

POVERTY, INCOME  
AND  
WELFARE IN IRELAND

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WELFARE IN IRELAND*

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## GENERAL SUMMARY

### *Objectives of the Study*

This is a study of poverty in Ireland, and the effectiveness of the social welfare system in reducing it. Although reducing or eliminating poverty is one of the main aims of economic and social policy, there is an extremely wide range of views about the extent and nature of the problem and how best to respond to it. The basic objectives of this study are:

- (i) to explore how poverty in a society such as Ireland is best thought of and measured;
- (ii) to present a range of new findings on low income and deprivation in Ireland; and
- (iii) to measure the effectiveness of the social welfare system in reducing poverty.

The study is based on a new data source of unprecedented richness specifically designed for such purposes, the Survey of Income Distribution, Poverty and Usage of State Services. This large-scale national household survey was carried out by the ESRI and jointly sponsored by the European Commission, the Combat Poverty Agency, and the ESRI itself. It produced a comprehensive and up-to-date database for the analysis of not only poverty and the social welfare system, but also other areas of public policy, notably the tax system and State-provided services such as health and education. This is one in a series of studies which will utilise these data.

Our Report on *Poverty and the Social Welfare System* in Ireland (1988), prepared for the Combat Poverty Agency, presented the first results from the analysis of this survey data. The present study builds on and develops that analysis in a number of directions. As in our earlier Report, we do not emphasise here a single measure of the extent of poverty in Ireland. Presenting our findings in that way would not reflect the extremely complex nature of the phenomenon and would be to some extent arbitrary. Rather, we concentrate on how much can be learnt about poverty and the effectiveness of anti-poverty policy even when we take into account the unavoidable uncertainty about where to draw a line dividing the poor from the rest of the population. Indeed, thinking in such hard and fast terms about "the poor" versus the non-poor may not be particularly helpful, since people will move in and out of poverty over time, and those just above any line we draw are probably not very different from those just below it.

*The Meaning of Poverty*

Having the bare minimum needed to survive is not enough to avoid being poor in a country such as Ireland — although it is obviously crucial in many developing countries. What people often think of as “absolute” needs in a developed country are by no means necessary for survival, they in fact reflect *socially determined* standards. Thus, poverty has to be seen in the context of the ordinary living patterns of the society, and is in that sense relative. The meaning of poverty therefore changes over time as living standards improve, and will be different in different countries. Many examples could be chosen to illustrate this — for example, hot and cold running water are now available in most Irish homes and considered a necessity, which would not have been true a generation ago.

A definition which is now widely used is that a person is in poverty when, due to lack of resources, he or she is excluded from the ordinary living patterns, customs and activities in the society. This is not a new definition, but brings out explicitly what had often been taken for granted in the past, i.e., that standards of adequacy are closely related to ordinary living patterns. It does not mean that the poor will always be with us: it is quite possible to conceive of a situation where no one is so far below the general standard of living that they are excluded from participating fully in the ordinary life of the community. Nor is poverty just the same as inequality: even if there were no poverty, there could still be a good deal of inequality between the wealthy and the rest of the population.

*Measuring Poverty*

While many different methods of drawing a poverty line have been formulated and used in other developed countries, in our view none of these is entirely satisfactory: there is no objective scientific method of setting “the” poverty line. In most previous Irish studies on poverty, as in many British ones, poverty lines have been based on the income levels provided by the social welfare system. These do tend to move broadly in line with other incomes, but have serious limitations as the basis for poverty lines. Most obviously, raising social welfare rates tends to increase rather than reduce measured poverty. A standard independent of the social welfare system is required, against which both trends in poverty and the effectiveness of social welfare can be assessed.

The approach on which most emphasis is placed in this study is the “relative poverty line” method, which calculates income thresholds as proportions of average income. While it does not tell the whole story, it provides an indispensable starting point for measuring trends in poverty over time and the characteristics of low-income households. Other approaches are also explored, and will be further developed in future — for example directly examining deprivation, looking at what different households have to do without. The relative poverty lines also

provide very useful benchmarks against which the success of the social welfare system in reducing poverty can be measured.

*Measuring Poverty Using Relative Poverty Lines*

Purely relative poverty lines are calculated as proportions of average household income, taking the greater needs of larger households into account. The choice of a particular proportion is largely arbitrary: here we employ three different ones, allowing us to highlight results which hold across a range of lines rather than depending on a specific cut-off point. In this way, income thresholds are calculated from the ESRI sample representing 40 per cent, 50 per cent and 60 per cent of average income. These will each vary with the number of adults and children in the household. For a single adult household the thresholds are:

- 40 per cent line: about £33 per week,
- 50 per cent line: about £42 per week,
- and 60 per cent line: about £50 per week,

all in 1987 prices (since that is when the survey was carried out).

The households in the sample are in fact found to be heavily concentrated in the rather limited income range spanned by the three lines. About 10 per cent of persons are in households below the lowest threshold, about 20 per cent are below half average income, and about 30 per cent are below the highest, 60 per cent threshold.

Although the method itself provides no basis on which to choose a particular threshold as "the" poverty line, some remarkably strong conclusions can be reached which hold across all three of these lines. For example, comparing them with 1973, there was a substantial increase in the numbers below each line by 1987. When we take into account not only the numbers below the lines but also how far they fell below them, a consistent increase in measured poverty between 1973-1980 and 1980-1987 is seen. There is an important difference between the two periods, though. In the 1970s incomes rose significantly in real terms, but between 1980 and 1987 average real incomes were stagnant. The rise in relative poverty in the 1980s must therefore have had a much greater impact on the living standards of the poor. This illustrates why in the short term changes in poverty using purely relative thresholds have to be seen against the background in which they are happening.

An in-depth comparison between Ireland and Britain using purely relative poverty lines reveals a higher proportion of the Irish population below a range of lines. Only more tentative comparisons with other countries are possible at this stage because of the limited data available. It is also difficult to know exactly how differences in average income levels, and in the services such as health and

education provided by the State, should be taken into account in making poverty comparisons across countries – and indeed in looking at changes over time.

### *Who Are the Poor?*

The advantages of using a series of poverty lines are again illustrated in analysing the characteristics of the households at low income levels. Certain household types are particularly likely to be found below each of the thresholds. Most importantly, households headed by an unemployed person face a very high risk of being in poverty, and make up a significant proportion of poor households. The fact that about one-third of all the households below half average income have an unemployed head reflects the historically high level of unemployment and the increasing importance of long-term unemployment. In 1973, by contrast, only about 10 per cent of households below half average income had an unemployed head.

The position of the elderly, on the other hand, has improved significantly in recent years. This is mainly because of the substantial increases in social welfare old age pensions, as well as the wider coverage of occupational pension schemes. As a result, although there are still a considerable number of old people at low income levels, the elderly as a group now face a relatively low risk of being in poverty.

The combined effect of these trends has been a sharp increase since 1973 in the risk of poverty for households with children, particularly for larger families. This is largely a reflection of the impact of increasing unemployment on families.

A significant proportion of those below the relative poverty lines in the sample are farm households. However, this is based on estimated farm incomes for 1986, which was a particularly poor year. Average farm incomes have increased substantially since then, though not all farms will have benefited to the same extent.

### *Measuring Deprivation*

The information gathered in the ESRI survey also allows us to look directly at the possessions and activities of the households in the sample. For example, we know whether a household has such items as an indoor toilet, bath, washing machine or fridge, and whether they are able to afford heating, a warm coat or new rather than second-hand clothes. We also asked respondents whether they thought each of these was a necessity. On the basis of this information, summary indices of deprivation are constructed. For example, we count the number of items, generally considered as necessities, which a household cannot afford.

The relationship between current income and these indices of deprivation is not a straightforward one. Other factors such as the flow of income over a longer

period, age, and assets owned (such as a house) also obviously influence living patterns. When the possessions of households at different income levels are examined, those at low current incomes are certainly more deprived on average. However at any given income level there are households which are quite different from one another in terms of these deprivation indicators — some high income households lack a substantial number of items or activities while some low income ones do not. This is similar to the results found in recent research in Britain and the US. It highlights *inter alia* the importance of going beyond a “snapshot” of people’s current income position to explore the dynamics of how they got there and how long they are likely to remain at relatively low income levels.

#### *The Social Welfare System and Poverty*

The impact of the social welfare system can be judged against two quite distinct standards. First, we can look at its success in bringing people up to the system’s own minimum income level. Secondly, we can see how successful the system is in alleviating poverty on the basis of income targets independent of the system itself. Both are examined in this study.

In assessing the social welfare system’s performance in terms of its own income standard, this is taken to be the rate paid by the safety net Supplementary Welfare Allowance scheme to families of different sizes and compositions. We know that not everyone falling below this safety net level is actually eligible for support — for example, those in full-time education or the self-employed. However the majority of those below the SWA rate do appear eligible for support under either SWA or other schemes such as Unemployment Assistance. These families are either not claiming benefits, or are receiving support but not as much as they would be eligible for on the basis of their current incomes as measured in the survey. While the reliability of the income information is clearly crucial here, the amounts of benefit apparently not being taken up are often quite substantial, and such non-take-up of benefits has been found in studies elsewhere. This seems to occur not just because of lack of information, but also because of the time, effort and perceived stigma attached to obtaining certain means-tested benefits. The Family Income Supplement scheme is generally thought to suffer from particularly serious non-take-up, and a detailed analysis of this scheme using the sample data confirmed this picture: further analysis will help to clarify whether or not recent efforts to improve the rate of take-up are likely to have a major impact.

#### *Social Welfare and Poverty Reduction*

Alleviating poverty is not the only objective of the social welfare system, but it is a central aim. Social welfare cash transfers are found to play a major role in providing income support to those with little or no other income, and eliminate



a very substantial proportion — 70 to 80 per cent — of the total gap between incomes before transfers and the relative poverty lines. This is lower than the effectiveness achieved in several other countries for which similar results are available though, a reflection of — among other things — the size of the problem with which the Irish transfer system has to deal.

A relatively high proportion of transfers goes to relieving poverty. The system does however contain quite a heavily differentiated structure of payment rates for those on different schemes — old age pensions compared with unemployment compensation, for example, and insurance versus assistance schemes. While progress has been made in rationalising the system in recent years, further streamlining might be possible if the desired overall balance between the various objectives — poverty reduction versus income replacement, for example — was clarified.

A comparison of contingency based payments — such as Old Age Contributory Pensions or Unemployment Benefit — with means-tested ones such as Non-Contributory Pensions and Unemployment Assistance shows that, contrary to the common perception, means-tested payments are not much more selective: quite similar proportions of expenditure under means-tested and non-means-tested schemes go to those near the bottom of the income distribution. In the case of Child Benefit, which is a universal payment, a significant proportion of the expenditure does go to the top half of the distribution. An increase in this benefit, financed by making it taxable, could shift resources from families paying tax at the higher rates towards non-tax-paying families.

#### *Implications for Policy*

The findings of this study provide a new and improved basis on which to formulate policy aimed at the alleviation of poverty. Most directly, the results pinpoint those who are at greatest risk of being on low incomes and allow responses to be targeted accordingly. Perhaps the most significant single finding in this context is the adverse effect of increased unemployment, which has dominated the overall trend in poverty, and the associated rise in the risk of poverty for children. This has occurred in spite of the fact that social welfare support rates themselves more than kept pace with other incomes, and highlights the major impact which success in significantly bringing down unemployment could have on the overall poverty problem.

This in turn means that, while the social welfare system has a vital role to play, the scale and changing nature of poverty are such that reliance on cash transfers will not be an adequate response. Poverty is not to be seen simply as a problem for the social welfare system: it is a deep-seated structural feature of the society, calling for a correspondingly wide-ranging response encompassing

education, training and manpower policies, industrial policy, and the design of the tax system.

*The Study in Context*

The present study represents a substantial contribution to our knowledge of the nature and extent of poverty in Ireland. Further analysis of the database will, however, serve to deepen and broaden the insights obtained. Future research will, for example, draw on longer-term measures of income and on a selective follow-up survey, in order to distinguish households which experience poverty on a long-term basis from those temporarily affected. Such analysis of the dynamics of poverty will help to elucidate the causal factors at work in the production and reproduction of poverty in Ireland. The overall research programme exploiting the potential of the database will also encompass several related areas. These include analysis of the cost, revenue, distributional and incentive implications of income tax and social welfare policy changes and the overall impact of State cash and non-cash transfers on the income distribution.

