of differences in wage rates from those of differences in hours worked in the week or weeks worked in the year, that OECD analysis has also concentrated on full-time full-year workers.

Turning to the measurement of household poverty, the definition of poverty which appears to be widely accepted in industrialised countries refers to exclusion from the ordinary life of the community due to lack of resources. As Atkinson (1985, 1987) and Foster and Shorrocks (1988) emphasise, there is then a diversity of possible judgements about the specification of the poverty line and choice of poverty measure. However, the most common approach is to use relative income poverty lines, derived as proportions of mean or median household income. This is the approach employed *inter alia* in recent studies for the European Commission, Eurostat and the OECD (O'Higgins and Jenkins 1990, ISSAS 1990, Hagenaars *et al* 1994, Forster 1994), and in cross-country comparisons based on the Luxembourg Income Study data such as Buhman *et al*. (1988). Unlike the low pay literature the mean is used more often than the median, though there are arguments in favour of each: the most common practice is to use 50% of mean household income, adjusted for household size and composition using equivalence scales. The precise equivalence

scales employed may have a significant impact on the size and composition of the group falling below the poverty line (Buhman *et al* 1988, Coulter, Cowell and Jenkins 1992), and no method of deriving such scales commands general support. The income concept used is disposable income, income of all household members from all sources minus income tax and social security contributions. Using the household as the recipient unit involves the conventional assumption that resources are shared within the household so as to equalise living standards.[1]

3. The Overlap Between Low Pay and Poverty

We now look at the relationship between low pay and household poverty in a cross-section perspective, first drawing on the study by Marx and Verbist, (1998) which used data from the Luxembourg Income Study (LIS). The LIS figures refer to the late 1980s and early 1990s, the most recent datasets in the database available for most countries. The poverty status of the household is measured against an income poverty line set at half average disposable income, adjusted for household size and composition. The equivalence scale used to make this adjustment gives a value of 1 to the first adult in the household, 0.5 to each additional adult, and 0.3 to each child (commonly known as the "modified OECD scale"). Household poverty has to be measured on the basis of disposable income over a whole year, since that is the accounting period for income used in the LIS (except for Belgium, where it is one month). Table 1 shows first the poverty rates for the population of working age in each of the countries to be covered. Poverty is highest in the USA, by a considerable margin, at 19%. Australia, Canada and the UK have the next-highest rates, at 12-15%, while the remaining countries have rates of between 5-8%.

Given that income is being measured on an annual basis, it is necessary to define low pay in a manner consistent with that accounting period. The coverage of the analysis is therefore limited to full-year, full-time workers,[2] and low-paid workers are then defined as those earning less than two-thirds of the median gross wage of all full-year, full-time workers in that particular country. This means that low-paid temporary and part-time workers are not included in the analysis, and countries in the database for which there is no or insufficient information available on weeks and

[1] For a further discussion of these issues see for example Atkinson (1995), Atkinson, Rainwater and Smeeding (1995), Callan and Nolan (1991) and Van den Bosch et al. (1993).

[2] Full-year, full-time workers are defined as those who worked 44 weeks or more per year, and

hours worked - namely Denmark, France, Italy, Norway and Spain – had to be excluded. The incidence of low-wage employment this produces is shown in the second column of Table 1.

Table 1: The Extent of Poverty, Low Pay, and Poverty Among the Low-paid, Based on LIS Data, late 1980s/Early 1990s

	% of working age population in poverty (below ½ mean)	% of employees who are low paid (below 2/3 median)	% of low-paid employees who are in poor households
Australia	12.5	14.5	7.6
Belgium	4.7	10.8	6.2
Canada	12.3	21.4	11.5
Finland	5.0	6.7	4.3
Germany	7.9	12.7	5.6
Netherlands	6.9	12.4	9.5
Sweden	6.6	11.2	5.5
United Kingdom	14.5	19.9	8.8
United States	19.1	26.4	24.0

Source: Analysis of LIS data.

We see that the USA again has the highest rate, with 26% low paid, while Canada and the UK are next-highest at about 20%. Most of the other countries have about 11-14% in low pay, but Finland is an outlier with only 7%. While countries with relatively high poverty rates for those of working age generally have relatively high percentages in low pay, then, the correspondence is by no means exact. (These estimates of the extent of low pay are mostly broadly similar to those produced by OECD 1996 and Keese and Swaim 1997, based on a similar definition of low pay).[3]

The third column of Table 1 then shows the percentage of the individuals categorised as low paid who are themselves living in poor households – our central focus of interest here. The overlap between low pay and poverty is greatest for the United States, where about a quarter of the low-paid are in poor households. For Canada, Australia, the Netherlands and the United Kingdom

more than 33 hours per week.

[3] The LIS-based estimates are higher for Belgium and Sweden, in part due to the fact that the OECD figures use country-specific definitions of what constitutes full-year, full-time work, while the LIS-based estimates employ a single, relatively broad definition for all countries.

poverty rates for low-paid workers are about 10 per cent. For Belgium, Finland, Germany and Sweden only about 5 per cent of low-paid full-time (full-year) employees are in poor households. These results suggest that for most countries there is only a limited – and often extremely limited - overlap between low pay and poverty

We can see how robust this result is by turning to an alternative source of data on the relationship between low pay and poverty, the European Community Household Panel survey (ECHP). The ECHP is a harmonised longitudinal survey of households and individuals carried out in the European Union member states for Eurostat, the Statistical Office of the European Community. The first wave of the ECHP was conducted in 1994 in the then 12 member states. Income data in the survey refer to receipts in the previous calendar year. Eurostat has recently published summary results (Eurostat 1998) of an analysis of low pay and household income based on data from the first wave, carried out in collaboration with the OECD which has presented some related results (OECD 1998). The OECD in addition include results for the USA based on the Current Population Survey for 1996. Here we draw on these results to provide another set of "observations" on the relationship between low pay at the level of the individual and poverty at the level of the household.

