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POVERTY IN IRELAND IN THE
1970S AND 1980S

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1. INTRODUCTION

In the early 1970s, Ireland's economic prospects appeared bright. Joining the European Community in 1973 (along with the United Kingdom and Denmark), Ireland was now a member of the "rich man's club" and could expect to share in the prosperity of the expanded Community. Indeed, as the poorest member state, Ireland joined with promises of substantial resource transfers from its new partners to ease the transition. Together with economic growth, social expenditure could be expected to increase as the welfare state expanded. The promise was of "a rising tide lifting all boats".

By the late 1980s, the reality looked rather different. Almost one in five of the labour force was unemployed. Having recklessly pump-primed the (small and extremely open) economy through the late 1970s in the face of recession internationally, the price was paid in very low growth from 1980 to 1987 as public sector borrowing was brought under control. Servicing the public debt, now among the highest in relation to GDP in the EC, consumed a substantial proportion of tax revenue. No longer the poorest EC member since the further expansion to include Spain, Portugal and Greece, Ireland was still receiving very substantial transfers from the Community to promote convergence. With stagnation in terms of economic growth and unprecedented levels of unemployment, the role of social expenditure did indeed increase, but simply as a defensive response. From such an optimistic point of departure, what had happened to living standards and the distribution of economic well-being?

In this paper we examine what happened to the distribution of income and to poverty in Ireland over this period. Recent research internationally has highlighted the increase in income inequality during the 1980s in a number of industrialised countries, notably the UK and the USA, though this trend has not been universal. The contributions to this volume look in depth at the way inequality and poverty have evolved in various countries, allowing similarities and differences across countries in outcomes and causal factors to be identified. The aim of this paper is to allow the Irish experience to be set alongside these other studies, adding to the international perspective. Section 2 looks at the distribution of income, focusing first on trends

over time and then on the level of inequality compared with other Western countries. Section 3 deals with poverty, again examining how it has changed over time and then how the Irish situation compares with other countries. Section 4 summarises the central features.

2. INCOME INEQUALITY

2.1 Measuring Income Inequality in Ireland

Studies of the distribution of income in Ireland rely on household surveys rather than administrative tax/social security records to provide the data base. The first such survey on which estimates of the income distribution for the state could be based was the Household Budget Survey (HBS) carried out by the Central Statistics Office in 1973 (see Nolan 1978). As its name indicates this is primarily an expenditure survey, but like the very similar British Family Expenditure Survey (FES) it contains detailed income data and serves as an invaluable source for analysis of the income distribution. Unfortunately, whereas the FES is an annual survey the HBS has been carried out only at seven-year intervals - in 1973, 1980, and 1987. This is clearly a severe limitation for analysis of changes over time, since one must rely on these "snap-shots" without any indication of what happened from one year to the next. The other major limitation from the research standpoint is that the data tapes are not released to a data archive or outside researchers. Some specially-designed analyses of the data have been carried out at arms-length so one is not entirely reliant on the published reports, but the scope for in-depth investigation is constrained. (A detailed description of the HBS is given in Murphy 1984).

A separate household survey was carried out by the ESRI in 1987, in order to provide data for research on income distribution, poverty and use of state services. (A full description is given in Callan, Nolan *et al* 1989). The income information obtained is similar to that gathered in the HBS, and the major advantage of this source is that the data tapes can be analysed directly. There are however differences between this survey and the 1987 HBS which have to be taken into account in making comparisons, as discussed below.

The income measures, time period and recipient unit employed in the HBS are again very similar to those used in the British FES. The aggregate income measures employed here are

gross income (market income plus social security payments received) and disposable income (gross income less income tax and employees' social security contributions paid). The time-period is the last week, with the weekly average used for those paid every two weeks or month, while for self-employment income the weekly average over a longer period (usually a year) is used. The recipient unit employed in the survey is the household. These are all replicated in the ESRI 1987 survey, though in that case the implications of alternative recipient units and time-periods have also been examined.

2.2 Trends in Income Inequality

We look first at the distribution of gross income in the HBS samples. Table 1 shows the decile shares in gross household income from the HBS for 1973, 1980 and 1987. Between 1973 and 1980, the shares of the bottom quintile increased slightly but those of the top three deciles also rose, with the losers being deciles 3, 4 and 5. The Lorenz curves for the two distributions thus cross, though the main change between the two years is the transfer from the bottom half of the distribution to the top quintile. This is reflected in the two summary

Table 1: Ireland: Decile Shares in Gross Household Income, 1973, 1980 and 1987

decile	1973	1980	1987
bottom	1.5	1.6	1.9
2	3.0	3.0	3.1
3	4.8	4.5	4.2
4	6.4	6.1	5.4
5	7.7	7.6	7.0
6	9.2	9.2	8.8
7	10.9	10.9	10.9
8	13.2	13.3	13.6
9	16.6	16.8	17.6
top	26.7	27.0	27.5
all	100.0	100.0	100.0

Source: Rottman and Reidy (1988) Table 7.4 (derived from 1973 and 1980 HBS tapes), 1987 from HBS Report (CSO)

inequality measures calculated for these distributions and shown in Table 2: both the Gini and the Theil measures show an increase in inequality between 1973 and 1980.¹ (It is worth noting, as Murphy (1984) and Rottman and Reidy (1988) do, that inequality rose even more for market income - that is, income before cash transfers - but transfers offset some of this increase).