## Chapter 1

### *THE ANALYSIS OF POVERTY*

#### 1.1 *Introduction*

Poverty is an emotive word. Inherent in it is the notion of unacceptability, of an imperative to do something about the condition being described. It is also, however, an ill-defined and ambiguous term, both in common usage and in academic application. This means that research on poverty faces particular challenges from the outset.

Few would dispute the importance of such research, however, since the alleviation of poverty is generally accepted as one of the central objectives of economic and social policy. Views differ greatly, of course, about how this may best be achieved, and such differences are often related to widely divergent perceptions of the extent and nature of the problem itself. This relationship is not simply one of perceptions determining policy approaches: as Townsend has pointed out in this context, "policy prescriptions permeate conceptualisation, measurement and formulation of theory".<sup>1</sup>

This paper studies the conceptualisation and measurement of poverty and the effectiveness of the social welfare system in Ireland. It addresses these topics from perspectives not available to previous Irish studies, being based on a new data source of unprecedented richness specifically designed for such purposes: the Survey of Income Distribution, Poverty and Usage of State Services. This survey, carried out by the ESRI, gathered a wide range of information from a large scale national sample of households.

This household survey was jointly sponsored by the European Commission, the Combat Poverty Agency and the Institute itself, and carried out from late 1986 through to the autumn of 1987. Its central objective was to provide a comprehensive and up-to-date data base making possible research to establish the extent and nature of poverty in Ireland, the adequacy and effectiveness of the social welfare system, and the wider effects of public policy through not only the tax and social welfare systems but also State-provided services such as health, education and housing. This paper is one element in a programme of research which will analyse that broad range of topics on the basis of this new data base.

The report on *Poverty and the Social Welfare System in Ireland*, prepared by the

1. Townsend (1978) in Atkinson (1980), p. 298

Institute for the Combat Poverty Agency and published by the Agency in September 1988, presented the first results from this research. The present study builds on and develops that analysis in a number of directions. It deals in greater depth than was appropriate in the earlier Report with the conceptual and analytic issues which arise in measuring poverty. It devotes considerable attention to a full description of the data base and an assessment of its representativeness and reliability. In addition to looking at the numbers below a variety of poverty lines, new and more sophisticated summary measures of the extent of poverty are applied, and trends over time and comparisons with other countries developed. The characteristics and changing composition of those at low incomes are analysed in detail and related to macroeconomic developments and trends in the level and structure of social welfare payments. The effectiveness and efficiency of the social welfare system as a whole, and its major components, in alleviating poverty, are also analysed. Drawing on the results of earlier studies, the implications for the measurement of poverty of taking into account services such as education and health care provided free or at subsidised cost by the State are also considered.

The publication of our Report for the Combat Poverty Agency, together with a commentary by the Agency, evoked a wide range of comments and reactions. We address these, in so far as they relate to the methodology and interpretation of our analysis, at the relevant points in the present study. It appears worthwhile dealing at this early stage, though, with one notable feature, namely the fact that the Report for the Combat Poverty Agency was widely discussed as if its central conclusion was that one-third of the population was in poverty. Our Report in fact presented no such conclusion. Various poverty thresholds were applied, with varying numbers falling below them. On the basis of this (and other) evidence some — including the Combat Poverty Agency in its commentary accompanying the Report — have concluded that the highest of the poverty lines examined were the appropriate ones, and that one in three of the population was in poverty. This was a legitimate judgement, but by no means the *only* legitimate one. The ESRI Report itself emphasised that the extent of measured poverty is extremely sensitive to the exact definition and poverty line employed, and that no one method does or can be expected to command universal acceptance.

It is worth making clear at the outset that the present study, like our Report for the Combat Poverty Agency, does not arrive at a conclusion of the type “x per cent of the population is in poverty” or “there are y poor people in Ireland”. This is not because we wish to evade the issue: rather, it is our strongly — held view that presenting our findings in this way would not reflect the complex nature of the phenomenon of poverty and would inevitably entail a significant degree of arbitrariness. We set out the basis for this view in some detail in the body

of this paper. What may be emphasised here is how much can be learnt about the nature of poverty and the effectiveness of anti-poverty policy by the broader perspective adopted, rather than an exclusive focus on a particular cut-off between "the poor" and the remainder of the population.

### 1.2 *The Meaning of Poverty*

It is also important to briefly address at this stage the central issue of what the term "poverty" means. Establishing how the term is to be interpreted and used, on the basis of what can be learnt from research elsewhere and the analysis of a new range of data for Ireland, is one of the main objectives of the paper. Here, though, it is worth outlining the broad approach adopted. This is that poverty has to be seen not in "absolute" terms, but rather in the context of a particular society and the standard of living generally considered to be adequate there: it is in that sense relative.

In a society at Ireland's stage of development, being able to "keep body and soul together" — avoid starvation, or have a roof over one's head — is not enough to avoid being in poverty. In many less-developed countries starvation is of course a reality, and even in Ireland hunger and homelessness do exist. But the fact that most Irish people have shelter, and few die of starvation, does not mean that there is little or no poverty here. Compared with many of those living in the Third World, even the least prosperous in Ireland are quite rich: this is not however the standard of comparison which most people apply when they talk of poverty here.

It is thus widely accepted — not just in the academic literature but, implicitly, in the everyday use of the term — that what constitutes poverty is influenced by the general socio-economic conditions in the society being examined. What is considered adequate will change over time and differ across countries — we do not apply the standards of the 1880s to the 1980s, or of Ethiopia to Ireland. This may mean that poverty is difficult to define and apply in any particular instance, but that is not the result of "woolly" thinking: rather, it is a reflection of the nature of concept itself.

The idea that poverty should be measured in "absolute" rather than relative terms is often expressed, but betrays confusion when closely examined. When people talk about absolute necessities in a country like Ireland, they usually mean much more than a biological minimum of food, clothing and shelter, and are in fact reflecting *socially-determined* needs. This is inevitable, since as Kennedy (1989) puts it human beings are essentially social animals. What are talked of as absolute necessities usually turn out to refer to a rather frugal set of relative needs, reflecting perhaps the standards of 20-30 years ago.

A person may be considered to be in poverty when, due to lack of resources, he or she is unable to participate fully in the life of the community. This is not

a "new" definition, replacing absolute measures: if anything it makes explicit what had generally been taken for granted in the past. This is illustrated by a frequently quoted passage from Adam Smith's *The Wealth of Nations*, where he talked of "necessaries" as including "not only the commodities which are indispensably necessary for the support of life, but what ever the custom of the country renders it indecent for creditable people, even the lowest order, to be without". He gives as examples the fact that "custom has made leather shoes and linen shirts "a necessary" of life in England: "the poorest creditable person would be ashamed to appear in public without them". As Sen (1983) has emphasised, it is in the notion of *shame* that the core of the concept of poverty is to be found: the absence of resources puts people in a situation where they face a constant struggle to live with dignity in their society.

How then is poverty to be measured? The notion itself is imprecise, and no unique satisfactory measurement approach has been developed, as we discuss in detail in this paper. However, any measure has to reflect the fact that notions of "need", the ability to participate and avoid shame, change over time as the general standard of living rises, and differ across countries. Some would argue that measuring poverty from this perspective means that "the poor will always be with us", or that what is in fact being measured is inequality rather than poverty. This is not the case. It is quite conceivable that in a particular society no one would be so far below the general standard of living as to be excluded from participation in the ordinary life of that society. Furthermore such a society, in which poverty has been eliminated, could still involve substantial inequality in the distribution of income. Poverty and inequality, while related, are quite distinct concepts.

It could be argued that since the term "poverty" is imprecise and carries with it such a complex set of connotations, it would be better avoided entirely in a study such as this, with some more neutral word employed instead. While this might have certain advantages, in our view it would serve to obscure rather than clarify the issues involved. The layers of meaning attached to the term "poverty" are in fact its true value, reflecting the complexity and depth of the underlying notion. If the issues of real substance are to be addressed, we believe the most productive — if most challenging — approach is to explore the nature of the concept itself and, in doing so, employ the term.

This brief discussion is intended to serve as an introduction to the arguments put forward in the following chapters, where the issues which arise in conceptualising and attempting to measure poverty are considered in depth. First, the scope and content of the paper, and the way in which it is structured, are set out.

### *1.3 Content and Structure of the Paper*

The absence of a consensus on what poverty means and how it is to be measured is sometimes seen as an insurmountable obstacle in this area of analysis. This study emphasises how much progress can actually be made, how much can be said about the nature of poverty, the characteristics of the poor, trends over time, and the role of the social welfare system, even without agreement on precisely where a poverty line is to be drawn.

The methodological issues which arise in attempting to define and measure poverty must first be addressed, and these are the subject of Chapter 2. The variety of approaches which have been developed and applied internationally are discussed, and their strengths and weaknesses assessed. These include methods which derive poverty lines from budget standards; from social welfare support rates; from subjective views about adequacy; from indicators of living patterns and deprivation; and from incomes relative to the mean (or median) in the society. A range of other issues relating to measurement are also considered, such as the appropriate income concept, income recipient unit, and time period to be used, and the most useful summary measures of poverty.

Previous research on the extent and composition of poverty in Ireland is then reviewed in Chapter 3. The approaches to measuring poverty adopted in these studies, their main results, and the basis on which they were derived, are assessed and related to the methodological issues discussed in the previous chapter. This is intended to both highlight the importance of the methodological points made, and place the present study in the context of previous Irish research in the area.

The data on which the study is based, from the ESRI survey on Poverty, Income Distribution and Usage of State Services, are then described in some detail. Chapter 4 outlines first the design and content of the questionnaires, the selection of the sample, and the pattern of response. The post-sample validation of the results and adjustment to correct for possible biases are described. The representativeness and reliability of the data are discussed, in particular with respect to the key information on incomes. Income concepts and income recipient units to be used in the analysis are also described.

The results of applying to this sample several distinct approaches to the measurement of poverty are set out in the following chapters. Chapter 5 concentrates on the purely relative poverty line method, looking at the numbers falling below a range of relative income thresholds derived as proportions of average income in the sample (taking differences in household needs into account). Using this approach it is also possible to explore trends over time since 1973 — using data from the Household Budget Surveys carried out by the CSO — as well as some limited international comparisons. The importance of using aggregate poverty measures which are more sophisticated than simply counting the numbers below a poverty line — which instead also take into account the

*extent* to which people fall below the line — is emphasised and illustrated. The implications of using purely relative lines of this type in measuring poverty are also explored.

An alternative approach to deriving poverty lines, the subjective or consensual poverty line method, is discussed and applied in Chapter 6. This is based on the views about income adequacy and minimum income needs expressed by respondents in the sample. Two distinct variants of the approach are implemented, one of Belgian origin and the other developed in the Netherlands. While the results are useful as indicators of perceived financial pressures on those in different circumstances, it is questioned whether the method provides a basis on which to measure poverty as it is generally conceived.

The characteristics of low-income households are analysed in some detail in Chapter 7. The make-up of the households falling below a range of income thresholds is examined, and the probability of falling below these levels measured for various household types. Categories of household at particularly high risk of being at low income levels are identified, focusing particularly on the size and composition of the household, the age and sex of the persons in them, and on the extent and nature of their labour force participation. Changes over time in the composition of low-income groups, and in the risk of poverty for different categories, are also analysed.

The living patterns of those on low incomes are analysed in Chapter 8, utilising a variety of information gathered in the survey. The construction of deprivation indicators and indices using this information is discussed, and the relationship between incomes and such indicators in the sample examined. This represents an initial exploration of a topic to which considerable further attention will be given in the future. The potential provided by information of this type for analysing the implications of poverty, what it means in concrete terms to be poor, is emphasised. However, some scepticism is expressed about the prospects for deriving a poverty cut-off using this type of information — either in terms of income or of an index of deprivation itself — as some have suggested (notably Townsend, 1979).

In the survey on which this study is based, considerable detail was gathered not only on cash income received by individuals, including social welfare payments, but also on the utilisation of services provided free or at reduced charge by the State, such as education, health care and local authority housing. One of the major objectives of the wider programme of research of which this study forms an element is to examine these patterns of utilisation and the redistributive effect of State spending on these services. This represents a separate major exercise, and is our next priority. For the purpose of the present paper, we confine ourselves for the most part to a discussion of the particularly complex issues which arise in trying to take these non-cash benefits into account in measuring



poverty, in Chapter 9. Reference is made to what is known from the available studies of the redistributive effects of such expenditure, and some empirical results from our own survey on the topic of housing costs discussed.