The Eurostat/OECD analysis also focuses on full-time, full-year wage and salary earners, once again to avoid the complications of disentangling the impact of differences in wage rates from those of differences in hours worked in the week or weeks worked in the year. Low-paid individuals are again defined as those earning less than two-thirds of the median for full-time full-year employees. However, it appears that the earnings measure employed is net of tax and social security contributions rather than the more usual gross earnings concept generally employed in analysing low pay. Household poverty is again measured in terms of annual disposable household income adjusted for differences in size and composition.[4] However two differences between this and the LIS-based poverty measure now arise: the equivalence scale calculates the number of equivalent adults as the square root of household size, and the poverty line is set at half the median rather than half the mean income.

Table 2 first shows the percentage of all full-time, full-year employees who are low paid in these results. Only five countries are included in both the LIS-based results reported earlier and in

[4] However the data for France relates to gross rather than disposable earnings and incomes.

this Eurostat/OECD analysis – Belgium, Germany, Netherlands, the UK and the USA. For these, the incidence of low pay is generally similar to that shown by the earlier LIS-based results, though it is now somewhat higher in Germany, presumably because of the inclusion of the East.

The table then shows the extent to which low paid employees defined in this way are in poor households, that is below half median equivalent income. The USA again has the highest proportion of its low paid living in poor households, at over 20%. For most of the other countries, the proportion of the low paid in poor households is much lower than that. To assess the sensitivity of these results to the location of the household poverty line, the percentage in households falling below two-thirds of the median is also shown. The degree of overlap is now somewhat higher, but in most countries it is still the case that less than one-quarter of the low paid are in these, what one might term "poor or near-poor", households. The exception is again the USA, where 38% of the low paid are in those households.

Table 2: The Overlap Between Poverty And Low Pay, Based on ECHP Data, 1993

	% of employees	% of low paid who are in households	
	who are low paid	Below ½ median income	below 2/3 median income
Belgium	9.1	7.3	17.2
Denmark	9.6	3.1	18.1
France	14.3	7.7	22.6
Germany	18.3	9.7	20.6
Greece	11.9	11.5	21.2
Ireland	18.9	3.3	7.1
Italy	11.7	18.4	28.8
Luxembourg	19.2	9.2	32.7
Netherlands	14.3	11.2	21.0
Portugal	15.4	13.7	23.2
Spain	16.8	10.6	21.8
United Kingdom	21.0	9.1	19.9
United States	26.3	22.1	38.4

Source: OECD (1998) Tables 2.7 and 2.8.

These results on the limited overlap between low pay and household poverty are consistent with earlier studies. For example, Layard, Piachaud and Stewart (1978) and Bazen (1988) found that between 10-22% of low-paid workers were in families below conventionally-used poverty lines in the UK, while Burkhauser and Finnegan (1989) reported about 8-18% for the USA. However such results have to be interpreted carefully. While most low paid workers are not in poor households, most workers in poor households are themselves low paid. Table 3 shows that, in the results presented by the OECD, generally two-thirds or more of the workers living in households below the half median income poverty line are in low pay. For many countries, then, only 10% or less of the (full-time, full-year) employees in poor households are not low paid.

Table 3: The Probability of Being Low Paid for Employees in Poor Households, Based on ECHP Data, 1993

	% of employees in households below ½ median income who are low paid
Belgium	64.9
Denmark	54.3
France	65.5
Germany	85.0
Greece	86.7
Ireland	89.9
Italy	73.4
Luxembourg	68.9
Netherlands	90.3
Portugal	61.6
Spain	88.0
United Kingdom	92.5
United States	87.2

Source: OECD (1998) Tables 2.7.

What explains this – at first sight curious – pattern whereby most low paid employees are not in poor households but most employees in poor households are low paid? The crucial factor underlying it is the location in the household income distribution of all employees – whether low paid or not. Table 4, drawn from the results presented by Eurostat, shows that very few employees are in fact in households in the bottom part of the income distribution. In most countries, rather less than one in ten of all employees are in households located in the bottom quintile of the income distribution. Over the 12 EU countries taken together, only 5% of all employees are in such households. Indeed, less than 20% of all employees in the twelve countries are in households in the bottom two quintiles – 80% are in the top 60% of the household income distribution. In other words, employees are not mostly to be found in households in poverty or towards the bottom of the income distribution, such households generally do not contain an employee.

Table 4: Location of Employees in the Household Income Distribution, Based on ECHP Data, 1993

	% of employees who are in households located in		
	Bottom quintile	Second quintile	3rd - 5th. quintile
Belgium	3	11	86
Denmark	4	13	83
France	6	15	79
Germany	7	16	77
Greece	3	11	86
Ireland	1	8	91
Italy	5	13	82
Luxembourg	12	14	73
Netherlands	6	12	82
Portugal	4	14	82
Spain	4	12	83
United Kingdom	3	11	86

Source: Eurostat (1998) Table 9.

It is not then so surprising that low pay is prevalent among employees in low income households, but that such employees account for only a minority of the low paid. Again drawing on the results presented by Eurostat, Table 5 shows where low paid employees are located in the household income distribution. We see that generally about 60% of the low paid are in the top 60% of the income distribution, and a further one-quarter are in the second rather than the bottom quintile. Less than one in five low paid employees is in a household located in the bottom quintile of the income distribution. There is a good deal of variation across countries. Ireland is a striking outlier in terms of very limited overlap, having only 5% of all low-paid employees in the bottom quintile. At the other extreme, Luxembourg has the most pronounced overlap of the EU countries, with 32% of the low paid in the bottom quintile of the household distribution. The results presented by the OECD for the USA and shown in Table 2, in terms of proportions below poverty lines rather than in different quintiles, suggest that the overlap is even greater in that case. For most of

the countries covered, though, 10-15% of the low paid are in households in the bottom quintile.