Table 2: Ireland: Gini and Theil Coefficients, Gross Income, 1973, 1980, 1987

Inequality measure	1973	1980	1987
Gini	0.379	0.385	0.398
Theil	0.103	0.106	0.111

Source: 1973, 1980 from Murphy (1985), 1987 calculated from HBS Report Table 2.

Moving on to the comparison between 1980 and 1987, the pattern is similar but more pronounced. The shares of the bottom two deciles increase substantially, but the shares of the top three deciles rise rather more, with the losers now being deciles 3, 4, 5 and 6. The summary inequality measures in Table 2 also show an increase in inequality between 1980 and 1987, with the percentage increase in each case being larger than from 1973 to 1980. Over the entire period from 1973 to 1987, then, the share of the bottom quintile rose by 0.5% of total income but that of the top quintile rose by almost 2% of total income. The Gini coefficient for gross income rose from 0.38 to 0.40, that is by 5%, and the Theil index rose by 8%.

Turning to disposable income, Table 3 shows the decile shares for each of the three years from the HBS. A pattern rather different to gross income is seen. Between 1973 and 1980 the

¹ These summary measures are calculated from the decile shares, and thus understate the true values calculated from the discrete data. Murphy (1985) presents both measures calculated from discrete data for 1973 and 1980 and compares them with the estimates using deciles and various income ranges. However only the decile shares were available for 1987, and so measures calculated from these shares are used here in all cases for consistency.

share of the bottom quintile rose slightly but now those of deciles 3-7 also rose. The top decile was the loser with a substantial decline in share. The Lorenz curves therefore do not intersect, and 1980 clearly Lorenz-dominates 1973. This is reflected in the fall in the Gini and Theil coefficients shown in Table 4. Between 1980 and 1987, the share of the bottom quintile rose substantially and that of the top decile again fell. Deciles 3-6 now experience a decline in share, however, with those of deciles 8 and 9 rising. Although the Lorenz curve for 1987 lies inside that for 1980 at most points, the curves do cross and there is no unambiguous dominance. Nonetheless, the Gini and Theil coefficients show a decline in inequality between 1980 and 1987, and their percentage fall is in fact slightly larger than between 1973 and 1980.

Table 3: Ireland: Decile Shares in Disposable Household Income, 1973, 1980 and 1987

decile	1973	1980	1987
bottom	1.7	1.7	2.2
2	3.3	3.5	3.7
3	5.0	5.1	5.0
4	6.5	6.6	6.3
5	7.8	7.9	7.6
6	9.2	9.3	9.2
7	10.9	11.0	11.0
8	13.0	13.0	13.4
9	16.2	16.2	16.6
top	26.4	25.7	25.0
all	100.0	100.0	100.0

Source: Rottman and Reidy (1988) Table 7.4 (derived from 1973 and 1980 HBS tapes), 1987 unpublished data supplied direct by CSO.

Table 4: Ireland: Gini and Theil Coefficients, Disposable Income, 1973, 1980, 1987

Inequality measure	1973	1980	1987
Gini	0.367	0.360	0.352
Theil	0.096	0.092	0.086

Source: 1973, 1980 Murphy (1985), 1987 calculated from Table 3.

Over the entire period 1973-87, inequality in the distribution of disposable household income fell, with 1987 Lorenz-dominating 1973 and the Gini coefficient falling from 0.37 to 0.35. This reflects the fact that the share of the top decile fell by 1.4% of total income and that of the bottom quintile rose by 0.9%. It is worth noting that the other gainers were not in the bottom half of the distribution, but rather deciles 8 and 9. However the pattern is still in contrast to the increase in inequality observed for gross income, over both sub-periods and 1973-87 as a whole. The redistributive impact of income tax and employees' social insurance contributions on the gross income distribution therefore increased substantially over the period, as seen in the growing gap between the summary inequality measures for gross and disposable income. In 1973 the Gini coefficient for disposable income was 97% of that for gross income, in 1980 it had fallen to 94%, and by 1987 it was only 88%, while the corresponding percentages for the Theil measure were 93% in 1973, 87% in 1980 and 77% in 1987.

It would be desirable to carry out the corresponding comparisons over time having adjusted household incomes for differences in size and composition, in other words to analyse the distribution of equivalent as well as unadjusted household incomes. Unfortunately this is not possible for 1987 because of the current situation regarding access to the HBS.² For 1973 and

² Due to a change in computing facilities at the CSO, it is not currently possible to access the HBS data even at arms-length, so here we have to rely on published data, previous

1980, Roche (1984) presented the equivalent gross and disposable income distributions using a set of equivalence scales based on the social security rates paid at the start of the period. On this basis the distribution of gross equivalent income became unambiguously less equal between 1973 and 1980, with the shares of each of the bottom five deciles falling and 1973 Lorenz-dominating 1980. For disposable income the picture is less clear-cut: the share of the bottom decile fell between the two years, that of the bottom half was unchanged, the top decile lost share, and the remainder of the top half gained. The Lorenz curves intersect, while the Gini coefficient indicates a fall in inequality.