The role of the social welfare system, its effectiveness in acting as a safety net and in alleviating poverty, are examined in the next two chapters. The first part of this analysis looks at the social assistance schemes which act as a safety net for those not eligible for other forms of support. The discussion in earlier chapters makes clear that using the rates of support provided by such schemes as the basis for a *poverty line* — an approach often used here and elsewhere — is quite unsatisfactory. However, quantifying the extent to which people fall below these income support levels is very important in a quite distinct context, namely the assessment of the effectiveness of the social welfare system in bringing people up to *its own* minimum income objective. Chapter 10 looks at the numbers in the sample falling below the rates of support provided by the Supplementary Welfare Allowance scheme. Of the people below that income level, those who are apparently entitled to, but not claiming, assistance are identified. The factors which may influence such “non-take-up” of support are discussed, drawing on research findings elsewhere. Those apparently not covered by any scheme, and falling through the net for that reason, are also examined.

The effectiveness and efficiency of the social welfare system in alleviating poverty, judged against independent standards rather than poverty lines based on the system’s own support rates, are analysed in Chapter 11. This involves first examining exactly where in the income distribution the recipients under the various schemes are located. The extent to which those below different poverty thresholds before receiving transfers are brought up to or above these thresholds is assessed. This allows the extent to which social welfare expenditure actually reaches those on low income, and how much it improves their situation, to be measured. The social insurance-based schemes and the means-tested social assistance schemes are compared, and the overall effectiveness and efficiency of the Irish system compared with the limited information available for other countries.

Finally, the main conclusions of the study are brought together in Chapter 12. This highlights the analytical approach to the study of poverty which we consider to be the most productive, learning from the different perspectives made available by our data and from a range of poverty thresholds. The considerable distance which this allows the research to go, deriving results which are *not* dependent on first obtaining agreement on precisely where “the” poverty line should be located, is emphasised. In particular, the relevance for policy of our findings on the characteristics of those on low incomes, linked with the results from the analysis of the operation of the social welfare system, is brought out.

The directions in which research in this broad area will be developed are also described.

#### 1.4 *The Study in Context*

It is important at this introductory stage to set the present study firmly in the context of the wider programme of research of which it forms an element. The objectives of that research are to provide a coherent and rounded picture of the nature of poverty and the forces at work in producing and transmitting it, the impact of State policy through direct cash transfers, the tax system and the provision of services, and the implications for incentives and behavioural responses, particularly in the labour market. This research will be able to use not only the unprecedented range of data in the 1987 Survey, but also the results of a limited follow-up survey just completed, which revisited about one-third of the households in the original survey. The latter will be invaluable in adding an extra dimension, allowing changes over time occurring within the same set of households to be analysed.

The present study opens up an area of critical importance for research and policy, addressing the major methodological issues and presenting a broad range of new findings. Further research will follow up the key areas it identifies, concentrating in particular on:

- (i) An in-depth analysis of the relationship between income and deprivation; measuring and explaining short-term transitions into and out of poverty, using data from the follow-up survey; and an analysis of inter-generational mobility using detailed information on socio-economic background, education and work experience gathered in the original survey.
- (ii) The operation of the tax and social welfare systems will be analysed through a model of these systems based on the sample households. This will permit the impact of various policy options on different household types and income groups to be estimated and assessed.
- (iii) The role and impact of non-cash transfers, principally through the provision of education, health care, and subsidised housing by the State, will be examined using information in the survey on utilisation patterns. The implications for the measurement of poverty and adequacy of cash transfers, and the overall redistributive effect of State policy, will be assessed.
- (iv) Labour market behaviour and incentives, in particular as they are affected by the income tax and social welfare systems, will be studied. Unemployment duration and spell repetition data in the original survey,

combined with labour force status changes between that survey and the follow-up, provide a unique resource for the analysis of such behaviour.

More will be said at the end of the paper about the way in which the research presented here will be developed. Having described the objectives of the paper and put them in the context of those of the broader programme of research which is underway, we now turn to the issues which the study must address in conceptualising and measuring poverty.

## Chapter 2

### *THE CONCEPTUALISATION AND MEASUREMENT OF POVERTY*

#### *2.1 Introduction*

As the introductory discussion in Chapter 1 made clear, the term “poverty” is an ill-defined and ambiguous one, both in common usage and in the academic literature. No single method of identifying “the poor” commands universal acceptance. It is therefore necessary to begin by discussing in some detail the issues involved in conceptualising poverty, and the variety of approaches to deriving a poverty line which have been applied. It is also important to consider some practical decisions which have to be made in measuring poverty, such as the most appropriate income concept, income recipient unit, and accounting period to be employed, as well as the actual measures used to summarise the extent of poverty.

Given the absence of a consensus on a particular methodology for setting a poverty line, the present study draws on a range of concepts and measurement approaches. This recognises the room for legitimate disagreement and uncertainty, and concentrates on what can be learned from the application of a number of different perspectives. This is illuminating, not only about the extent and nature of poverty, but also about the measurement approaches themselves. It also reveals, as we shall see, that a great deal can be said about the nature of poverty and the characteristics of the poor without having to concentrate solely on one particular poverty line or measurement approach.

The chapter begins with a brief review of the way in which thinking about the concept and measurement of poverty has evolved. This is followed by a discussion of the strengths and weaknesses of the main approaches to the derivation of a poverty line, in Sections 2.3 – 2.7, concentrating on those actually implemented in later chapters. The decisions which must be faced about the income concept, recipient unit, accounting period and adjustment for the needs of different households are then considered in Section 2.8. The main conclusions and implications for the study are brought together in Section 2.9.

#### *2.2 The Meaning and Measurement of Poverty*

It appears to be widely — though not universally — accepted that poverty in advanced societies is not to be conceived narrowly in terms of lack of sufficient resources to survive, to merely maintain physical health and efficiency. Such

an "absolute" conception of poverty is clearly still of critical importance in many less developed countries. In developed economies, though, ensuring that everyone has the absolute minimum — in terms of nutrition, clothing and housing, for example — though still relevant, would not generally be seen as sufficient to eradicate poverty.

What are often viewed as "basic necessities" in a developed economy in fact reflect socially determined needs. The implications, as the discussion in Chapter 1 spelt out, are that poverty must be seen and measured in the context of the particular society being examined, and is in that sense relative. The most influential discussion of poverty explicitly developing this relative basis has been produced by Peter Townsend. His widely quoted definition is that:

Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the type of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged, or approved, in the societies to which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities (1979, p. 31).

While the particular approach to measuring poverty which he implemented has given rise to a considerable debate, as discussed below, Townsend's general conception of poverty has been widely adopted. There are some dissenting voices, notably Sen, who argues that "ultimately poverty must be seen to be primarily an absolute notion" (1983, p. 153). Sen's approach is much more subtle than what he terms the simplistic absolute conceptualisation of poverty, absolute deprivation for him being framed in terms of *capabilities* rather than commodities. None the less, this appears to represent a minority opinion (though see also Ringen, 1987). Piachaud expresses the dominant view in stating firmly that "close to subsistence level there is indeed some absolute minimum necessary for survival but apart from this, any poverty standard must reflect prevailing social standards: it must be a relative standard" (1987, p. 148).

It is important to emphasise that recent research, notably that of Townsend, has, for the most part, served to make *explicit* the relative nature of poverty in developed societies, rather than to radically alter the concept of poverty being employed. In practice, earlier research on this topic rarely, if ever, took a strictly "absolute" approach, but introduced what amounted to relative elements in measuring poverty in a more or less *ad hoc* manner. For example, Veit-Wilson (1986) has recently argued that Rowntree, in his path-breaking early research on poverty in York, employed a concept of poverty which was a good deal more "relativistic" than has been appreciated. Another example is the US official poverty

line in use since the 1960s (see Sawhill, 1988). This is based on "absolute" nutritional requirements, but the income required to meet these requirements is estimated taking observed actual expenditure patterns into account, thus incorporating a relative element.

Before looking at particular approaches to deriving a poverty line and identifying the poor, it is worth noting that most of these are based on the — often implicit — view that poverty is an "all or nothing" phenomenon. The poor are distinguishable from the non-poor, and answering the question "how many are poor" is seen as the major objective of the exercise. This view is increasingly being questioned: some prefer to regard poverty as a matter of degree, best measured on a continuum from very poor to very rich. Whether or not the poor are "different", forming a distinct social group, has been and continues to be the subject of heated debate. For example, Piachaud (1981) argues that "The poor in Britain are worse off than others; but for the most part, they are members of society, not outcasts" (p. 421). Townsend, by contrast, rejects this view and emphasises the extent to which "the poor" are deprived of the conditions of life which ordinarily define membership of society.

From either perspective, though, there is value in examining the sensitivity of the results to precisely where the poverty line is located. If one views poverty as an "all or nothing" phenomenon, the fact that there is uncertainty over where to draw the poverty line makes it necessary to consider several distinct answers to the question. If one views poverty as a matter of degree, one may wish to use the lowest of the poverty lines to identify the very poor; the higher poverty lines can then be used to identify those who are at least on the margins of poverty. Thus, in the present study a range of poverty lines, based on a number of different approaches, is applied and results which are sensitive to the exact location of the poverty cut-off distinguished from those which are robust in this respect.

This is also in keeping with the general approach advocated recently by Atkinson (1987) and Foster and Shorrocks (1988), where poverty comparisons between two distributions are made while allowing the poverty line to vary. This explicitly takes into account the scope for disagreement which exists about the level and structure (the relativities between different house types, for example) of the poverty line, and produces results which are *not* dependent on securing consensus on a particular poverty line to be employed. As Atkinson (1985) argues, this leads to less definite answers but ones which should command a wider degree of support.

While a great deal of emphasis in the analysis of poverty has been given to what Sen has termed the "identification" problem — determining a poverty line and thus identifying the poor — increasing attention has recently been given to what he calls the "aggregation" problem — how the extent of poverty is to be summarised in an overall measure of poverty. Even assuming that a unique

satisfactory poverty line could be identified, focusing purely on the numbers below that line, the *number* of poor people, has been shown to have serious limitations. This "headcount" measure of poverty has been severely criticised, notably in the work of Sen (1976, 1979), on the basis that it takes no account of how far below the poverty line people actually are, and has a number of undesirable features. Among these are that it violates the "transfer axiom" - a transfer of income to a poor person from someone who is richer will not always reduce measured poverty (and may in fact increase it, if the richer person falls below the poverty line as a result of the transfer). Despite this, as Geary (1989) points out in a recent review, the headcount measure still dominates popular discussion of poverty; Sen's remark that the support it has received is "quite astonishing" is frequently quoted but does not seem to have dented this popularity.

Sen (1976) proposed a poverty measure which takes into account not only the number of people below the poverty line, but also the depth of their poverty. Following on his suggestion, alternative *aggregate* poverty measures have been put forward by, among others, Anand (1977), Thon (1979), Blackorby and Donaldson (1980), Clark, Hemming and Ulph (1981), and Foster, *et al.* (1984). (A useful review is given by Foster (1984).) In analysing the extent of aggregate poverty and trends over time in Ireland, we describe and apply the aggregate measures developed by Foster, *et al.* (1984), which have some particularly attractive features. This is the first time that aggregate poverty measures other than the headcount have been produced for Ireland. In analysing the effectiveness of the social welfare system, we also make use of the gap between people's incomes and the poverty line. The importance of going beyond the concentration on the numbers below a poverty line, in measuring poverty and assessing the impact of policy, is to be emphasised.

We now turn in the following sections to a discussion of the main approaches to setting a poverty line, attempting to identify "the poor", beginning with the "official" poverty line approach. (For a more detailed treatment of this material, see Callan and Nolan (1987a).)

### 2.3 The "Official Poverty Line" Approach

Much of the empirical work on measuring poverty in advanced societies, including Ireland, has taken as a starting-point the rates of income support offered by the social security system. Generally, the level of support provided by the safety net scheme or schemes has been taken as a benchmark, as an "official poverty line" in some sense. At its most basic level, this may rest simply on the inference that the State must expect recipients to be able to subsist on this income level. More generally, the underlying assumption, explicit or implicit, may be that these social security rates represent a consensus on the minimum level of income acceptable in the society, or an official expert view on that minimum.