Table 5: Location of Low-Paid Employees in the Household Income Distribution, Based on ECHP Data, 1993

	% of low-paid employees who are in households located in		
	Bottom quintile	Second quintile	3rd - 5th. Quintile
Belgium	10	17	73
Denmark	15	27	58
France	18	27	55
Germany	22	27	50
Greece	10	18	72
Ireland	5	11	84
Italy	18	17	65
Luxembourg	32	21	47
Netherlands	16	13	71
Portugal	13	23	63
Spain	16	18	66
United Kingdom	14	22	65

Source: Eurostat (1998) Table 10.

To conclude this section it is worth presenting some results focusing on Ireland, but measuring household poverty in a more comprehensive way than by income alone. Measuring income in household surveys is of course subject to error, and income from self-employment poses particular problems. In addition, in measuring poverty our primary focus is on exclusion due to lack of resources, and income has limitations as the measure of living standards or control over resources. It is therefore worth going beyond income poverty lines to also employ non-monetary indicators of deprivation, available in two Irish surveys carried out in 1987 and 1994. A full description of these surveys, the indicators and the way they have been used is given in Nolan and Whelan (1996). To focus on current basic exclusion due to lack of

resources look at households which are both below relative income lines **and** experiencing deprivation of one or more of what have been identified as basic deprivation indicators – such as not being able to afford to heat one's house, buy adequate food or have a second pair of shoes or warm overcoat. What we are primarily interested in here is whether this affects our assessment of the extent of overlap between low pay and poverty.

Drawing on Nolan (1998), we measure low pay once again vis-à-vis a benchmark set at two-thirds of median gross earnings, and concentrate on full-time employees. The income concept being used is now current rather than annual, so we include all those who were full-time employees when surveyed, rather than only those who were also full-year employees. Table 6 first shows the percentage of these low paid employees who were in households below the half average equivalent income poverty line. In either year, no more than 9% were in households counted as poor by that measure. If the alternative poverty measure is applied, of a higher income line but also the condition that the household must have been experiencing basic deprivation, then the figure is only marginally higher. Even with this alternative poverty measure, then, only about 6-10% of the low paid were in poor households. (Once again, most employees in poor households on this basis are themselves low paid). While we saw earlier that Ireland appears to have an even smaller overlap between low pay and poverty than other EU countries, this does suggest that the limited overlap found more generally is not simply a reflection of the fact that the identification of poor households is based on income alone.

Table 6: The Overlap between Low Pay and Household Poverty, Ireland 1987 and 1994

% of low paid individuals in poor households:	1987	1994
Household below 50% of mean income	8.9	5.5
Household below 60% of mean income + experiencing basic deprivation	10.3	6.4

Source: Nolan (1998) Table 10.

4. Understanding the Results

The overlap between low pay and poverty is thus rather more limited than often assumed in policy debates, and this is primarily because in most countries most poor households do not contain an employee – whether low paid or not. In order to understand the observed pattern and tease out its implications, however, we want to know what distinguishes the minority of the low paid who are in poor households from the majority who are not. The LIS-based analysis of Marx and Verbist (1998) is of assistance here. With the same data and definitions as Table 1 above, Table 7 now looks at how the percentage in poverty varies among the low paid by gender and age.

We see that, as one would expect, the association between low pay and poverty is stronger for men than for women. Poverty rates for low-paid men are much higher than those for low-paid women in all the countries included in the analysis. In some, notably Belgium and Sweden, low-paid women are very unlikely indeed to be in poor households. As far as age is concerned, it is again in line with expectations that poverty rates for prime-aged low-paid workers tend to be higher than those for young people, although Sweden is an exception. (It should be noted that these poverty estimates by age and gender are based on relatively small numbers for some countries).

Table 7: Poverty rates for Low-paid Individuals by Age and Sex, Based on LIS Data, late 1980s

	% of Low paid in poverty by sex		% of low paid in poverty by age		
	Men	Women	Under 25	25-54	+55
Australia	10.2	5.3	4.6	12.2	7.7
Belgium	16.1	1.6	1.5	8.6	0.0
Canada	13.7	9.8	8.9	12.5	9.3
Finland	7.4	3.0	3.6	4.9	0.0
Germany	7.5	4.3	3.6	6.7	0.0
Netherlands	12.8	6.0	4.8	17.7	0.0
Sweden	10.8	2.2	12.4	3.7	1.8
United Kingdom	13.0	5.6	4.2	13.3	6.8
United States	32.2	18.3	21.7	25.4	17.8

A crucial influence on the poverty status of households containing a low-paid employee is the extent to which the household is relying on those earnings. Analysis of the LIS data reported in table 8 shows that most low-paid workers in fact live in households with more than one earner, and that this is particularly the case for low-paid women. The proportion of low-wage workers living in single-earner households varies from slightly over one in five in Canada and the United Kingdom to around one in three in Belgium and Germany. For the remainder, in a significant number of cases there are not just two but three earners in the household.

Table 8: The Distribution of Low-paid Workers by Number of Earners in the Household, Based on LIS Data, late 1980s

	one earner	two earners	three or more earners
Australia	24.3	39.3	36.4
Belgium	34.8	53.5	11.7
Canada	21.7	48.8	29.5
Finland	27.0	54.3	18.7
Germany	33.8	42.7	23.5
Netherlands	24.6	52.5	22.8
Sweden	28.5	67.7	3.8
United Kingdom	22.1	43.6	34.3
United States	28.1	49.5	22.4

Source: Analysis of LIS data

These low-paid individuals in multi-earner households are often married women or younger workers still living in the parental home. As a consequence, among low-paid workers the percentage in poverty is particularly low for married women. Analysis of the LIS data suggests that only about 5% of low-paid married women were in poor households in the UK and Canada and the figure was even lower in the other countries covered, except in the case of the USA. There the figure was 13% - much higher than elsewhere but still low relative to other low-paid employees in the USA. Poverty rates for low-paid men with a partner but no dependent children are also relatively low in most countries, though in the UK about 10% were in poor households and for the United States the figure was 20 per cent.