While the corresponding equivalent income estimates from the HBS are not available for 1987, it appears likely that the overall trends between 1980 and 1987 were broadly similar to those in unadjusted income - that is, the gap between gross and disposable income distributions widened, with the former becoming if anything less equal and the latter if anything more equal. The ESRI survey for 1987 points in the same direction. It is possible to use the ESRI survey instead of the HBS to derive the equivalent income distributions for 1987, but care has to be exercised in comparing this with the earlier HBSs. This is because the unadjusted income distributions in the ESRI survey differs somewhat from that in the 1987 HBS - both gross and disposable income distributions for the ESRI sample show a larger share for the bottom quintile and the top decile than the HBS. One important difference between the two surveys is that fieldwork for the ESRI one was carried out in the first half of the year and the farm income information obtained was retrospective and referred to 1986, which was a particularly bad year. The HBS, on the other hand, was carried out through 1987 and used farm accounts for that year, when farm incomes were on average over 25% higher. This is likely to be a major contributor to the differences in the income distribution between the two surveys. In making comparisons over time with earlier HBS-based results one would tend to rely more on the 1987 HBS (though there were in fact also changes in the way farms were surveyed in the HBS in that year). However, the ESRI survey can be used to compare unadjusted and equivalent income distributions in 1987 and do suggest that the gap between the two was wider than in 1980.

studies, and a limited number of special runs by the CSO.

2.3: Explaining Trends in Inequality

Why then did inequality in the Irish income distribution evolve in this way over the years 1973-1987? Without access to the micro-data it is not possible to address this question directly using for example the type of decomposition analysis performed by Atkinson (1993) and Jenkins (1992) using British FES data. However, we can point to some likely links between the income distribution and developments in the macroeconomy and in tax and social welfare policy. The central features of the Irish economic landscape in the 1970s and 1980s from this point of view were the striking increases in both unemployment and direct personal taxation.

Rising unemployment is likely to have been a major influence on the gross income distribution. The rate of unemployment doubled to 7-8% of the labour force between 1973 and 1980.³ A detailed analysis of within-group and between-group inequality in the 1973 and 1980 HBS carried out by the CSO (Murphy 1984) suggests that the increasing number of households with an unemployed or retired head or with no earner over that period was primarily responsible for the increasing inequality in market incomes, with little increase in within-group inequality.⁴ The impact on the distribution of gross incomes was ameliorated though not fully offset by the fact that rates of social welfare support grew relatively rapidly. This was particularly marked for the elderly, which would have been an important influence on the share of the bottom quintile in the unadjusted distribution. The unemployed, on the other hand, tend to be most heavily concentrated in the bottom half but not the bottom quintile of the unadjusted distribution, which experienced declining shares in total gross income.

Between 1980 and 1987 unemployment increased very much more rapidly, rising to over 18% of the labour force. This is likely to have played a major part in the falling gross income shares of the second and third quintiles of the unadjusted distribution. In assessing the impact on household incomes, it is worth noting that in the Irish case an unusually high proportion

³ The rate of unemployment in the Labour Force Survey carried out in April 1980 was 7.3%, while registered unemployment over the year averaged over 8%.

⁴ See Murphy (1985) p. 84.

of the unemployed are married men living in families, who would conventionally be termed "household heads".⁵ The result is a magnified impact on families of the loss of income which is in most cases the consequence of unemployment, despite the fact that once again social security support rates were increased in real terms over the period.⁶ The impact of a given increase in the level of unemployment is also magnified by the growing proportion of the unemployed who have been away from work long-term, and therefore have exhausted unemployment insurance entitlements and have to rely on means-tested social assistance payments. In the Irish case this is also particularly pronounced: by 1987 about half of all men on the Live Register of the unemployed had been in that position for more than one year.

If unemployment was a key influence on the distribution of gross income, the sharp upward trend in the tax burden and the increasing reliance on direct taxation over the period was central to the widening gap between gross and disposable income distributions. Between 1973 and 1980, total tax revenue (including social security contributions) rose from 31% to 34% of GDP.⁷ Within that increasing total, taxes on personal income plus employees' social security contributions became more important, rising from 29% of total taxation in 1973 to 37% in 1980.⁸ This sharp increase in taxation and particularly personal taxation reflected not only the growing burden of unemployment on the public purse, but also the expansion in other areas of state expenditure associated with the ill-fated fiscal policy adopted in 1977-1979. This was intended to be a counter-cyclical employment-creating strategy, but its lasting result was an extremely high level of public debt and associated debt service payments. After 1980, as the public sector deficit was brought under control, total tax revenue rose by even

⁵ See OECD Employment Outlook (1990), NESC (1990).

⁶ The relationship between income in versus out of work in Ireland has been analysed by Callan and Nolan (1993) using the ESRI 1987 sample, and shows that in most cases the replacement rate is below 80%. This does not take into account non-cash benefits such as entitlements to free health care for those on low incomes, which are of course not reflected in the gross or disposable income distributions either. These non-cash benefits, together with indirect taxes, have been allocated among households in the 1873 and 1980 HBS by the CSO (see CSO 1980, 1982 and Murphy 1984) but the corresponding results for 1987 have not yet been produced.