This approach was adopted by Abel-Smith and Townsend (1965) in their pioneering work in Britain, and by many academic and official studies since then.

While the levels of support may initially have borne some relation to the costs of what were thought to be subsistence standards of diet, clothing, etc., both these levels and their adjustment over time are the product of a complex political process, influenced by many other factors. The "subsistence" concept involved is clearly relative, influenced by changing standards of living in society generally. Levels of support provided by the State may rise in line with, or more or less rapidly than, incomes in the economy, depending on a wide range of influences including the state of the economy, the demands on the system, and a variety of socio-political factors. It is, therefore, difficult to accept the status which either the "consensus" or the "expert" interpretation would accord these levels of support as "poverty lines".

Further, their use as a poverty line gives rise to obvious anomalies. One major conceptual problem is highlighted by the fact that while raising the minimum level of social security payments tends to raise the incomes of the poorest groups in society, it will tend to lead to a rise in measured poverty on this definition. The importance of this problem can be most clearly demonstrated by a *reductio ad absurdum*: the numbers in poverty could be almost eliminated by reducing the minimum level of official income support towards zero. This conceptual flaw gives rise to problems not only in the measurement of poverty at a point in time, but also in measuring changes in poverty over time and comparisons across countries. Changes in the extent of poverty over time can be masked or exaggerated by changes in the generosity of the safety net scheme, as can differences between countries. Thus, the basic measure is not one of poverty, but a combined measure of poverty and the generosity of the social security system's safety net.

Sen (1983) points to a further conceptual flaw in the "policy definition" of poverty, i.e., identifying the official minimum income standard with the level of income which society feels responsible for providing to all persons, and treating that as a poverty line. The level of official income support is determined by a wider political process which reflects a number of influences. These may include the state of the public finances, or wider considerations of feasibility. But, as Sen puts it, "the fact that elimination of some specific deprivation — even of starvation — might be seen, given particular circumstances, as infeasible, does not change the fact of that deprivation. Inescapable poverty is still poverty" (1983, p. 158).

Apart from these major conceptual difficulties, there are problems in the implementation of poverty lines based on official standards. There may, in many cases, be no legal minimum income for all guaranteed by the social security system, but rather a range of schemes catering for different contingencies. In



either case, the minimum income provided by the scheme(s) may not be unambiguously defined. For example, various additions may be made to basic rates to cater for one-off items or special needs, which has been one reason for the widespread use of 120 per cent or 140 per cent of the basic rates as poverty lines, for example, in Britain. This in turn leads to the highly unsatisfactory result that many of those actually in receipt of all the safety net transfers to which they are entitled are found to be below the "official" poverty line.

The application of an "official" minimum income line — leaving aside the practical problems of defining it — does, however, have a clear and indeed essential function. It allows those who are falling below the social security safety net to be identified and the reasons why explored. Thus, the performance of the social welfare system in meeting its own minimum income objective can be assessed. Those below the safety net income level are either not eligible even for the safety net, or are entitled to a social welfare payment but not receiving it. Cases of the latter type give rise to concerns that the safety net is not effective at what it tries to do; cases of the former type may indicate that there are significant gaps in the coverage of the safety net. For these reasons, later in this study (Chapter 10), we compare the incomes of the households in our sample with the safety net support which households of that type would receive, to see if they are below this level. We use this information to provide indicators of the performance of the social welfare system on its own terms, not as a measure of poverty.

For the measurement of poverty, official poverty lines are fundamentally inadequate. What is required is a basis *independent* of the social welfare system, which will allow us to examine the extent of poverty and the effectiveness of the system in reducing it, rather than merely judging the system on its own terms.

#### 2.4 *The Budget Standard Approach*

One obvious way of deriving an income poverty line is to define and cost a set of goods and services which are considered to be the minimum necessary. The income needed to cover this minimum is then the poverty line. This approach has a long history going back to Rowntree and what he termed in his early research "primary poverty". Drawing on nutritional studies, Rowntree specified a diet which was required to maintain physical effort. He then priced the components of this diet, and added elements for housing and clothing. (Veit-Wilson (1986) has emphasised that Rowntree's conception of poverty was broader than a pure subsistence one: in defining *primary* poverty at least, though, a subsistence standard — with some elaborations — was employed.) This approach formed the basis for the calculations made by Beveridge in his 1942 Report, which in turn strongly influenced the National Assistance rates of support when that scheme was set up in Britain in 1948.

In the US, there has also been a good deal of research employing budget standards, and this provided the original rationale for the official poverty line produced there since the 1960s. Poverty lines were based on the cost of a nutritionally adequate diet for households of a particular size and composition, as estimated by the Department of Agriculture. To allow for non-food expenditure, this food cost was multiplied by three for families of three or more, to reflect the fact that such families spent on average about 35 per cent of their income on food. (A higher multiplier was used for smaller families.) The poverty lines set in 1965 (see Orshansky, 1965) have been indexed to the Consumer Price Index, and thus are intended to represent the cost of a fixed basket of goods and services, which are believed to constitute the bare necessities of life (as Sawhill, 1988, puts it).

A number of key features of the budget standard methodology may be noted. First, it clearly requires that judgements be made as to what a particular family type's consumption of food, clothing, transport, etc., "needs" to be. In the case of food this may be based on nutritional information and research, but for other items such a "scientific" basis may be difficult to develop. Even for food, Townsend has emphasised the lack of precision in the estimates of "needs" coming from nutritional studies, and Atkinson has pointed out that "there is no one level of food intake required for subsistence, but rather a broad range where physical efficiency declines with a falling intake of calories and proteins" (1983, p. 226). For other items, and to some extent for food as well, "needs" are usually defined by the judgement of experts but based on what are in effect *social* rather than scientific criteria, and with a significant degree of arbitrariness.

The definition of the minimum necessary bundle of goods requires that necessities be identified and the required quantity specified. There is clearly enormous scope for disagreement about both. Going beyond this, though, is the question of the extent to which actual spending patterns in the community should be taken into account. Most budget standards have, in practice, made allowances for expenditures on items which are not considered necessities — or, equivalently, have defined necessities much more broadly than merely food, clothing and shelter to include, for example, some leisure activities. Here the scope for argument is obviously even broader. Further, to what extent should the standard take into account the fact that consumers do not, in fact, allocate their expenditure "optimally" across the items in the budget, so that having the minimum income will not generally lead to the "necessary" consumption?

Budget standard studies have tended to deal with these issues by increasingly employing data on actual household expenditure patterns. Thus, in effect, the level of income needed to provide the required consumption, *given* prevailing expenditure patterns, can be derived. The US official poverty line, for example, took into account actual consumption of food of particular types in arriving at

the nutritionally adequate "diet", and the actual ratio of food to other expenditure in deriving the overall income level required.

Going one step further, studies such as those by Statistics Canada (see Love and Oja, 1977) have based poverty cut-offs directly on the actual expenditure of lower income groups on food (or food plus clothing plus housing). These income groups in general spend a relatively high proportion of their total expenditure on food. Taking the average ratio of food to total expenditure over *all* households, the income level which would permit lower income groups to maintain their food expenditure but at that average ratio to total expenditure can be derived. (An alternative form of this food-ratio approach is to use the ratio directly as an indicator of poverty, defining a cut-off in terms of the ratio itself.)

This highlights what Townsend has identified as the weakest feature of the general approach, the element of circularity. Needs are, to a large extent, determined by actual expenditures of the poor. This remains the case even where expert judgements play a major role. These are themselves based on what are, in effect, largely social criteria rather than scientific ones, and make allowances for actual spending patterns. Poverty lines such as the US official one, derived through the budget standard approach, are often termed "absolute" ones, but in fact they cannot be seen as representing needs which are in any sense *absolutely necessary* for subsistence. The terminology employed thus gives a quite misleading impression of scientific objectivity in measuring an immutable set of "needs". As Sawhill (1988) puts it, "what constitutes a minimum subsistence income is clearly socially defined and will therefore vary across cultures and historical periods" (p. 1076).

The "absolute" versus "relative" poverty line debate is often perceived as contrasting a line based on a very frugal set of "bare necessities" with one based on a more generous set of requirements reflecting actual spending patterns and behaviour. In fact, at the core of the debate — and obscured by the terminology — is the issue of whether the poverty standard is to be *fixed* over time or to change as the general standard of living changes. The choice obviously has major implications: if a fixed standard (indexed only to take account of price changes) is used, then economic growth will leave a smaller and smaller fraction of the population below that standard. If the base period is sufficiently long ago, poverty with such a measure will generally be seen to effectively disappear.

Assessing change against such a fixed standard is clearly providing relevant information — a real improvement in people's living conditions is (presumably) being brought about by increasing real incomes. It none the less fails to capture what appears to be widely accepted as inherent in the notion of poverty, that the standards applied, being socially-determined, will *not* remain fixed as incomes rise and living patterns change over time. Thus, concentrating purely on such

fixed standards in measuring poverty is limited and unsatisfactory. However, they may provide information which is a useful complement to results derived from standards which do vary as living standards improve, which may be particularly relevant over a relatively short period. There seems no reason why such a fixed standard should necessarily be based on the budget standard approach, though: a purely relative line derived in the base period as half average income, for example, could be kept fixed in real terms and used as a constant real income standard. (We show later in this paper the relevance of taking this approach in comparing trends in Ireland in the 1970s and the 1980s.)

This discussion serves to undermine any claims which may be put forward for the budget standard approach as offering an objective and scientific method of defining "the" poverty line. Lines derived in this way may still have a role to play in the analysis of poverty and adequacy, though, while explicitly acknowledging that the "needs" involved are socially defined rather than "absolute". Piachaud (1987), for example, argues that for some groups — notably children — it may be possible to specify a set of "needs" on which there is a reasonable degree of social consensus. He carried out such an exercise for Britain (1979), and found that the cost of these minimum requirements exceeded the support given to most children under the Supplementary Benefit Scheme. For other groups the definition of what is "needed" is much more problematic. Even so, an approach such as that employed by Bradshaw and Morgan (1987) can be instructive. They costed a basket of goods, constrained by the overall expenditure patterns of low income households, to illustrate what can be *afforded* on social security income levels. This, they concluded, revealed that families on Supplementary Benefit could only afford "an extremely restricted and drab lifestyle" (p. 14), with food consumption deficient in nutrition and even this achieved only by severely limiting expenditure on other commodities.

The budget standard approach, therefore, represents a somewhat uneasy mix of absolute and relative conceptions of poverty, and does not in itself provide a satisfactory method of deriving a poverty line. It may, however, be of value in the analysis of the adequacy of social security support levels, and in particular in illustrating in a concrete and evocative way what it actually *means* to be on low income levels in a particular society.

### 2.5 *Relative Poverty Lines*

If poverty is to be seen in terms of the standard of living of the society under examination, one approach to deriving a poverty line is to frame it explicitly, and purely, in terms of relative income.

An extreme view sees poverty as synonymous with inequality, and would lead simply to the identification of bottom groups in the income distribution — for example, the bottom 20 per cent — as "the poor" (see Miller and Roby, 1971).

In this case the proportion of the population in poverty cannot rise or fall, but we can examine the position of this group *relative* to the rest of the distribution, and see whether this is improving or disimproving.

However, this is *not* the more usual way of implementing the purely relative poverty line approach, and most analysts would continue to see poverty and inequality as distinguishable. Customarily, the relative poverty line is set at a particular percentage of mean or median income. With a line of half mean income, for example, relative poverty can now rise, fall, or indeed be eradicated entirely. The general rationale behind this approach is that those falling more than a certain amount below the average or usual income level in the society are unlikely to be able to participate fully in the life of the community.

This relative poverty line approach has been adopted in a number of studies by the OECD (1976) and the EC Commission (see, for example, Final Report on the First Programme to Combat Poverty (1981), O'Higgins and Jenkins (1988)). Other cross-country analyses using this approach include Smeeding, *et al.*, (1988) and Buhman, *et al.*, (1988); these use the Luxembourg Income Study data-base, which has attempted to bring together data sets for different countries which are harmonised, to the greatest extent possible, in terms of their coverage and definitions. Single country studies applying relative income lines include Ringen (1987) for Sweden. This approach also provides the basis for the new official British statistics on low incomes, introduced in 1988, replacing a series which had used the Supplementary Benefit support rates as the benchmark.