It is low-paid married men who are “household heads” and have dependent children for whom the percentage in poverty is generally highest. The extent of cross-national variation here is striking, as shown in Table 9. The poverty rate for low-paid household heads with children was over 50 per cent in the United States, around 40-45 per cent for the United Kingdom, the Netherlands and Belgium, around 30% in Australia and Canada, and as low as 15% for Germany, 10% for Finland and 5% for Sweden. Households having to make ends meet on low pay constitute a minority but the financial hardship facing such households should not be neglected. A factor

contributing to their poverty is that in many countries low-paid household heads are more likely to have a non-employed spouse, or one in temporary or part-time work, than heads in work who are not low-paid (Marx and Verbist, 1997). This presumably reflects the fact that, among other things, partners tend to have similar levels of education; it could in some instances also be affected by disincentives in tax/welfare systems.

The table also shows that the impact of social transfers and personal taxes on poverty rates may be a key factor explaining these differences. On a purely static basis, this shows for example that Australia, Canada, Germany and Sweden would all have had poverty rates of about 35 per cent before transfers and direct tax. Hence, the fact that they had such different poverty rates is largely due to the differential impact of transfer and tax policies. For the UK and the USA, on the other hand, it is seen that their very high poverty rates reflect both very high pre-tax and transfer poverty rates and the limited – in the US case minimal – impact of transfers and taxes. (Note however that social security contributions, which are particularly important in continental Europe, are not taken into account in this analysis).

Table 9: Poverty rates and the impact of social transfers and taxes for low-paid household heads, couples with dependent children

	% in poor households	% in poor households before transfers and direct tax
Australia	33.3	38.5
Belgium	39.4	61.1
Canada	27.2	36.0
Germany	15.7	37.4
Sweden	5.7	34.7
United Kingdom	45.6	57.3
United States	55.5	57.1

Both the tax and transfer systems, and the role which low paid earnings play in the income of the households in which the low paid live, will differ from country to country. To explain more

comprehensively the variation we observe across countries in the degree of overlap between low pay and poverty, other factors obviously come into play. In general, one might expect those countries with relatively high poverty rates, and with a relatively high proportion of employees low paid, to have a greater overlap than others. This does seem the case more often that not, and the USA is of course the extreme case of a country with both high poverty and low pay rates and the greatest degree of overlap. However, the data from the two sources LIS and ECHP - do not themselves give an entirely consistent picture of the way the degree of overlap actually varies across countries, and there are in any case counter-examples to the general rule just advanced. The most obvious is Ireland, which has high poverty and low pay rates but, as the OECD highlight, a very limited overlap between low pay and poverty.

The reasons why this comes about are instructive. Ireland had (in 1993) both a very high rate of unemployment (especially long-term unemployment), a large farming sector, and a level of support for the unemployed and pensioners that, compared to most richer EU member states, was relatively ungenerous. This meant that the – relatively large – population below relative income poverty lines was dominated by the unemployed, farm households, and those relying on state pensions. Since household poverty is being measured vis-à-vis relative income lines, then, the position of the low paid will depend not only on the income of their own households and how low-paid earnings contribute, but also on the position of other types of household relative to the average or median income. To understand the overlap between low pay and poverty fully, indeed, an in-depth analysis of the overall poverty profile in each country would be required.

5. Complications

The results described so far show that in most EU countries only a minority of low-paid full-time employees are to be found in poor households, and that among the low paid it is those who are household heads with dependent children who are most likely to be poor. Before concluding that low pay is mostly not associated with poverty, however, a number of features of these analyses have to be emphasized, notably their limited coverage and focus and their cross-section perspective.

As far as coverage is concerned, both the LIS and ECHP-based analyses were confined to those employees who worked full-time, full-year. We know that those who are working part-time are more likely to be low paid than those working full-time, and those who worked only for part of

the year are probably also more likely to be low-paid when in work than those working for the full year. We might also expect that these sub-groups among the low paid are more likely to be in poor households than low-paid full-time full-year workers. Analysis of the survey data for Ireland mentioned above shows that when part-time as well as full-time employees are included among the low paid (using an hourly earnings low pay threshold), a substantially higher proportion of the part-timers are found to be in households below half average income (Nolan and Watson 1998). The same point is brought out by results presented by the OECD (1998) for three countries only, separately for the low paid among full-time full-year workers and among all workers, shown in Table 10. We see that when all low-paid employees, rather than just full-time full-year ones, are included the proportion in households below half the median is again considerably higher in all three countries.

Table 10: Poverty for Low Paid Full-time Full-Year Workers Versus All Low Paid, Netherlands, UK and USA, 1993

	% of low paid in households below poverty line	
	Full-time, full-year workers	All workers
Netherlands	9.9	15.0
UK	3.9	9.7
USA	23.2	33.0

Source: OECD (1998) Table 2.10.

The focus of the analysis of the overlap between low pay and poverty is also limited in the sense that no account is taken of the role of the earnings of low paid individuals in lifting and keeping their households out of poverty. The Irish data already mentioned can be used to illustrate the impact of the earnings of low-paid workers on the position of their households vis-à-vis the income poverty lines by a crude but revealing exercise. This involves simply deducting the net pay of the low-paid individual from the disposable income of the household, and then comparing that reduced income with the relative poverty lines. Table 11 shows how often this would bring the households containing low paid individuals (below two-thirds of the median) below the 50% income poverty line. We see that over one-third of all low-paid men and 22% of all low paid women are in households which are above the poverty line, but would

be poor if the "low pay" was not coming into the household. For low paid women who are widowed, separated or divorced, about half are in households which would fall below the income lines without their earnings.

Table 11: Poverty Rates for Households of Low Paid Employees in the Absence of Their Earnings, Ireland 1994

	% in households below poverty line without the earnings of the low paid individual
Men	37.8
Women	22.2
Married	13.6
Widowed/separated/divorced	50.5
Single	24.3

The extent of overlap between low pay and household poverty at a point in time, as revealed by analysis of cross-section data, is also clearly only part of the story. From a dynamic perspective, the consequences of long-term low pay interspersed with periods of unemployment will clearly be much more serious than those of low pay experienced for a relatively short period, perhaps at an early stage in the working career. Dynamic analyses of earnings mobility and the relationship between earnings, unemployment and poverty over time are increasingly becoming possible as suitable panel data become more widely available. The relationship between experiencing low pay and poverty which this reveals is a complex one, with that relationship appearing more or less pronounced than in static cross-sections depending on the perspective one adopts.