⁷ OECD Revenue Statistics (1990) Table 3.

⁸ OECD Revenue Statistics (1990) Tables 11 and 15.

more, reaching 40% of GDP in 1987. Taxes on personal income and employees' social security contributions continued to play a more and more important role, and by 1987 were accounted for 40% of all tax revenue.

The growing redistributive impact of income tax and social security contributions over the 1973-87 period was attributable to both their growing importance and to the increasing degree of progressivity with which these taxes operated. Table 5 shows the average tax rate for income tax and for social insurance contributions in the HBS for 1973, 1980 and 1987 and the Suits progressivity index for both, as well as for the two taken together. In 1973 income tax and employees' social security contributions came to just under 10% of gross income of sample households. By 1980 this had risen to 15%, as the general level of taxation rose and income taxation accounted for a steadily rising share of the total. Between 1980 and 1987 the percentage of gross income going in income tax again increased, though less dramatically, but now social security contributions rose substantially.

Table 5: Suits Progressivity Index and Average Tax Rate for Income Tax and PRSI Contributions, 1973, 1980, 1987.

	1973	1980	1987
Average tax rate	%	%	%
- income tax	7.8	12.9	15.4
- PRSI contributions	2.0	2.2	3.5
- total	9.8	15.1	18.9
Suits progressivity index			
- income tax	0.194	0.207	0.275
- PRSI contributions	-0.074	0.056	0.133
- total	0.138	0.185	0.249

Source: 1973 from Nolan (1981), 1980 and 1987 calculated from HBS Reports.

Focusing on the degree of progressivity, Nolan (1981) used the Suits progressivity index to show that in 1973 income tax was progressive but social security contributions were mildly regressive (as indicated by its negative value).⁹ From Table 5 we see that by 1980 income tax was slightly more progressive but social insurance contributions were now also progressive.¹⁰ Between 1980 and 1987, income tax became a good deal more progressive and so did social insurance contributions. However contributions became a more important element in the total over this period and remained a good deal less progressive than income tax. The net result was that the Suits index for income tax plus social insurance contributions together rose by almost as much between 1973-1980 as between 1980-1987, registering an increase of 34% in the earlier period and 35% in the later one.

2.4 Income Inequality in Ireland in International Perspective

Before moving on to the examination of trends in poverty and in living standards, it is worth briefly putting the distribution of income in Ireland in perspective by comparison with other industrialised countries. It has become clear in recent years that great care is needed in making such cross-country comparisons. Without careful attention to maximising the degree of comparability of the estimates in terms of income concept, income unit, time period, nature and coverage of data source, equivalence scale (where relevant) and so on, misleading conclusions can be reached. The income distribution database assembled by the Luxembourg Income Study (LIS) is designed to overcome these obstacles to the greatest extent possible. The preferred income concept in the LIS is annual rather than weekly. It is not therefore meaningful to compare the distribution of (mostly) current weekly income from the Irish HBS, discussed above, with LIS-based figures for other countries. However the ESRI 1987 survey has been used to estimate the distribution of annual income in Ireland, and this is now included in the LIS database. Callan and Nolan (1992) present a detailed comparison between

⁹ The index is calculated on the basis of share of tax paid by gross income groups and the share of gross income they receive.

¹⁰ Murphy (1984) presents the Suits (and Kakwani) progressivity index calculated for equivalent (market) income for 1973 and 1980. Like Table 5 (based on unadjusted gross income), this shows the degree of progressivity of income tax little changed and that of employees' social security contributions significantly increased between 1973 and 1980.

that distribution for Ireland and other countries in LIS, and here we highlight the main results. In addition, since the Irish HBS and the UK FES are very similar in terms of the concepts and measures employed - indeed there is a great deal of overlap in the detailed income questions - we can compare the distribution of weekly income among households with the corresponding results from the FES.

Callan and Nolan (1992) compared the distribution of annual gross and disposable income in the 1987 ESRI survey with figures from the baseline study of income distribution in the first wave of LIS data presented in O'Higgins, Schmaus and Stephenson (1989) and covering seven countries - Canada, USA, UK, Federal Republic of Germany, Sweden, Norway and Israel. This showed Ireland having a higher Gini coefficient for gross and disposable income than most of these seven countries, the exception being Germany. Ireland was not Lorenz-dominated by most of these countries because the share going to the bottom quintile was relatively high, but the shares of the second and third quintile were lower and that of the top quintile a good deal higher than in most of the other countries. This was seen to remain true when equivalent rather than unadjusted disposable income was used.¹¹

Several caveats must be entered about this comparison, some mentioned in Callan and Nolan (1992). The fact that annual income in the ESRI sample had to be estimated from limited information and annualised current income had to be used in some cases could serve to overstate inequality (though this would also be true of some of the other countries). The data for the other countries is for about 1980, whereas the Irish estimate is for 1987 when unemployment was generally higher. A comparison with second-wave LIS data for around 1985 would be preferable, and will be covered in the forthcoming comparative income distribution study for the OECD based on LIS by Atkinson, Rainwater and Smeeding (1993). Finally, we have already seen that the distribution of income in the ESRI sample is more unequal than that in the HBS for the same year, and that this was most pronounced at the top of the distribution. While factors which could contribute to this difference can be identified, it means that a question-mark has to be placed over the estimate of the share of the top decile in the ESRI sample.