Some of the problems with adopting a purely relative approach in this way have been highlighted by Sen (1983). Any improvement in living standards of low income groups which are shared by the rest of the population are discounted. Likewise, a general decline in prosperity, even if it leads to a lot of additional people in misery, will not show up as an increase in poverty if the relative picture has not changed. These measures may therefore look more plausible in situations of growth than contraction.

There is a considerable diversity of views, among those who view poverty primarily in relative terms, about the precise nature of the relativity concerned and therefore the extent to which a purely relative income approach is satisfactory. Most would presumably be much less happy with its application over a period of recession than growth. Even in a steadily growing economy, do socially-perceived "needs" necessarily rise *pari passu* with average incomes? Clearly, considerable care needs to be exercised in applying the methodology to specific situations, and it may be more suitable for some than for others. It does have the considerable appeal of simplicity and transparency: it yields results which can be readily understood and serve at least as a starting point for the analysis of poverty, the relative position of low-income groups, and the composition of

these groups. This may be a particularly useful point of departure for comparisons across countries or over time, for example.

Even if a purely relative conception of poverty was accepted, though, the method would not produce a unique poverty line because, quite simply, the choice of cut-off is arbitrary. Most applications have used 50 per cent of mean or median income, but there is no firm basis for the selection of any particular ratio to serve as "the" poverty line. In the present study, we apply a number of different cut-offs derived using the purely relative method, and examine the sensitivity of the results. It is particularly important in the case of this approach that the degree of arbitrariness be acknowledged and its implications explored.

### 2.6 *Consensual Income Poverty Lines*

The views and perceptions of people in the society are increasingly being taken into account in the analysis of poverty. One possible approach to identifying the poor, of course, is to simply ask people whether they consider themselves to be "poor" or have an income insufficient to cover what they regard as necessities. This purely *subjective* approach, while it yields results which are of some interest, has major limitations as a basis on which to frame a poverty line. Individuals may feel deprived while on an income above the average, while some of those near the bottom of the distribution may have very modest expectations. As Townsend emphasises, while feelings of deprivation are undoubtedly an important phenomenon in themselves, concentrating purely on how people see their own situation obscures some essential elements of what is generally conceived, however imprecisely, as poverty.

Recently, though, views in the population about minimum income requirements or minimum "needs" have been used in a number of studies as the basis for poverty lines which are intended to reflect a *social consensus*. Through surveys, respondents are asked to state what they consider to be an adequate minimum income, or to specify a list of items which they view as necessities. Poverty lines may then be derived from these responses, in a number of ways. Such poverty lines have been termed "consensual" (see Mack and Lansley, 1985; Walker, 1987; Veit-Wilson, 1987). (Some researchers have described them as "subjective", but it appears more satisfactory to reserve that term for the analysis of people's views about whether they *themselves* are poor/deprived, as discussed above.)

Those developing this approach have argued that it allows "the people" rather than experts to decide where the poverty line should be. Two distinct approaches have been used. The first, pioneered by researchers at Leyden, asks respondents directly about the minimum *income* level they regard as necessary. Cross-country studies applying this method have been completed by this Dutch team, and a

sophisticated methodological framework grounded in utility theory developed (see Goedhart, *et al.*, 1977; van Praag, *et al.*, 1980; van Praag, *et al.*, 1982; Hagenaars, 1986). A somewhat simpler variant relying on the same key survey responses on income has also been applied by Belgian researchers (see Deleeck, 1989). Both these variants are applied in the present study, and a detailed description of their methodology is given in Chapter 6.

The second consensual approach is based on views, not about income but rather about "necessities", which items and activities are regarded by respondents as necessary to avoid deprivation. The poor/non-poor may then be distinguished either directly in terms of absence of "necessities", or through the derivation of an income poverty line from the correlation of income with the achievement of this living standard. Mack and Lansley, in a composite of these methods, specify a cut-off directly in terms of an index of deprivation based on possession/absence of specified items, but adjust the results to exclude from "the poor" those high income households with high deprivation scores, and include certain low-income households even though they have low deprivation scores.

A number of difficulties with the consensual approach have been raised, both at a conceptual level and in terms of implementation. At a general level, Townsend has argued that: "Perceptions which are filtered through, or fostered by, the value or belief systems of sectional groups, the state or whole communities can never be regarded as sufficiently representative of 'reality out there'." (1985, p. 660). He therefore stresses the need for forms of "objective" social observation, investigation and comparison. Piachaud (1987) also points to what he terms "inescapable conceptual problems" with the income approach, including the fact that the "consensus" represents a majority view of the minimum needed which is in effect a prescription *for others*, which may also differ from the level taxpayers are willing to provide. If the deprivation indicator approach is taken, what allowance is to be made for expenditure on non-necessities, and what basis is there for choosing a particular cut-off? Even more fundamentally, there may in fact be no social consensus: different groups may have quite different views, and this may merely be masked by the derivation of an overall "average" of some kind.

The consensual approach thus has severe limitations as a basis for deriving a particular poverty line. However, it clearly has a great deal to offer in terms of the analysis of perspectives and attitudes towards income, poverty, necessities and life-styles. In conjunction with other approaches, it may, therefore, make a valuable contribution to the understanding of poverty and its meaning.

### 2.7 Deprivation Indicators

Another major element in recent research on poverty has focused directly on patterns of living and deprivation. This stems from Townsend's in-depth research

in Britain which aimed at developing indicators of deprivation, that is items or activities which are socially prescribed necessities. Taking a range of such indicators, an overall index of deprivation may be specified. Townsend then — controversially — related this deprivation index to incomes in his sample, and suggested that an income “threshold” may exist below which withdrawal from participation “escalates disproportionately”. This income level then serves as an income poverty line.

This approach is to be distinguished from the consensual deprivation indicator method discussed in Section 2.6, in that the items or activities to be considered as necessities are not selected on the basis of people's views. Rather, they are intended to represent the “objective” reality of the customary pattern of activities and living conditions in the society. This inevitably involves a considerable degree of judgement on the part of the researcher. This has been criticised sharply, for example, by Piachaud (1981 and 1987); Mack and Lansley (1985) and Veit-Wilson (1987). Veit-Wilson, for example, questions the justification for according the researcher this privileged status: it appears, however, to be consistent with the clearly stated objective of Townsend's analysis. The detailed criticisms of the rather *ad hoc* way in which the deprivation indicators have been selected do have considerable force, however.

One major element in the response to Townsend's work emphasised that observed differences in living patterns may be attributable to differences in tastes rather than resources. One method of taking this into account, employed by Mack and Lansley, is to ask survey respondents not only whether they do or do not have a given item or participate in a given activity, but also for those who do not, whether this is because they cannot afford to do so. While this is of some assistance, such responses cannot always be taken at face value. Some people may be embarrassed to admit that they cannot afford a particular item, or their “choice” to do without it may be highly constrained. Conversely, some people may state they are unable to afford necessities while at the same time spending on non-necessities. These considerations led Mack and Lansley, for example, to also take income levels into account, though in an arbitrary manner, in determining whether the lack of an item was an “enforced” one.

Apart from the selection and interpretation of the deprivation indicators, most of the criticism of Townsend's findings has focused on the question of the income “threshold”. The difficulties in specifying a cut-off between poor and non-poor in terms of a score on the deprivation index have already been mentioned, and Townsend did not attempt to do so (though he did suggest that a score of five or six on his 12-item index was “highly suggestive” of deprivation). Rather, he relates deprivation scores to income (adjusted to take differences in household size/composition into account), and tentatively identifies an *income* threshold below which withdrawal from participation escalates and people are “disproportionately



deprived". This level was at about 140 per cent to 150 per cent of the Supplementary Benefit rate of support.

The actual procedure adopted by Townsend in identifying this threshold has been subjected to considerable criticism, notably by Piachaud (1981) and Mansfield ((1986). Townsend did not employ any statistical tests, relying on a graphical representation of the income/deprivation relationship. Desai (1986) took the data used by Townsend, as well as that of Mack and Lansley, and using regression techniques, claims to identify a break in the relationship between income and deprivation score, again at about 150 per cent of Supplementary Benefit level. His results, in turn, have been rejected by Piachaud (1987), on the basis that the relationship between income and deprivation is misspecified. Without detailing the technical issues involved in the debate, it is clear that the proponents of a threshold have as yet failed to convince.

This is not merely a detail but is critical to the derivation of a poverty line in Townsend's approach. Without such an income line, we are left with a measure of deprivation — in terms of the score itself — but no cut-off distinguishing poor from non-poor. It is, of course, possible to try to derive a cut-off in terms of the score rather than income, as Mack and Lansley do, but this runs counter to Townsend's emphasis on the centrality of the *resource* constraint and its identification. It also appears likely to involve a significant degree of arbitrariness in the selection of a particular deprivation score.

In a development of Townsend's approach — and using his data — Desai and Shah (1988) construct a more sophisticated deprivation measure and look at the influence on it of variables such as income, family size, location and wealth. On the issue of the income threshold, they state that their results may be suggestive of such a break but in their view not much should be made of this feature. They emphasise that current income is found to be not the only, or even the major, determinant of relative deprivation.

In sum, then, the analysis of patterns of living and deprivation is clearly of great value in illuminating the nature and meaning of poverty. It may also, with care, serve as a basis for measurement of the intensity of relative deprivation. This may not, however, allow a clear cut-off between poor and non-poor to be derived, either in terms of income or of deprivation indicators themselves.

### 2.8 *Other Measurement Issues*

Having critically reviewed the main approaches to setting a poverty line, some important issues of definition which arise in attempting to measure poverty must also be considered. These relate in particular to the choice of income concept, accounting period and recipient unit. The choices made may substantially influence the results, and the issues involved cannot be regarded as merely

technical. These issues are addressed in, for example, Atkinson (1985), Sawhill (1988) and are reviewed in Geary (1989).

### *Income Concept*

Most of the approaches to measuring poverty we have reviewed concentrate on specifying an income poverty line, and comparing household resources with this income line. (The exceptions are the direct measurement of deprivation and subjective assessments by people of their own poverty status). In measuring resources, common practice is to concentrate on *current disposable income*. Some have argued that expenditure in a particular week may be a better measure of resources than income, given the difficulties in measuring income adequately. However expenditure is in fact also difficult to measure with precision, and is conceptually distinct from resources available for consumption without depletion of savings or other assets, the Hicksian definition of income. The explanations for the observed differences between income and expenditure, discussed in Chapter 4, merit analysis, but trying to measure income itself and thus focus on resources constraints in measuring poverty has been by far the most widely-used approach.

Disposable income is generally defined as income from work and property plus social security cash transfers and minus income tax and social security contributions. The question arises as to whether superannuation contributions should be included in the disposable income; they are not available for consumption, but do confer entitlements for the future. Broadly speaking, though, the most common procedure is to concentrate on income after income tax and social security contributions are deducted.

This clearly represents a rather narrow measure of economic well being and command over resources in a number of respects. The first issue which arises is the treatment of assets. While income streams from assets — such as rent, interest and dividends — are included in disposable income, assets may also affect consumption potential without giving rise to cash income. The most important example is housing: those who own their own houses clearly may have considerably greater consumption potential on a given income than people on the same income who must pay for housing. The implicit rent on owner-occupied housing may be imputed and added to the cash income to take this into account, though this is subject to valuation problems. Another approach is to focus on income net of housing costs for all, though this is also problematic since differences in housing expenditure will reflect differences in consumption choices as well as constraints. The same conceptual problem arises with assets such as cars and other consumer durables.

The second, and conceptually considerably more complex, issue is the treatment of non-cash benefits. Education, health care, housing, food, fuel, and

other goods and services are frequently provided free or at subsidised prices by the State. How are these to be taken into account in assessing command over resources and making comparisons between those who do and do not receive the benefit in question? Similar issues arise with benefits provided by employers, including free or subsidised meals, insurance, travel, share options, etc. Clearly such free or subsidised goods/services affect economic well-being, but it is far from obvious how they are best to be treated. A good deal of attention has been paid to this problem in the US, and the difficulties involved have been illustrated by the fact that ten alternative poverty estimates have been published by the US Bureau of the Census, involving different choices about which non-cash benefits to include in income and how to value them.