This can be illustrated by the results of analysis carried out by the OECD (OECD 1998, Keese, Gittelman and Stancanelli 1998). Panel data for Germany, the Netherlands, the UK and the USA allowed individuals who are low paid in a given year, in either of two years, and in any of five years to be identified. Table 12 shows the percentage of the full-time, full-year employees experiencing low pay who were in households below the half median income poverty line during the period in question. (In other words, with for example the five-year window income over the five years is used to determine poverty status). The results show that most employees experiencing

low pay in a given year are once again not in poor households, and that when the time period is lengthened the degree of concentration in poor households falls. For example, in the case of Germany about 13% of those low paid in 1993 were in poor households in that year, whereas only 8% of those who were low paid in at least one year between 1989-93 were in households with income over that whole period below half the median. (The UK is an exception here, with a slightly higher percentage in poor households when the five-year rather than the one-year window is used). This pattern reflects the fact that, among other things, some of those who are low paid in a particular year will be in higher-paid employment in a later year.

Table 12: Percentage of Employees Experiencing Low Pay Who are in Poor Households Over Different Periods, Germany, Netherlands, UK and USA

		% in households below poverty line
Germany	1993	13.4
	1992-93	10.0
	1989-93	7.7
Netherlands	1993	9.9
	1992-93	6.7
	1989-93	4.8
UK	1993	3.9
	1992-93	5.4
	1989-93	5.8
USA	1993	23.2
	1992-93	22.5
	1989-93	21.3

Source: OECD (1998) Table 2.10.

While these results are illuminating, they focus on only one side of the coin: how poverty risk varies when we count all those who experience low pay at some point during different periods. The other side of the coin is how the risk of being poor at some point varies with the duration of experience of low pay. The extent and nature of mobility over the earnings distribution and in/out of low pay has been the subject of considerable research in recent years (see for example Atkinson,

Bourgouignon and Morrison 1992, Gittleman and Joyce, 1995, OECD, 1996). Again how one reacts to the persistence/mobility with respect to low pay such studies show depends on one's prior expectations and the way one views the results. Sloane and Theodossieu (1996) report that, in the first and third waves of the British Household Panel Survey (BHPS), only 44% of those who were low paid in 1991 were still low paid two years later. Stewart and Swaffield (1997) present results from the first four waves of that survey which provide a different perspective: of those who were low paid in 1991, 1992, 1993 and 1994, over two-thirds were also low paid in 1994. However, about 1.7 times as many people experienced low pay in at least one of the four years as are low paid in the first year.

From the point of view of impact on household poverty, it then matters a great deal precisely which types of low paid individuals are and are not likely to move up the earnings distribution. Gregory and Elias (1994) show for example, with UK New Earnings Survey data, that low pay (defined as being in the bottom quintile of the earnings distribution) is more persistent among prime age and older workers than young workers, and is much more marked for women. Few studies have looked directly at the relationship between persistence of low pay and household poverty, but Sloane and Theodossieu (1996) do report that when one focuses on those who remained in low paid employment in both the first and third waves of the BHPS, less than 30% were in households in the bottom three deciles of the income distribution.

A particularly important point in the context of low pay and poverty coming out of the research on earnings mobility is that the low paid can move out of low pay not simply by moving up the earnings distribution, but also by exiting from employment into unemployment, illness or out of the labour force. Stewart and Swaffield (1998) note that in the British data such transitions out of employment are more likely for the low paid than the more highly paid, so restricting attention to those who are employees throughout overstates movement up the earnings distribution. They also conclude that those entering employment from a spell outside employment are more likely to be low paid, and those who had been low paid prior to being outside employment are more likely (than other entrants) to be low paid when they subsequently move back into employment. Such a cycle of low pay and joblessness is also found in Jensen and Verner's (1997) analysis of longitudinal data for Danish workers over a ten-year period. It is important to stress then that among the low-paid, it is not just those who we see to be in persistent low pay over time who we would expect to face a heightened risk of poverty.

Taking a life-cycle perspective, the impact on low pay, or of a cycle of low pay and joblessness, over a career is likely to have effects carrying over into retirement. As Atkinson (1973) emphasised, substantial experience of low pay and unemployment while at working age are linked to inadequate pension entitlement and poverty when elderly. This applies both to occupational and social insurance pensions. Hughes and Nolan (1998) show for example in the Irish case that occupational pension coverage is extremely low in what might be considered the secondary segments of the Irish labour market, and it of course in precisely those sectors where low pay is most prevalent. With social insurance pension entitlement generally depending on a sustained record of contributions over one's career, a low pay/out of employment cycle may lead to dependence in retirement on a means-tested social assistance pension safety net. In addition, of course, it minimises one's chances of building up assets such as financial savings or housing, which can play a crucial role in influencing living standards in retirement.

A longitudinal perspective, not just over a number of years but over a working career and beyond, adds great to the depth and complexity of the relationship between low pay and poverty. However, what is most important about this type of dynamic analysis is the long-term causal connections it highlights, on which policy will ultimately have to focus if it is to be successful. The European Community Household Panel has already served as the basis for the cross-section analysis of the low pay/poverty relationship discussed above. The longitudinal data shortly to be available from this source will make possible dynamic analyses of earnings mobility and the relationship between low pay and poverty for a wide range of EU countries, which should be highly informative.