¹¹ See Callan and Nolan (1992) Tables 3, 4 and 5.

It is therefore also of interest to compare the distribution of gross and disposable weekly income in the 1987 HBS with the corresponding figures from the British FES. A similar comparisons for 1973 (Nolan 1981) had shown the Irish distribution to be more unequal than the UK one, but by 1987 this was no longer the case. The quintile shares for gross income in the two countries were then very similar, as are the Gini coefficients at 0.40. For disposable income Ireland actually had a slightly lower Gini by 1987. This highlights the divergence in trends in disposable income inequality between the two countries over the 1970s and 1980s, with the UK becoming markedly less equal while the Irish distribution became more equally-distributed. The need to compare Ireland in 1987 with the second wave, mid-1980s LIS data is therefore to be emphasised. It is also necessary to further reconcile the somewhat different pictures of the Irish distribution given by the two surveys available for that year.

3. POVERTY AND LIVING STANDARDS

3.1 Measuring Poverty

Various approaches to the measurement of poverty in developed countries have been proposed and applied, involving for example poverty lines based on subjective views about adequacy, on social security rates, on budget standards, on proportions of average or median income or expenditure, and on deprivation indicators (see Callan and Nolan 1991 for a review). Research on poverty in Ireland based on the 1973 and 1980 HBS generally employed social security rates as the point of reference from which poverty lines were derived (O'Cinneide 1975, Roche 1984, Rottman, Hannan et al 1982). A series of studies using the 1987 ESRI survey has applied a number of different approaches to measuring poverty, including relative income lines, subjective lines based on the Leyden approach, and the combination of information on income and the type of indicators of deprivation developed by Townsend (1979) and Mack and Lansley (1985) (see Callan, Nolan *et al* 1989, Callan, Nolan and Whelan 1993).

Here our primary interest is in trends over time, however, and for this purpose it is again necessary to rely on the HBS for 1973 and 1980 as points of comparison. We therefore concentrate on results which can be replicated from those surveys, which did not include information on subjective views about adequacy or the range of deprivation indicators

employed in the specially-designed ESRI survey. We therefore focus on straightforward relative income poverty lines, constructed as a given percentage of average equivalent income in the sample. This approach has in any case a number of advantages in making comparisons over time or across countries, in that the identical procedure can be readily applied in each case, and the sensitivity of the results to the particular line or equivalence scale chosen can be examined. Having presented results on this basis we then look at how real incomes, and therefore the absolute rather than relative position of those on low incomes, evolved over the period.

2.2 Trends in Relative Poverty 1973-87

We look at the numbers falling below relative income poverty lines constructed as 40%, 50% and 60% of mean equivalent household income. The equivalence scale employed at this stage is the simple one which has been used in a number of comparative studies for the EC, where the household head is given a value of 1, each additional adult is 0.7, and each child 0.5. These lines were applied to the HBS for 1973 and 1980, and to both the HBS and the ESRI sample for 1987. Table 6 presents the percentage of households and persons falling below each line.

Table 6: Percentages Below Relative Poverty Lines, Ireland, 1973, 1980, 1987

	1973 HBS	1980 HBS	1987 HBS	1987 ESRI
40% line:	%	%	%	%
% of households	8.0	8.5	7.3	10.0
% of persons	8.5	10.4	10.4	12.8
50% line:				
% of households	18.2	17.2	16.2	18.9
% of persons	17.8	19.2	20.9	22.9
60% line:				
% of households	27.8	27.9	26.6	29.0
% of persons	28.7	29.7	31.6	33.5

Source: 1973, 1980 and ESRI 1987 from Callan, Nolan *et al* 1989, HBS 1987 from special analysis.

Comparing 1980 with 1973, the percentage of households falling below the 40% line rose, the percentage below half average income fell, and the percentage below the 60% line was virtually unchanged between the two years. Focusing on persons rather than households, though, there was a consistent increase across all three relative lines in the percentage of persons living in households below the line. The average size of the households falling below the lines was therefore rising over time, for reasons to be discussed shortly.

Now comparing the results from the 1980 and 1987 HBS, the percentage of households falling below each of the three lines was lower in the later year. Once again, however, the average size of these households rose, so that there was an increase in the percentage of persons below the 50% and 60% lines while the percentage in households below the 40% line remained unchanged. The ESRI sample once again shows a somewhat different picture for 1987, with a higher percentage of households and persons falling below each of the relative lines than in the HBS. The much lower levels of income from farming in the ESRI survey than the 1987 HBS again appear to be the principal factor producing this difference. Now comparing the 1980 HBS with the ESRI sample results for 1987, a consistent increase over time in the percentage of households and a substantial increase in the percentage of persons below each of the relative lines is seen.