The issues involved are set out in some detail later in this paper (Chapter 9), and it may suffice at this stage to focus on the example of medical care, which as Geary (1989) notes is a particularly difficult area. If the actual market value of health care received is imputed as income, then the sick will appear better off than the healthy. The value to people entitled to care can instead be allocated as a benefit to all those covered by the scheme, valued at the appropriate insurance premium. However, such medical insurance cannot be used to buy other goods, and thus does not represent command over resources in the same way as cash — one could have cover for medical treatment accorded a high value and still not be able to buy food, clothes or housing. The value that recipients themselves place on the insurance could be used instead, but it is extremely difficult to estimate satisfactorily.

These issues have attracted a great deal of attention in the US but much less in Britain, and it is important to note the institutional and other factors underlying this contrast. In the US, in-kind benefits such as health care and food are largely targeted on those at low incomes. In Britain, health care is available to all through the National Health Service, education is also available from the State, and there is little emphasis on the direct provision of food. In measuring poverty in Britain, then, the most common procedure is to compare cash income with a cash poverty line derived from social security support levels, with the implicit understanding that the costs of health care or education do not have to enter on either side of the equation — resources or “needs”. In the US, on the other hand, health care must be paid for by most people and does affect the calculation of the official poverty line. (As described in Section 2.4 above, this is based on the cost of the food budget multiplied by a factor to take into account the “average” proportion of spending going on other items, and these other expenditures will include medical costs — whether insurance or direct costs of care). Thus both institutional structures and the exact method of deriving the poverty standard itself will influence the way in which income is best measured and the appropriate treatment of non-cash benefits.

*Accounting Period*

Apart altogether from deciding what should be included in income and how it should be measured, another key choice is that of accounting period. Quite different results may be produced, depending on whether the focus is on income in a particular week, over a year, or over a number of years. Recent US evidence from the Panel Study of Income Dynamics (PSID) has shown considerable mobility into and out of poverty from year to year, while the Survey of Income and Programme Participation has allowed the difference between monthly and annual incomes to be measured. The work of Bane and Ellwood (1986) using the PSID has been particularly important in distinguishing the long-term poor from those moving into and out of poverty on an annual income basis, and identifying some of the factors at work.

Clearly there is no "correct" period: different accounting periods allow different questions to be addressed, short-term poverty is of interest in itself even if many of those who experience it move in and out of poverty over a longer period. The availability of new data sources has undoubtedly led to a realisation of the importance of focusing not only on the short-term situation of individuals and families, but of setting this in the context of experience over a longer period. Measuring and trying to explain the dynamics involved is crucial to understanding poverty.

Even in concentrating on short-term poverty, questions arise to the appropriate accounting period. For particularly variable income sources such as self-employment, income in the last week may be quite unrepresentative even of income over a month or two, and may therefore not be the dominant influence on consumption possibilities. Even for employees, the most recent wage may be influenced by special factors and not be representative. It is thus common even when the focus is on weekly income to measure self-employment and investment income over a longer period, often a year, to smooth out fluctuations. "Normal" or "usual" wage is also often gathered in surveys as well as last pay and may be useful for some purposes.

*Recipient Unit*

Difficult questions also arise as to the most appropriate income recipient unit to use in analysing poverty. Clearly the individual is not suitable, because many people — notably children — share in the income/consumption of a wider unit. The choice is generally seen as one between the family and the wider household unit. The family in this context is usually taken to be the nuclear family of a single person or couple with dependent children, while the household is more loosely defined, usually as a group of individuals — who may or may not be related — living together and sharing common catering arrangements. A household may thus consist of, for example, a couple with adult children who

are at work, an elderly person living with married son/daughter and his/her children, or a brother and sister living together.

The key issue, in the context of measuring poverty, is the extent of income sharing which takes place within the unit. We do not wish to count as poor someone who, though in receipt of little or no income directly, has access to income from another member sufficient to bring them above the poverty standard. The major problem is that little is known about actual patterns of income sharing, which in any case probably vary widely, making it hazardous to draw general conclusions about a particular unit being most appropriate. It does appear that significant inequalities within families and households exist (see for example Pahl, 1983), and this may be beginning to receive more attention in the literature. (Information gathered in our follow-up survey will enable this topic to be studied for the first time in the Irish context, as discussed in Chapter 12).

No clear choice between family and household as recipient unit, applying to all situations, may be made. For some purposes one may be obviously more appropriate — in examining the operation of the social welfare system, for example, it may be useful to employ the unit on which the system itself is based, which is broadly speaking the family. For other purposes, it may be necessary to use both household and family units, and assess the sensitivity of the results to the unit chosen.

## 2.9 *Conclusions*

In this chapter, the meaning of "poverty" and the main approaches to measuring it have been discussed. The relative nature of the concept, being necessarily based on socially-defined needs rather than scientifically-determined "absolute" ones, was emphasised. The strengths and, perhaps even more so, the weaknesses of each of the main methodological approaches to setting a poverty line were assessed. This served to bring out the fact that no entirely satisfactory and convincing method of drawing a unique poverty line is available. Many would argue, indeed, that adopting an "all or nothing" approach — people are sharply categorised as poor or not poor — is not appropriate: if reality is better described as a continuum from very poor to very rich, drawing such a cut-off will necessarily involve a significant degree of arbitrariness. Piachaud (1981) has likened the search for an objective or scientific method of setting a poverty line which could command universal acceptance to the quest for the Holy Grail; given that the Grail was eventually found, a more appropriate analogy might well be the search for the Philosopher's Stone which would turn base metal into gold.

The approach adopted in the present study will be to explicitly acknowledge the uncertainty and absence of consensus on where to locate a poverty line; it will show that without concentrating on a particular line, a great deal may be

achieved in analysing the nature and meaning of poverty, the characteristics of those in or on the margins of poverty, and the effects of policy aimed at alleviating poverty. Indeed, by examining the sensitivity of particular findings to the precise location of the poverty line, considerably more can be learnt. This general approach is very much in the spirit of that advocated in recent papers by Atkinson (1987, 1988) and Foster and Shorrocks (1988). They argue that the diversity of possible judgements about the specification of the poverty line and the choice of poverty measure should be acknowledged and taken into account in the measurement procedures adopted. While this may permit less all-embracing answers, it does offer the prospect of unambiguous conclusions in certain circumstances. Such conclusions, holding across a variety of poverty lines and measures, can then command much more widespread acceptance than those which are based on a particular line and measure. Perhaps equally importantly, ambiguous results can be recognised as such.

The data available in the ESRI survey are extremely unusual in actually allowing a number of different approaches to deriving a poverty line to be implemented. Echoing Piachaud (1987), while each has its limitations, each has something important to contribute. The study therefore applies the relative poverty line approach and a number of variants of the consensual method, and also looks at deprivation indicators and style of living. In addition, although the "official" poverty line method is not used because of its conceptual flaws, safety net social welfare support rates are used as a standard against which the success of the system in meeting its own objectives is assessed.

In measuring poverty, the analysis also takes into account the limitations of the traditional summary measure, the "headcount" of people below a poverty line. Recently developed aggregate measures which also take into account the distance people are falling below the line are thus also applied.

The income concept, accounting period and recipient unit to be used in the analysis also raise important issues, as discussed in this chapter, and the approaches adopted in this respect in the present study are set out in Chapter 4, which describes the data base and concepts employed. First, to put the study into context, previous research on the measurement of poverty in Ireland is reviewed in Chapter 3.

## Chapter 3

### *PREVIOUS RESEARCH ON THE EXTENT OF POVERTY AND COMPOSITION OF THE POOR IN IRELAND*

#### *3.1 Introduction*

In this chapter we review previous research on the extent and nature of poverty in Ireland. The approaches to measuring poverty adopted in previous Irish studies, their main results, and the basis on which these were derived, are outlined and assessed in the light of the conceptual and methodological issues discussed in Chapter 2. This serves to highlight the relevance of the points made in that discussion, and place the present study in context.

The chapter begins with an overview of the major studies, their approaches and their central results. Section 3.3 deals in greater depth with the poverty lines used in these studies. Section 3.4 discusses the equivalence scales, and Section 3.5 the definitions of income and recipient unit they employed. Section 3.6 summarises the main findings of this research on the nature and composition of poverty in Ireland. Section 3.7 brings together the main implications arising from this review for the present study.

#### *3.2 Recent Research on Poverty in Ireland*

The key Irish study in what has often been termed the "rediscovery of poverty" was O Cinneide's presentation to the 1971 Kilkenny Conference on Poverty (published in *Social Studies*, 1972). This set out to measure the overall extent of poverty, and had, of necessity, to piece together information from a variety of sources. These included administrative statistics on the numbers in receipt of various social welfare payments, and data on earnings in different sectors from the Farm Management Surveys, the Census of Retail Distribution, and the Census of Industrial Production. These were combined with data from the 1966 Census on the total population in such categories as the old, widows, farmers, the self-employed, etc.

In deciding on a poverty line, O Cinneide compared the rates of support payable under the Unemployment Assistance (UA) and Unemployment Benefit (UB) schemes in the Republic and the Supplementary Benefit (SB) scheme in Northern Ireland. On this basis he set a line close to SB level, which was considerably above UB (and even more so UA) for most family types. On the basis of the piecemeal data, together with various assumptions, he concluded

that at least 24 per cent of the population in 1971 had income below this poverty line.

O Cinneide's study, and the papers which accompanied it at the Kilkenny Conference, excited a great deal of interest. In a later paper (O Cinneide, 1980) the results were updated to 1975, using a similar variety of data sources to estimate the numbers in different groups below a particular income level. In this case the overall composition of the population was taken from the 1975 Labour Force Survey results. The poverty line used on this occasion was basically the 1971 line adjusted for price increases between then and 1975, and further increased by 50 per cent to take into account the results of an EEC attitude survey on the minimum income required "to enjoy a non-poor way of life". The conclusion was drawn that about 27 per cent of the population were below this poverty line.

O Cinneide's work, while path-breaking, was significantly limited by the lack of micro-data permitting an individual's income from different sources, and the incomes of various members of the same household, to be linked. The first data source which provided information on income from all sources on a household basis, based on a national sample drawn from both urban and rural areas, was the 1973 Household Budget Survey (HBS) carried out by the CSO. This was the basis for studies by Roche (1980), summarised in Joyce and McCashin (1982), Fitzgerald (1981) and Rottman, Hannan, and Hardiman, Wiley (1982) which looked at the extent and nature of poverty in the 1973 HBS. (By special arrangement with the CSO, ensuring the confidentiality of the responses, these studies carried out analyses of the household-level data which would not have been possible from the published reports.)

Roche's (1980) analysis applied a number of poverty lines, which were the UA rates payable from mid-1973, and 120 per cent and 140 per cent of those rates. It will be clear from the review in Chapter 2 that, in focusing on poverty lines derived from social welfare support rates and multiples of these rates, Roche followed a procedure frequently adopted in British studies since Abel-Smith and Townsend's (1965) seminal work. The percentage of households in the 1973 HBS found to be under these three lines was 10 per cent, 15 per cent and 23 per cent, respectively, with these households containing 8 per cent, 10 per cent and 21 per cent, respectively, of the persons in the sample. Roche also looked in some detail at the composition of these below each line.

Fitzgerald (1981) used the 1973 HBS results to analyse the income going to households towards the bottom of the income distribution. She focuses on the bottom 20 per cent and bottom 30 per cent, with incomes adjusted for differences in household size and composition. Looking at the bottom 30 per cent and up-rating the incomes to 1980 prices, she notes that they received less than the old-age pension payable to a couple at that date:



The standard of living obtainable on social welfare pensions today corresponds roughly to our current perception of what it means to be poor. By that definition about 30% of households in 1973 could be regarded as poor (p.18).

The bottom 20 per cent in the HBS had incomes of three-quarters of this level or below. Fitzgerald also examined data on the numbers in receipt of various types of social welfare payments, attempting to identify those who were dependent on these payments long term with little or no other income. This led her to conclude that "about one in five" of the population in 1980 depended on social welfare for their principal long-term source of income, representing about 700,000 people.<sup>2</sup>

Rottman, Hannan, *et al.*, (1982) concentrated more on analysing the composition of the poor, particularly in terms of class and family cycle factors, rather than on arriving at a precise estimate of the numbers in poverty. A range of poverty lines was adopted, based on the prevailing UB rates, with results for the number of households in the 1973 HBS at or below the UB level, between 100 and 120 per cent, 120-140 per cent, etc. The results showed 7 per cent of households at or below the UB level, and 20 per cent at or below 140 per cent of UB, the latter being the poverty line to which primary attention is given. Poverty was placed explicitly in the context of the overall level of inequality in the distribution of income and resources, the main focus of the study.