Before going on to the implications of these results and the complexities which surround them, one further complication must be mentioned. We have focused throughout on poverty measured at the level of the household, in contrast to low pay which is of course at the level of the individual. This follows the conventional practice in the poverty measurement literature, but as mentioned earlier using the household as the recipient unit involves the critical assumption that resources are shared within the household so as to equalise living standards. If this does not in fact happen, there may be differences in poverty risk between individuals within a given household, which could have particularly important implications in the context of poverty and low pay. Suppose for example that some married women who do not work outside the home have a lower standard of living than their husbands, because the husband controls the

resources coming into the household. Even with household income above the poverty line, some such women could have living standards as low as those in poor households. For them, working in a low paid job might not be necessary to lift the household out of poverty, but it might allow the woman herself to escape poverty. The evidence on the extent of such inequalities within the household and of "hidden poverty" is extremely limited because the "black box" of behaviour and distribution of power and resources within the household is such a complex area to investigate (see for example Jenkins 1991). Cantillon and Nolan (1998), for example, sought to measure differences between spouses in living standards via non-monetary indicators; the results did not suggest the existence of widespread poverty obscured by conventional measurement practices, but the limitations of the available measures were acknowledged and the need to improve on the stressed.

6. Implications

The first and most obvious implication of these empirical findings on the limited overlap between low pay and poverty is that any policy aimed at improving the earnings of the low paid as a group will directly benefit only a minority of poor households. A valid response is that the same is true of any policy aimed at helping the working poor, simply because in most countries most poor households do not contain an employee: policies aimed at that sub-set must be judged on their effectiveness in benefiting that target group rather than their overall impact on poverty. This is only true up to a point, however: the limited (direct) impact which policies aimed at the working poor will have on poverty has to be kept in mind when considering their role in an overall anti-poverty strategy and the extent to which they can only complement other policies - notably those towards unemployment and pensions for the elderly. In this sense policies aimed at the low paid may be similar to those aimed at specific local areas with high poverty rates - commonly referred to as "pockets of poverty" or "black spots". In a number of countries - notably Ireland and the UK again - such area-based policies have come to play a major part in the rhetoric and practice of anti-poverty action. The reality is, however, that most poor people do not live in such areas. An anti-poverty strategy which has as its central planks measures targeted towards the low paid and specific high-poverty areas - whatever their merits and attractions - will simply not assist the majority of the poor.

Unlike area-based policies, policies aimed at the low paid as a group will also have a very

substantial spill-over: much of the benefit will go to the non-poor. This applies for example to a minimum wage, even one which is highly effective in increasing the gross earnings of the low paid without adversely impacting on employment levels. Recent US studies suggest that even there, where the overlap between low pay and household poverty is greatest, increases in the minimum wage have relatively limited impact on poverty or income inequality and substantial spill-over to the non-poor (see for example Horrigan and Mincey 1993, Mishel, Bernstein and Rassel 1995, Neumark and Wascher 1997). This is particularly pertinent in the case of Ireland and the UK, which do not at present have national minimum wages but where in each case the current government has committed itself to the introduction of such a minimum. In the Irish case, an advisory Low Pay Commission has recently recommended that the minimum be set at about two-thirds of median earnings, whereas the corresponding UK Commission has recommended a somewhat lower rate. In both cases much of the debate has focused on the impact which a minimum wage in general, and one set at these recommended levels in particular, might have on employment. What tends to be somewhat neglected – both by proponents and opponents of the minimum wage - is the limited direct effect one would expect a minimum wage on its own to have on household poverty. Even in the absence of negative effects on employment, most of the benefits would go to non-poor households, simply because that is where most of the low paid are to be found. (See for example Gosling 1996, Sutherland 1997, for the UK, and Nolan 1998 for Ireland). Where any disemployment effects would be felt is also important, of course, but it is far from clear whether the low paid in poor households are likely to be more or less vulnerable than those in non-poor households.

This limited impact on poverty is not in itself an argument against the introduction of a minimum wage, and the overlap between low pay and poverty appears to be a good deal greater in the UK than Ireland. It is also important to be clear that the pattern in any one country can change substantially over time, as evidenced by the increase in the numbers of "working poor" in the UK in recent years. As Gosling (1996) puts it in the UK context, a minimum wage is not a good way to redistribute income from the rich to the poor, but it would be more distributive there now than in the past. In either country, a substantial proportion of the working poor would indeed benefit from a minimum wage - but it is necessary to caution against unrealistic expectations. In doing so, of course, objectives other than poverty alleviation - notably promotion of greater equality in earnings between men and women - must also be given full weight.

From the point of view of poverty and policies aimed at reducing it, though, the central role of unemployment in the case of most EU countries must be stressed. As debates about the minimum wage illustrate most sharply, the potential impact of alternative strategies on not just the low paid but on low earnings and unemployment taken together must therefore be the focus of attention. It is important to note in that context that introducing or increasing the minimum wage may also have an indirect effect on poverty in the sense that it could help to draw people depending on benefits, particularly on social assistance, back into work. (This is particularly important if there is more upward income mobility from low-paid jobs than from long-term dependence). Also, increasing minimum wages could in some instances affect the scope for increasing benefit levels, where the latter are constrained by the level of the statutory minimum wage. This is for example the case in Belgium, where it is an accepted principle that the maximum unemployment benefit level should not exceed the minimum wage. Because of this link an increase in the minimum wage could indirectly benefit the non-employed living on benefits, particularly the unemployed.

The interface between tax, social security and low pay is a key area for policy, both in terms of the potential for direct impact of reforms on poverty and for ensuring that dynamic behavioural responses enhance rather than erode that direct impact. The tax and welfare systems offer ways of targeting the low paid who are in poor households, and this can look attractive as a way of minimising spill-over and concentrating on the sub-set of the low paid who are in poor or near-poor households (Scholz, 1996; Whitehouse, 1996). Indeed, in several countries a minimum wage policy is now complemented with in-work benefits, with the aim of raising work incentives and alleviating in-work poverty. Since its expansion after 1993, the Earned Income Tax Credit (EITC), which supplements the incomes of low-wage working parents, has become a major anti-poverty program in the United States. The direct impact of EITC on poverty appears to have been quite substantial, especially in terms of reducing child poverty (CEA, 1998). There is also evidence that EITC has raised work effort among single women - a remarkable upsurge in work activity of single mothers closely tracks the expansion of EITC after 1993 (Eissa and Liebman, 1996).