The sensitivity of these trends in relative poverty over time to the equivalence scale employed have been tested by applying relative lines using a variety of scales to the ESRI 1987 and the 1973 and 1980 HBS (see Nolan and Callan 1989, Callan, Nolan *et al* 1989). This showed that the general pattern held across the range of scales tested. As well as the head-count of households and persons below the lines, per capita "poverty gaps" and the distributionally-sensitive summary poverty measure proposed by Foster, Greer and Thorbecke (1984) were also calculated. These consistently show an increase in measured poverty between 1973 and 1980, and between 1980 and the 1987 ESRI survey.¹²

An alternative perspective for the 1980-1987 period is provided by a cross-country study

¹² Both income gaps and the Foster-Greer-Thorbecke measure were calculated on a household and a person basis, and the same pattern is shown in each case (see Nolan and Callan 1989).

carried out for Eurostat which employed relative poverty lines based on equivalised household *expenditure* rather than income, and for Ireland applied these to the 1980 and 1987 HBS (Eurostat 1990). The results for Ireland show a fall in the percentage of households but an increase in the percentage of persons below 40% and 50% poverty lines between 1980 and 1987.

To summarise, application of relative poverty lines to the available Irish data shows that the percentage of persons below such lines rose between 1973 and 1980 and again between 1980 and 1987. The magnitude of the increase over the 1973-1987 period varies depending on the proportion of mean income chosen, the equivalence scale used, and whether the ESRI or HBS samples are the basis for the 1987 results. Nonetheless, the robustness of the overall conclusion as to the direction of change is to be emphasised. We look in the next section at some of the principal factors underlying this trend.

3.3 Explaining Trends in Poverty

The changing composition of the households falling below the relative income poverty lines provides insights into the processes at work, and major changes in composition occurred over the period in the Irish case. Classifying households on the basis of the labour force status of the household head, almost half the households below the 50% line in 1973 had a head who was retired or "in home duties", and only 10% had an unemployed head. By 1980 the percentage of those below the corresponding line with a head retired or in home duties had fallen to 36% and the unemployed now accounted for 15%. By 1987 (using the ESRI survey), only about 20% of the households below half average income had a head who was retired and in home duties, while over one-third now had an unemployed head. Similar trends in composition are seen for households below the 40% and 60% relative lines.

The increase in the level of unemployment described earlier is therefore of central importance to understanding the evolution of poverty in Ireland in the 1970s and 1980s. Analysis of trends in poverty risk versus incidence over the period shows clearly that the *risk* of poverty for households headed by an unemployed person did not in fact rise between 1973 and

1980.¹³ The very substantial increase in the number of households headed by an unemployed person falling below the relative lines is entirely due to the dramatic rise in the numbers unemployed in the population. At the same time, the relatively rapid rise in social welfare support levels for the elderly, as well as wider coverage of occupational pensions, and improved provision for widows and other lone parents contributed to the decline in the proportion of the poor coming from those groups. By 1987, then, households with an unemployed head had become the largest single group among those below the relative income (or expenditure) lines.

This compositional change in terms of labour force status also explains why the average size of the households below the relative poverty lines rose so consistently and substantially over the period. Households with a retired head were effectively "replaced" among the poor by those with an unemployed head, and far more of the latter contained two or more adults plus children. The result was that the overall risk of poverty for children rose markedly. In 1973, 16% of children were in households below half average income. By 1987, this had risen to 26%. While the percentage of children in that situation at a point in time varies with the equivalence scale adopted, the increase over time is seen not to be sensitive to the choice of scale.¹⁴ For the elderly, on the other hand, an even sharper decline in the risk of poverty was seen.

These trends clearly have major implications for the design of policies to combat poverty. Improved social security for the elderly is seen to have played an important role in reducing the risk of poverty for that group over the 1970s and 1980s, but the current profile of the "poverty population" makes reliance on transfers much more problematic. While income support for the unemployed is crucial to cushioning the impact of unemployment, the constraints in terms of both the burden on public expenditure and the impact on incentives have become all too obvious in Ireland as elsewhere. Tackling poverty is therefore even more closely linked to structural and particularly labour market policies than before.

¹³ see Callan, Nolan et al 1989, Chapter 7.

¹⁴ See Nolan and Farrell (1990).

3.4 Poverty in Ireland in International Perspective

To see the extent of relative poverty in Ireland compared with other EC member states in the mid-1980s, we can draw on several cross-country studies carried out for the EC Commission or Eurostat. O'Higgins and Jenkins (1989) compiled estimates on as consistent a basis as they could using relative income poverty lines, while the study for Eurostat (1990) already mentioned applied the same approach to household expenditure. Table 7 shows the percentage of persons below half average income/expenditure in each of the member states drawn from these two sources. The estimate for Ireland on an income basis is drawn from the ESRI 1987 survey,¹⁵ while the expenditure-based estimate is from the HBS. (We will not dwell here on the conceptual and empirical issues involved in choosing to measure poverty in terms of expenditure rather than income).

Both income and expenditure-based estimates show Ireland as having a higher level of relative poverty than most member states, similar to Spain and Greece but lower than Portugal. The countries with the lowest poverty rates have rates of less than half that seen in Ireland. On the basis of these country-specific poverty lines, the EC member states with the highest relative poverty rates are those with the lowest levels of GNP per capita. While there are some methodological differences, comparison with published results for other countries (in Buhman et al 1988) suggests that Ireland around 1987 also had a higher proportion of persons below half median income than Sweden, Norway or Switzerland, but lower than the USA.