While small-scale Household Budget Surveys were carried out in urban areas only during the 1970s, the second full national survey was in 1980. This formed the basis for Roche's (1984) detailed study of poverty and trends since 1973. To ensure comparability with his earlier study, the three poverty lines used there (i.e., 1973 UA rates and 120 per cent/140 per cent of these rates) were up-rated to 1980, taking into account the increase in prices and in real national income. The analysis of the 1980 HBS then showed a substantial fall in the numbers below these thresholds compared with 1974, with 4 per cent of households below the lowest line, 7 per cent below the middle one, and 12 per cent below the highest line. (Our own analysis of the 1973 and 1980 HBS data leads us to question this conclusion, as discussed later in this chapter and in Chapter 5).

The main features of these studies of the extent of poverty in Ireland are summarised in Table 3.1. This highlights the very considerable variation across

<sup>2</sup>The basis for the "one million poor" referred to (albeit with a question mark) in the title of the book in which this paper appears, is not clear. Kennedy (1981) refers to both this 700,000 people dependent on social welfare long term given by Fitzgerald, and the "30% of all households in poverty" also estimated by Fitzgerald. The number of people in these households is not calculated, however. Both Kennedy and Fitzgerald also refer to the fact that nearly one million people (including dependants) were in receipt of a social welfare payment each week: of course, not all would be dependent on social welfare for their "principal long-term source of income".

Table 3.1: *Main Features of Studies Quantifying the Extent of Poverty in Ireland*

<i>Study</i>	<i>Year to which Results Refer</i>	<i>Main Data Source</i>	<i>Income Concept</i>	<i>Income Recipient Unit</i>	<i>Estimated Equivalence Scales</i>	<i>Poverty Line</i>	<i>Percentage Poor</i>
O Cinneide (1972)	1971	Administrative data	Gross	Individual/family	ad hoc (based partly on UK Supp. Ben. rates)	ad hoc	24% of population
O Cinneide (1980)	1975	Administrative data	Gross	Individual/family	Derived from EEC Attitude Survey	1971 line updated, + 50%	27% of population
Roche, in Joyce & McCashin (1982)	1973	HBS	Disposable (net of some rent)	Household	UA implicit scales	(A) UA (B) UA + 20% (C) UA + 40%	(A) 10% (B) 15% (C) 23% } of households
Fitzgerald (1981)	1973	HBS, administrative statistics	Disposable	Household	Based on UK Studies	Equivalent to contr. old age pension rate for couple	30% of households; (20% below ¼ of this income)
Rottman, Hannan, <i>et al.</i> , (1982)	1973	HBS	Disposable	Household	UB implicit scales	Principally UB UB + 20%	7% at or below UB 20% at or below UB + 40%
Roche (1984)	1980	HBS	Disposable (net of some rent)	Household	UA implicit scales	(A) 1973 UA, adjusted for increase in CPI and GNP to 1980, (B) this plus 20% and (C) plus 40%	(A) 4% (B) 7% (C) 12% } of households

the different analyses, particularly in terms of the poverty lines and the equivalence scales (by which households of a differing composition are brought to a common basis) used.

### *3.3 The Poverty Lines Used in Previous Studies*

We now consider in more detail the approach adopted in previous Irish research on poverty to the central problem of specifying the poverty line. Relating this to our review in Chapter 2 of the various methods developed in the literature, Irish research has so far relied almost exclusively on what is usually termed the "official poverty line" approach, that is, the poverty line or lines are based on rates of income support provided by the social welfare system. The assumptions underlying this general approach — which has been widely employed internationally — were discussed in Chapter 2, as was the range of problems to which it gives rise. Without repeating that discussion, these problems relate both to the conceptual basis — in particular the interpretation of social welfare levels and changes over time involved — and to the difficulties and paradoxes which arise in implementation.

Even within this common approach, though, the poverty lines applied in Irish studies have varied widely. A major factor in producing this diversity is the absence of agreement on the appropriate social welfare scheme to provide the basis for the "official" poverty line. In the UK, the Supplementary Benefit (now Income Support) scheme, means-tested and explicitly designed to provide a safety net income support, has been the obvious candidate for this purpose. In Ireland, though, there has been no such uniform national scheme covering, for example, the unemployed, sick, and those not in the labour force. The unemployed without social insurance entitlement are supported by the means-tested Unemployment Assistance (UA) scheme, while those not entitled to any other form of support may be eligible for Supplementary Welfare Allowance (SWA). Prior to the introduction of SWA with effect from 1977, the Home Assistance Scheme operated, allowing considerable local discretion and differences in treatment. The SWA rates were set equal to those payable to UA (rural) recipients, with a uniform set of (maximum) rates for the country as a whole.

Roche, in his analysis of the 1973 HBS, used the (rural) rates then payable under the UA scheme as the basis for the poverty lines, on the basis that they acted as a proxy for what would have been payable under the SWA scheme had it existed then. He thus accepted SWA as the appropriate basis for the implicit "official" poverty line. O Cinneide, though, argued that the UA rates were not adequate in themselves — and that this was acknowledged at the time of the scheme's introduction. He therefore, in his earlier paper, derived a poverty line broadly based on the SB rates payable in the UK, considerably above not only the UA rates payable in the Republic but also above the insurance-based UB

rates for most categories. In his study of 1980 data he up-rated this poverty line to 1975 prices, but notes that this still leaves it well below the levels revealed by an EEC opinion survey of the population as representing people's views of the minimum income required "to enjoy a non-poor way of life". On this basis he increases the poverty line by a further 50 per cent to bring it nearer — though not all the way to — the levels revealed by the survey. His 1975 poverty line, then, is different in nature to those purely based on official scales, in taking explicitly into account attitudes towards adequacy in the general population. It therefore represents an amalgam of the "official" method and the "consensual" approach also discussed in Chapter 2.

Rottman, Hannan, *et al.*, also argued that Home Assistance or UA rates were not appropriate as an official poverty line. On Home Assistance, they state that the means test was not standardised, and that it was not necessarily assumed that Home Assistance would be the sole source of income, intended to provide full support for claimants. On UA, they reiterate the point made by O Cinneide that the scheme, on its introduction in 1933, was not presented as providing an adequate income, reference being made to a cost constraint. They therefore use the higher UB rates as the basis for their poverty lines, arguing that the original levels at the time of introduction were set by a more rational decision-making process.

Fitzgerald (1981) looks at the income of the bottom 30 per cent of households in the 1973 HBS, concluding that, adjusted to 1981 prices, they were below the level received by a pensioner couple in 1981. This is in effect the poverty line used, on the basis that it corresponded to the current perception of what it meant to be poor. It is to be emphasised, however, that the poverty line used was 31-35 per cent above the level of UA or SWA payable to a couple at the time, and 14 per cent above the level of UB (flat-rate).<sup>3</sup> Further, 1981 levels of payment are being applied to the 1973 population with incomes adjusted for the increase in prices between the two dates: with the real value of income maintenance payments increasing significantly over the period, a higher real standard than prevailed in 1973 is being applied.

Roche (1984), in comparing 1973 and 1980, adopts an alternative strategy of applying the 1973 UA-based poverty line, up-rated for price increases and for the increase in real national income, to 1980. This involves using a basic poverty line for 1980 considerably below the actual level of UA then payable

<sup>3</sup>The poverty line used is £46 per week for a couple. This is said to be the social welfare pension going to a pensioner couple in 1981, but it is not clear how the figure is derived. A couple consisting of two people each in receipt of the non-contributory old age pension, with no means, aged under 80, would in fact have received a higher figure of £52.50 from April 1981 (£55.10 from October 1981). A couple consisting of one person in receipt of the pension and one dependant aged under 66 would have received £39.45 from April 1981 (£41.40 from October). Since means of up to £6 were disregarded, the figure of £46 could possibly be based on the £39.45 plus £6 allowed means, though, of course, not all recipients would have such means.

— about 85 per cent of 1980 UA (rural) for a single adult, for example — because the level of payment grew in real terms significantly faster than national income. Also, as analysed in detail in Nolan and Callan (1989a), the way in which the lines have been up-rated to take the growth in real incomes into account may be misleading. Roche used the growth in real GNP per capita for this purpose, but this may not be a good indicator of the income going to households. A comparison of the average household income in the 1973 and 1980 HBS shows a substantially smaller growth in household real incomes than the GNP per capita comparison would suggest. Much of the apparent fall in the numbers below Roche's poverty lines is due to this procedure in calculating the lines themselves — as a comparison between purely relative poverty lines applied to the two years, described in Chapter 5, indicates.

On the issue of the appropriate scheme on which to base an Irish "official" poverty line, prior to the introduction of SWA the absence of a clear-cut national safety net scheme certainly made this problematic. Since the SWA scheme was introduced (with effect from 1977, though the enabling legislation was passed in 1975), however, it now appears the obvious choice. It has a uniform set of (maximum) rates for the country as a whole,<sup>4</sup> and is intended to cater for all those with inadequate incomes from other sources. Implicitly, if not explicitly, its aim is to provide what, in the State's view, is a subsistence level of income.<sup>5</sup> It must also be noted that the real value of benefits has increased much more rapidly in Ireland than in the UK since the early 1970s, so that the gap between assistance rates here and SB rates in the UK, emphasised for example by O Cinneide, is no longer pronounced.<sup>6</sup> The argument for rejecting the SWA as not comparable with SB on this basis has therefore lost force.

Whatever scheme is chosen, though, the general approach to setting poverty lines based on official support rates is severely flawed, for the reasons set out in Chapter 2. What the analysis of households falling below these rates does achieve is the identification of those falling through the safety net. The SWA scheme is used for this purpose in the present study, but it is not applied as a "poverty line".

<sup>4</sup>Though there are certain supplements for special needs, as well as scope for discretionary extra payments.

<sup>5</sup>Where "needs" exceed "means", SWA is payable to all those who qualify to cover those "needs". When questioned as to the meaning of "needs" as he introduced the Bill in the Dail in 1975, the Parliamentary Secretary to the Minister for Social Welfare, Mr Cluskey, said that the levels of payment were intended to "meet legitimate needs", and that these "will not be confined to the bare necessities of life" (Official Report Vol. 285, No. 12, 19 November 1975, pp. 1468-1470). He also pointed out that the rates of payment under the new scheme would be considerably higher than the amounts actually paid out on average under Home Assistance (p. 1562-1563).

<sup>6</sup>By 1986, the (maximum) SWA rate for a married couple was IR£57, compared with the ordinary SB rate of £48.40 Stg. While a complete assessment of relative levels would have to look at the real value of the benefits in terms of the cost of living in each country, it is clear that, at a minimum, the SWA rates are at a level much more comparable with SB than in 1971, when SB exceeded UA for a married couple by a third.

A number of the Irish studies follow the common UK practice of applying not just the social welfare support rates, but also multiples of rates — usually 120 per cent and 140 per cent — as poverty lines. Although the point is not in fact made in most of the Irish work, the central justification for this procedure used in British studies is that extra payments are made in certain circumstances, over and above the basic rates, and some income is disregarded in the means test. This does create a genuine difficulty in defining precisely the exact entitlement to income support of different recipients. However, the procedure adopted — of, in effect, adding a very substantial supplement to the basic scales — has the perverse effect of ensuring that most of those actually in receipt of safety net support are found to fall below what is represented as the “official” poverty line. (If, as we suggest, the support rates are used as an indicator of the system’s own minimum income objective rather than as the basis for poverty lines, then the basic rates — abstracting from special additions, etc., — can legitimately be taken as the lower bound on that objective.)

A further important issue arises in the implementation of the “official” poverty line approach because of the fact that surveys such as the HBS generally run through a period when official rates of benefit were changed. In 1973, for example, rates of payment were increased in July, while in 1980 rates were increased in April. Which level should then be adopted as the poverty line? Roche, in his study of the 1973 HBS, used the higher set of rates from July 1973 for the entire sample, including those sampled before that date, arguing that a uniform poverty line is most satisfactory. Rottman, Hannan, *et al.*, agreed with maintaining a consistent standard, but used the 1972 scales, which were above 20 per cent lower. In such a period of rapid inflation and substantial rate increases, the approach adopted can clearly make a substantial difference. This difference in approach explains why Rottman, Hannan, *et al.*, found only about the same percentage below the 140 per cent cut-off for 1973 as Roche (see Table 3.1), although they used UB and he used the significantly lower UA rates as basis for the poverty lines.