However, even where such measures do reach their intended target - which may not happen due to for example problems of non-take-up of benefits[5] - this generally comes at a high

[5] Scholz (1996) estimates that a relatively high fraction of families eligible for the EITC - about 81 to 86 per cent in 1990 - have claimed the benefit. The participation rate of the less generous UK Family Credit is estimated at around 50 per cent.

cost in terms of disincentive effects. In work benefits encourage labour participation because in-work benefits are made relatively higher than out-of-work incomes. Also, in the phase-in range, marginal tax rates will tend to fall, providing increased work incentives for those already in work. But the labour supply effects may not be unambiguously positive because in-work benefits are gradually reduced once a certain earnings limit is reached. If the phase-out range is wider than the phase-in region and if more people fall within the phase-out range (which may well be the case) then more people may in fact face increased marginal tax rates. In the case of the EITC, however, this effect does not seem to have dominated the positive effects for other groups (Blank, Card and Robins, 1999).

In-work cash transfers aimed at the low paid may be seen as complements rather than substitutes for the minimum wage. Indeed, a substantial minimum wage may be a prerequisite for in-work benefit programs to be efficient in the longer run. For example, if low wage supplements are available, low pay workers may have less of an incentive to bargain for higher wages. They might even put up with even lower pay (Freeman, 1996). As the discussion in Keese, Gittelman and Stancanelli (1997) and OECD (1998) brings out, whether they operate effectively as such depends on the level of the minimum wage and the extent and nature of the in-work benefits themselves. Other factors matter too, like the shape of the earnings distribution, or the cost and availability of child care. And there are likely to be important interactions with the other parts of tax/benefit system. All this makes it difficult to evaluate the net effects of a combined policy of in-work benefits and minimum wages. Simulations for the United States, which focus on the EITC, suggest that there are strong complementary effects (OECD, 1998). However, Sutherland's (1997) simulation analysis for the UK brings out the potential for serious disincentive effects and poverty traps is real. Indeed, withdrawal of benefits or increases in tax and social security contributions as earnings rise may mean that it is precisely the low paid in poor households who fail to benefit from a minimum wage.

This focuses attention on the broader range of policies aimed at helping families with children, including introducing or increasing universal cash transfers (Child Benefit). This can have a more immediate impact on poverty both among those depending on earnings and those on social welfare, without adversely affecting work incentives, but at significant exchequer cost. To give another example, availability of good-quality child care may be critical in reducing the disincentive to work for lone parents and women married to low-paid men in receipt of in-work benefits.

Particularly when one takes the implications of the dynamic perspective seriously, it is clear that to be effective, policies aimed at the working poor will have to fit within a broad-based anti-poverty strategy, rather than focus narrowly on a specific sub-set of the low paid at a point in time. This also applies to policies aimed at making labour markets - and particularly wage setting - more flexible in response to persistent, and in some countries rising, female and youth unemployment. A general expansion in low wage employment is sometimes advanced as a way to tackle poverty by promoting the employment prospects of potential second earners in low income households. However, countries where low pay is most prevalent are also currently the ones where means-testing in social protection is most important, and they in fact have relatively high poverty rates both among the low paid and among workless households. The context in which low paid employment occurs is crucial for its impact on poverty, and the same will be true for an expansion in low-paid employment.

References

Atkinson, A.B. (1973) "Low Pay and the Cycle of Poverty", in F. Field (ed.) *Low Pay*, London: Arrow.

Atkinson, A.B. (1987) "On the Measurement of Poverty", *Econometrica*, 55 (4), 749-64.

Atkinson, A.B. (1995), *Incomes and the Welfare State*, Cambridge University Press.

Atkinson, A.B., F. Bourguignon and C. Morrison, (1992), *Empirical Studies of Earnings Mobility*, Harwood.

Atkinson, A., Rainwater, L. and T. Smeeding (1995), *Income Distribution in OECD Countries*, Paris: OECD.

Bazen, S. (1988) *On the Overlap Between Low Pay and Poverty*, Discussion Paper 120, Programme on Taxation, Incentives and the Distribution of Income, London: London School of Economics.

Buhman, B., L. Rainwater, G. Schmaus and T. Smeeding (1988) "Equivalence Scales, Well-being, Inequality and Poverty: Sensitivity Estimates Across Ten Countries Using the Luxembourg Income Study Database", *Review of Income and Wealth*, Series 33, no. 2, pp. 115-42.

Blank, R., D. Card and P. Robins (1999), Financial Incentives for Increasing Work and Income Among Low-Income Families, NBER Working Paper 6998.

Burkhauser, R. and T. Finnegan (1989) "The Minimum Wage and the Poor: The End of a Relationship?", *Journal of Policy Analysis and Management*, 8 (1),pp. 53-71.

Callan, T. and Nolan, B. (1991), Concepts of Poverty and the Poverty Line, *Journal of Economic Surveys*, vol. 5 no. 3, pp. 243-261.

Cantillon, B., Marx, I. and Van den Bosch, K. (1997), The Challenge of Poverty and Social Exclusion, in OECD, *Family, Market and Community: Equity and Efficiency in Social Policy*, Paris: OECD.

Cantillon, S. and B. Nolan (1998), "Are Married Women More Deprived than their Husbands", *Journal of Social Policy*, 27 (2), 151-71.

Centre d'Etudes des Revenus et des Coutes (1991) *Les Bas Salaires dans les Pays de la Communaute Economique Europeenne*, Paris: CERC.

Coulter, F., F. Cowell and S.P. Jenkins, (1992). "Equivalence Scale Relativities and the Extent of Inequality and Poverty", *Economic Journal*, 102, 1067-1082.

Council of Economic Advisers (1998), Good News for Low Income Families: Expansions in the Earned Income Tax Credit and the Minimum Wage, Council of Economic Advisers: Washington.

Duncan, G., Gustafsson, B., Hauser, R., Schmaus, G., Jenkins, S., Messinger, H., Muffels, R., Nolan, B., Ray, J.C., Voges, W. (1995), Poverty and Social Assistance in the United States, Canada, and Europe., in K. McFate, Lawson, R. and Wilson W.J. (1995), *Poverty, inequality and the future of social protection*, Russell Sage Foundation, New York.