3.4 Real Incomes

Finally, it is necessary to put the observed trends in relative poverty and comparisons across countries in context by describing what was happening to living standards over the period. This is particularly important in the Irish case in reaching conclusions about the 1970s and the 1980s, because the pattern of real income growth was very different in the two sub-periods analysed here, that is 1973-1980 and 1980-1987. Between 1973 and 1980, real incomes grew rapidly. Mean household income in the HBS in 1980 was 193% higher than

¹⁵ These differ slightly from those presented by O'Higgins and Jenkins, which were preliminary estimates from the same source.

in 1973, while the Consumer Price Index rose by 155%, representing a 25% rise in average income in real terms. Between 1980 and 1987, on the other hand, average incomes rose by 87% in nominal terms but the CPI was 91% higher by the end of the period, so real incomes actually fell. This means that poverty lines which were fixed in real terms, rather than changing *pari passu* with average income, would show very different patterns in the two sub-periods. Between 1973 and 1980, a substantial fall in the numbers below such "absolute" lines would be registered. In the 1980-1987 period, on the other hand, there would be an increase in the number below "absolute" lines which was slightly greater than that seen with relative lines.

Table 7: Percentage of Persons Below Half National Average Equivalent Income and Expenditure, EC Countries, Around 1985

Country	Income Poverty	Expenditure Poverty
Belgium	7.2	5.9
Netherlands	7.4	11.4
Germany	8.5	9.9
Italy	11.7	15.5
UK	12.0	18.2
Denmark	14.7	8.0
France	17.5	15.7
Spain	20.0	18.9
Ireland	22.9	19.5
Greece	24.0	18.4
Portugal	28.0	32.7

Source: Income estimates from O'Higgins and Jenkins (1990) except Ireland which is from Callan, Nolan et al (1989) Table 5.4; expenditure estimates from Eurostat (1990) Table B.7.

An interesting perspective on the implications of taking differences in real incomes into account in cross-country poverty comparisons is provided by the Eurostat study. as well as country-specific relative lines, it also presents results for the percentages in each member country below a Community-wide poverty line set at half average expenditure. The divergence in poverty rates across countries is then very much wider than with relative lines. The Irish

poverty rate is in fact still about 20% with such a line, but those for Greece and Portugal are very much higher and those for the richer member states much lower. Whether one would wish to base a poverty measure on a standard which is common across all the countries rather than relative to the living standards and expectations in each depends among other things on the purpose of the exercise, but quantification of the difference made by adopting one rather than the other is clearly very valuable.

4 CONCLUSIONS

In this paper we have used the limited data available for Ireland to examine changes over the 1970s and 1980s in income inequality, poverty, and real living standards. Survey data on which estimates of the distribution of income and poverty can be based are available only for the years 1973, 1980, and 1987, when the official Household Budget Surveys were carried out by the Central Statistics Office, and a specially-designed survey also carried out in 1987 by the ESRI. The analysis has also been constrained by the fact that only the micro-data from the ESRI survey could be analysed directly.

Data from the HBS revealed that the degree of inequality in the distribution of gross income among Irish households widened from 1973 to 1987. For disposable income, however, inequality declined. The unprecedented rise in unemployment, to close to one-fifth of the labour force by 1987, is likely to have been a major contributor to the increased inequality in gross incomes. For disposable income, this was more than offset by the effects of the sharp rise in the proportion of income taken in income tax and social security contributions, and the fact that both became more progressive over the period. From this perspective the main difference between Ireland and the UK, for example, is that similar macroeconomic factors produced a widening of inequality in market and gross incomes, but the policy adopted with respect to direct taxes was very different. Ironically, the increase in the importance and the progressivity of direct tax was primarily a highly-constrained response to the size of the public sector deficit and debt with which Ireland found itself as a result of reckless fiscal expansion in the 1970s, rather than a deliberate strategy.

The percentage of persons falling below relative income poverty lines was seen to have risen from 1973 to 1987. This conclusion was robust across different relative lines and equivalence

scales. While unemployment was rising so substantially, private and public pensions for the elderly improved. This produced a marked change in the composition of those below the relative poverty lines, with the unemployed becoming much more important and the elderly much less so, and was accompanied by a significant rise in the risk of poverty for children. The percentage falling below country-specific relative poverty lines was higher in Ireland than in most other EC member countries.

During the 1970s, real incomes grew relatively rapidly in Ireland. During the period from 1980 to 1987, however, average household income fell slightly in real terms. While quite similar patterns of changes in inequality and relative poverty were seen between 1973-1980 and 1980-87, they therefore occurred in quite different settings. Whereas the numbers below poverty lines held fixed in real terms would have fallen significantly in the 1970s, they would have risen in the 1980s. Using a common standard across all EC countries in measuring poverty would not alter Ireland's ranking, on the other hand, though it would widen the gap between Ireland and the countries with the highest and lowest poverty rates.

Since 1987, the Irish economy has returned to growth and real incomes have been rising on average. However unemployment is again close to 20%, having dipped in the late 1980s, and appears unlikely to fall very much below that level in the short-to-medium term. While the average rate of income tax remains high, top tax rates have been sharply reduced, with Ireland belatedly following the international trend and the top income tax rate now down to 48%, from 58% in 1987 (and 65% a few years earlier). In the absence of suitable household survey data, one can only attempt to infer the impact of such changes on income inequality and poverty, using aggregate indicators such as the growth in incomes from different sources and the changing profile of the labour force and social welfare dependency,¹⁶ and the tax-benefit model based on the 1987 ESRI survey micro-data which is currently being developed.¹⁷

¹⁶ See Callan and Nolan (1992) for such an examination of the 1987-1991 period.

¹⁷ See Callan (1991) for a description.

References

Atkinson, A.B. (1993) *What is Happening to the Distribution of Income in the UK?*, Welfare State Programme Discussion Paper No. 87, 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.

Callan, T. (1991) *Income Tax and Welfare Reform: Microsimulation Modelling and Analysis*, General Research Series No. 154, Dublin: The Economic and Social Research Institute.

Callan, T. and B. Nolan (1991) "Concepts of Poverty and the Poverty Line: A Critical Survey of Approaches to Measuring Poverty", *Journal of Economic Surveys*, vol. 5, no. 3, pp. 243-62.

Callan, T. and B. Nolan (1992a) "Distributional Aspects of Ireland's Fiscal Adjustment", *Economic and Social Review*, Vol. 23(3), pp. 319-342.

Callan, T. and B. Nolan (1992b) "Income Distribution and Redistribution: Ireland in Comparative Perspective", in J.H. Goldthorpe and C.T. Whelan (eds.) *The Development of Industrial Society in Ireland*, Oxford University Press: Oxford.

Callan, T., B. Nolan and C.T. Whelan (1993) "Resources, Deprivation and the Measurement of Poverty", *Journal of Social Policy*, Vol. 22, No. 2, pp. 141-172.

Callan, T., B. Nolan and B.J. Whelan, D.F. Hannan with S. Creighton (1989) *Poverty, Income and Welfare in Ireland*, General Research Series No. 146, Dublin: The Economic and Social Research Institute.

Eurostat (1990) *Poverty in Figures: Europe in the Early 1980s*, Luxembourg: Eurostat.

Foster, J.E., J. Greer and E. Thorbecke (1984) "A Class of Decomposable Poverty Measures", *Econometrica*, Vol. 52, pp. 761-766.

Joyce, L. and T. McCashin eds. (1982) *Poverty and Social Policy in Ireland*, Dublin: IPA.

Jenkins, S. (1992) *Accounting for Inequality Trends*, Department of Economics Discussion Paper 92-10, University College of Swansea.

Mack, J. and S. Lansley (1985) *Poor Britain*, London: Allen and Unwin.

Murphy, D. (1984) "The Impact of State Taxes and Benefits on Irish Household Incomes", *Journal of the Statistical and Social Inquiry Society of Ireland*, Vol. XXV, Part 1, pp.55-120.

Murphy, D. (1985) "Calculation of Gini and Theil Inequality Coefficients for Irish Household Incomes in 1873 and 1980", *Economic and Social Review*, Vol. 16, no. 3, pp. 225-249.

National Economic and Social Council (1990) *A Strategy for the Nineties: Economic Stability and Structural Change*, Report No. 89, Dublin: NESC.

Nolan, B. (1978) "The Personal Distribution of Income in the Republic of Ireland", *Journal of the Statistical and Social Inquiry Society of Ireland*, pp. 91-139.

Nolan, B. (1981) "Redistribution of Household Income in Ireland by Taxes and Benefits", *Economic and Social Review*, Vol. 13, No. 1, pp. 59-88.

Nolan, B. (1991) *Recent EC Commission Statistics on Trends in Poverty*, Project on Income Distribution, Poverty and Usage of State Services Working Paper 22, Dublin: The Economic and Social Research Institute.

Nolan, B. and T. Callan (1989) "Measuring Trends in Poverty Over Time: Some Robust

Results for Ireland 1980-1987", *Economic and Social Review*, Vol. 20(4), pp. 309-328.

Nolan, B. and B. Farrell (1990) *Child Poverty in Ireland*, Dublin: Combat Poverty Agency.

O'Kinneide, S. (1972) "The Extent of Poverty in Ireland", *Social Studies*, 1 (4), pp. 381-400.

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

O'Higgins, M., G. Schmaus and G. Stephenson (1989) "Income Distribution and Redistribution: A Microdata Analysis for Seven Countries", *Review of Income and Wealth*, Vol. 35, pp. 107-131.

Organisation for Economic Co-Operation and Development (1990) *Employment Outlook*, Paris: OECD.

Roche, J. (1984) *Poverty and Income Maintenance Policies in Ireland*, Dublin: Institute for Public Administration

Rottman, D.B., D.F. Hannan and N. Hardiman, M. Wiley (1982) *The Distribution of Income in the Republic of Ireland: A Study in Social Class and Family-Cycle Inequalities*, General Research Series Paper 109, Dublin: The Economic and Social Research Institute.

Rottman, D. and M. Reidy (1988) *Redistribution Through State Social Expenditure in the Republic of Ireland 1973-1980*, Report No. 85, National Economic and Social Council: Dublin.

Townsend, P. (1979) *Poverty in the United Kingdom*, Harmondsworth, Penguin.