Eissa, N. and Liebman, J. (1996), "Labor Supply Response to the Earned Income Tax Credit", *Quarterly Journal of Economics*, 112 (2), May 1996, pp. 605-637.

Eurostat (1998). *Low Income and Low Pay in a Household Context (EU-12)*, in series Statistics in Focus: Population and Social Conditions, 1998/6, Office for Official Publications of the European Communities: Luxembourg

Foster, J.E. and Shorrocks, A.F. (1988) "Poverty Orderings" *Econometrica*, 56, 173-77.

Förster, M. 1994. Family Poverty and the Labour Market, LIS Working Paper 114, Luxembourg Income Study/CEPS: Luxembourg.

Freeman, R. (1996), "The Minimum Wage as a Redistributive Tool.", *Economic Journal*, 106 (May), 639-649.

Gittleman, M. and M. Joyce, (1995), 'Earnings Mobility in the United States, 1967-91', *Monthly Labour Review*, September, 3-13.

Gosling, A. (1996). "Minimum Wages: Possible Effects on the Income Distribution", Fiscal Studies, 31-48.

Gregg, P. and Wadsworth, J. (1996), More Work in Fewer Households ?, in Hills, J. (ed), *New Inequalities: The Changing Distribution of Income and Wealth in the UK*, Cambridge University Press, Cambridge.

Gregory, M. and P. Elias (1994), "Earnings Transitions of the Low-paid in Britain, 1976-91: A Longitudinal Study", *International Journal of Manpower*, 15 (2/3), 170-188.

Hagenaars, A., de Vos, K. and Zaidi, M. A. (1994) *Poverty Statistics in the Late 1980s: Research Based on Micro-data*, Luxembourg: Office for Official Publications of the European Communities.

Horrigan, M. and R. Mincey (1993), "The Minimum Wage and Earnings and Income Inequality", in S. Danziger and P. Gottschalk eds., *Uneven Tides: Rising Inequality in America*, Russell Sage Foundation: New York, 251-75.

Hughes, G. and B. Nolan (1998), *Competitive and Segmented Labour Markets and Exclusion from Retirement Income*, paper for LOWer Conference, Groningen.

Institute of Social Studies Advisory Service (1990), *Poverty in Figures: Europe in the Early 1980s,* Luxembourg: Eurostat.

Jenkins, S. (1991), "Poverty Measurement and the Within-Household Distribution: Agenda for Action", *The Journal of Social Policy*, 20, (4), 457-483.

Jensen, P. and M. Verner (1997), *Do Low-Wage Individuals Experience More Unemployment*?, paper for LOWer Conference, London.

Keese, M., M. Gittelman and E. Stancanelli (1997), *Do Minimum Wages Work*?, paper for LOWer Conference, Milan.

Keese, M. and P. Swaim (1997), *The Incidence and Dynamics of Low-Wage Employment in OECD countries*, Paper presented at the European Low-Wage Employment Research Network Conference on the Problems of Low-Wage Employment, 31 January - 1 February, Bordeaux.

Layard, R, D. Piachaud, M. Stewart and others (1978) *The Causes of Poverty*, Background paper No. 5, Royal Commission on the Distribution of Income and Wealth, London: HMSO.

Marx, I., Verbist, G. (1997), *Low-wage Employment and Poverty: Curse or Cure ?*, Paper presented at the First Lower Conference on Problems of Low-Wage Employment, Bordeaux.

Marx, I. and G. Verbist (1998), Low-Paid Work and Poverty: A Cross-Country Perspective, in Bazen, S., M. Gregory, and W. Salverda, *Low-Wage Employment in Europe*, Edward Elgar.

Mishel, L., J. Bernstein and E. Rassell (1995), *Who Wins With a Higher Minimum Wage?*, Economic Policy Institute Briefing Paper, Washington DC.

Neumark, D. and W. Wascher, (1997). *Do Minimum Wages Fight Poverty?* NBER Working Paper No. 6127.

Nolan, B. (1998). *Low Pay in Ireland*, Volume II of the Report of the National Minimum Wage Commission, Stationery Office: Dublin.

Nolan, B. and Whelan, C.T. (1996). *Resources, Deprivation and Poverty*, Oxford: Clarendon Press.

Nolan, B. and D. Watson (1998), *Women and Poverty in Ireland*, forthcoming, Oak Tree Press: Dublin.

OECD (1996), *Employment Outlook*, Paris: OECD.

OECD (1998), *Employment Outlook*, Paris: OECD.

O'Higgins, M. and Jenkins, S.P. (1990) "Poverty in the EC: Estimates for 1975, 1980 and 1985", in Teekens, R. and Van Praag, B. (eds.), *Analysing Poverty in the European Community*,

Luxembourg: Eurostat.

Scholz, J.K. (1996), "In-Work Benefits in the United States: The Earned Income Tax Credit", The Economic Journal, January, 130-141.

Sloane, P. and I. Theodossiou (1996), "Earnings Mobility, Family Income and Low Pay", *The Economic Journal*, 657-66.

Stewart, M. and J. Swaffield (1998), "The Earnings Mobility of Low-paid Workers in Britain", in R. Asplund, P.J. Sloane and I. Theodossiou eds., Low Pay and Earnings Mobility in Europe, Edward Elgar: Cheltenham.

Sutherland, H. (1997). *A National Minimum Wage and In-Work Benefits*, Employment Policy Institute, Economic Report, April.

Van den Bosch, K., Callan, T., Estivill, J., Hausman, P., Jeandidier, B., Muffels, R. and Yfantopoulos, J. (1993), A Comparison of Poverty in Seven European Countries and Regions using Subjective and Relative Measures, *Journal of Population Economics*, vol. 6, pp. 235-259.

Whitehouse, E. (1996), "Designing and Implementing In-Work Benefits", *The Economic Journal*, January, 130-141.