Neither of these procedures is particularly satisfactory, nor is having a poverty line which is higher for those interviewed after a particular date. (This introduces artificial biases for those not in receipt of social welfare payments — an employee may be placed below the line because he was interviewed at a particular date, but would have been above it on the same income if interviewed a week earlier.) Again, this may not present a problem if the objective is to look at the effectiveness of the social security system rather than define a poverty line. Then, the system’s minimum income objectives clearly change when the rates are increased, and it is valid to assess households interviewed pre/post-up-rating against different standards.

### 3.4 *Equivalence Scales Used*

In comparing income levels across households, some adjustment is required to take differences in needs arising from variations in household size and composition into account. This is done by the application of adult equivalence scales, designed to convert each household to a common basis, usually by convention to the equivalent of either a single adult or a married couple. In estimating the numbers in poverty, a separate poverty line may be specified for each household type, involving an implicit set of equivalence scales, or the poverty line may be expressed in terms of a single adult and other household types converted to that basis by the division of their adult equivalence unit into their income.

The Irish poverty studies have adopted a variety of equivalence scales, contributing to the differences in results. O Cinneide's earlier study used a set of scales derived loosely from the UK Supplementary Benefit rates. His 1980 study based scales on the results of an attitude survey. Roche's two studies used the weights implicit in the UA rates, while Rottman, Hannan, *et al.*, used those implicit in UB rates. Fitzgerald derived a set of scales broadly from UK studies of the spending patterns of different households there. (Until the recent study by Conniffe and Keogh (1988), discussed in Chapter 5, no such scales derived from the analysis of actual household expenditure patterns were available for Ireland.)

Table 3.2 illustrates the differences in equivalence scales between the various Irish studies. These can affect the results significantly. Roche (1984) examined the sensitivity of his results for 1980 when children of different ages are given different weights, and found that this had little effect on the overall estimate of the poor population, but some on its composition (Appendix 4c). Roche (1980) also examined the sensitivity of his 1973 results when the weight for children under 6 was reduced (to 0.25), which reduced the number of households under his highest poverty line by about 7 per cent and the numbers of those households with children by about 16 per cent. Even where such differences in equivalence scales do not have a major impact on aggregates such as the percentage of the population estimated to be in poverty, they can have a substantial effect on the composition of the poor, which in turn may lead to rather different policy implications — a point emphasised in the context of these Irish studies by Kennedy (1981).

### 3.5 *Income Recipient Unit, Income Concept and Time Period Used*

Other differences between the various Irish studies on the extent and composition of poverty relate to the income recipient unit, income concept, and time period for income used. As shown in Table 3.1, the studies based on the Household Budget Survey have all used the household as the income recipient

Table 3.2: *Equivalence Scales Used in Irish Poverty Studies*

Study	EQUIVALENCE SCALE			
	Single Adult	Married Couple	Child	Additional Adult
O Cinneide (1972)	1	1.67	0.33	—
O Cinneide (1980)	1	1.47	0.29	—
Joyce & McCashin (1982)	1	1.75	0.45 <sup>b</sup>	0.75
Roche (1984)				
Rottman, Hannan, <i>et al.</i> , (1982)	1	1.68	0.24/ 0.18 <sup>c</sup>	0.68
Fitzgerald (1981) <sup>a</sup>	1	1.67	0.42	0.83

<sup>a</sup>This study expressed its scales in terms of married couple 1 (single adult = 0.6, child = 0.25, extra adult = 0.5), converted here for comparison.

<sup>b</sup>Children are all under 18; children's allowances have been added to benefit rates, and weights for first/second/further children rounded to one figure.

<sup>c</sup>The higher weight is for the first 2 children; children are under 15.

unit, reflecting the basis on which information is presented in the surveys. In O Cinneide's analyses he attempted to estimate incomes for what he termed the "basic family unit" of an independent adult, a married man with (assumed dependent) wife and children, or widow with children. Much of the data he had to use, though, were purely on an individual basis — such as earnings — and could not be related to family situation.

Similarly, the HBS-based studies used disposable income - income from work and property plus social welfare transfers but after income tax and PRSI contributions are deducted — to assess households' situations, whereas O Cinneide had to use what was generally closer to gross income. Roche in his analyses deducted some rent paid from disposable income to arrive at "net disposable income". This was to take into account the fact that a rent supplement is payable under SWA and therefore may be included in the "official" poverty line, and it was more convenient to subtract the amount actually paid from income than add it to the poverty line. His "net" income is not to be confused with income net of housing costs, which has been used in some British analyses of poverty — this would involve deducting all rent, rates (where payable) and mortgage interest from disposable income.



The time period covered by the income data used in Irish poverty studies has again, for the most part, been determined by what is gathered in the HBS. For the most part, this refers to income in the last week (or last pay period for employees, which may be two weeks or a month). For the particularly variable income sources, self-employment and investment income, though, income over a (usually) twelve-month period is gathered and the weekly equivalent used. Thus although the income data in the HBS is expressed in weekly terms, it does not, in all cases, relate to actual receipts in the previous week. O Cinneide's studies relied on a variety of sources, some of which related to weekly income and some to annual.

### 3.6 *Previous Research on the Composition of the Poor*

While there are significant differences between the studies reviewed in terms of their estimates of the overall extent of poverty in Ireland, as we have seen, there is much greater agreement between them on the characteristics of the poor. (This aspect of these studies is reviewed in detail in Creighton (1988), on which the present section draws.)

O Cinneide's early results highlighted the importance of four groups: the elderly, farmers, the unemployed/ill and low-paid employees. These dominated his total estimated number poor in 1971, accounting for over 90 per cent (see O Cinneide, 1972, Table 11, p. 397). While the 1973 HBS provided a much more satisfactory database, the analyses of these data by Roche, Fitzgerald and Rottman, Hannan, *et al.*, in fact broadly confirmed this emphasis. Being able to link individual earnings with family situation, they focused in the context of low pay on the position of employees with large families, or in Rottman, Hannan, *et al.*'s family cycle classification the "middle child rearing", "completion" and "early dispersed" stages. Some alteration in the relative importance of these groups is noted as the poverty line changes. In particular, as the poverty line is raised in Roche's analysis, the importance of households headed by an employee increases sharply.

While these were the groups which constituted most of the poor, some smaller groups faced as high, or higher, risks of being below the poverty line. "Risk" is here defined as the likelihood that a household of a particular type is found in poverty, i.e., the percentage of all households of that type in poverty; this is to be distinguished from what is often termed the "incidence" of poverty, i.e., the percentage of all poor households made up by households of this type. For example, though lone parents made up only a small proportion of the poor, this was because there were not very many in the population as a whole: a high percentage of the households of this type were none the less found below the poverty lines. Conversely, while employee-headed households made up a

significant element of the poor, households of this type faced a relatively low risk of being in poverty.

Roche's (1984) analysis of the 1980 HBS revealed some striking changes in the risk and incidence of poverty between 1973 and 1980. A major finding was the reduction in risk for households headed by the elderly or, in terms of labour force participation, the retired and those in home duties. This was largely attributed to improved State income support. For households with children, on the other hand, the risk of being in poverty increased sharply over the period. The risk facing households headed by an unemployed person remained relatively very high, and as the overall unemployment rate rose, a larger proportion of all poor households were of this type in 1980. Farm households remained at high risk and continued to form a substantial proportion of the poor.

### *3.7 Conclusions*

This review of previous research on the extent of poverty and the characteristics of the poor in Ireland has served to highlight first of all the relatively narrow approach used. Most studies have based poverty lines on social welfare payment rates, the "official poverty line" approach. Given the shortcomings of this method of specifying a poverty line, as discussed in Chapter 2, one of the main objectives of the present study is to apply a range of other approaches to Ireland.

The review also brought out the very considerable variation in the estimates of the extent of poverty in Ireland, despite the common methodological basis and the fact that most relied on the same database, the Household Budget Survey. This was produced by a number of factors, including differences in the social welfare scheme chosen as the benchmark, differences in the equivalence scales used, and different choice of base data for the social welfare rates determining the poverty lines. The present study is able to look in a structured way at the sensitivity of the results to the location of the poverty line and the equivalence scale chosen, and thus make explicit the way in which different results are produced.

Most of these Irish studies have concentrated on measuring the numbers below poverty lines — the "headcount" measure of poverty (though Roche, 1984, did also measure the aggregate poverty gap). It is important to develop measurement approaches to take into account the limitations of this measure and the more sophisticated aggregate measures which have recently been suggested. This is explored in Chapter 5, having first described the database to be used in this study.

## Chapter 4

### *THE DATABASE*

#### *4.1 Introduction*

This chapter describes in some detail the survey on Poverty, Income Distribution and Usage of State Services carried out by the ESRI, which provides the database for this study. The organisation of the survey, the sampling procedure, and the nature of the response are first outlined. The post-sample validation and re-weighting procedures to compensate for possible biases are then discussed. The representativeness and reliability of the data are assessed on the basis of external information and drawing on experience elsewhere with such surveys. The content of the survey is described in detail. Some of the key concepts to be employed in the analysis, in particular the income definitions and income recipient units used, are also described.

#### *4.2 The Sampling Frame*

The survey was designed to provide a national sample from the population resident in private households. Those living in institutions — hospitals, hotels, prisons, etc. — thus did not form part of the target population. (This is generally the case in such surveys, including the CSO's Household Budget Surveys). The 1986 Census of Population showed that private households contained 97 per cent of all persons in the State.<sup>7</sup>

The sampling frame, from which a sample of names and addresses was drawn, was the Register of Electors. This is an annually revised listing of all those eligible to vote in local, national or European elections. The sampling was performed using the RANSAM programme developed at the Institute, described in detail in Whelan (1979). This implements a multi-stage random sample incorporating both stratification and clustering, and giving each individual on the Register an equal probability of being selected.

Research into the quality of the Register as a sampling frame has confirmed its usefulness. Keogh and Whelan's (1986) detailed study concluded that the Register was in reasonable concordance with the population as measured by

<sup>7</sup>The definition of the population to be sampled as the set of private households makes the results comparable with the Household Budget Surveys and most other surveys used internationally for the study of poverty. It should be noted that the risk of poverty may be quite high among certain groups excluded or underrepresented, such as residents of institutions, the homeless and travellers; a survey such as the present one is not, however, a suitable instrument for the study of such groups.

the Census. They did identify some deficiency, though, in terms of under-representation of young single persons and newly-formed households.

The target sample for the survey comprised 5,850 households, selected as 225 clusters of 26 each. Within clusters, respondents were selected on a systematic basis, giving an implicit geographical stratification. Since the initial sample of names and addresses was on the basis of *persons* on the Register, households had a probability of selection proportional to the number of electors they contained. The weighting scheme applied to the results, discussed in Section 4.5 below, was designed *inter alia* to adjust for this bias.

#### 4.3 Fieldwork

The survey was carried out by the Institute's own Survey Unit and panel of trained interviewers. Fieldwork began with a pilot survey of about 200 households in October 1986. Having reviewed the questionnaire in the light of the results of this pilot, the main fieldwork began in February 1987. While most of the interviews were carried out in the six-month period from then to July, the final interviews were completed in September 1987. All interviews were carried out by personal visits, often entailing repeat visits to households, and interviewers were instructed to keep calling until a response or definite non-response was obtained.

#### 4.4 Response

The total sample selected was 5,850 households. Of these, a total of 615 were not successfully contacted. For the majority of these — 421 cases — this was because the household had moved and their new address could not be found. A further 114 of the addresses no longer existed, and in 80 cases the person selected was deceased.

In addition, 70 of the addresses selected were found to be institutions, and therefore did not form part of the private household population.

Excluding these cases left a total of 5,165 households. To use the term applied by the CSO in the context of the Household Budget Surveys, these constituted the "effective sample". Of these, 3,321 households, 64.3 per cent of the effective sample, responded to the survey. The refusal rate was 24.1 per cent — 1,246 households refused to participate. A further 486 or 9.4 per cent were never available when the interviewer called despite repeat visits. For 112 cases, 2.2 per cent, they were too ill or senile to take part.

Of the responding households, 27 were excluded from the sample for analysis due to completely or substantially missing information in key areas, notably income. This left a sample for analysis of 3,294 households. This constitutes 63.8 per cent of the effective sample and 56.3 per cent of the overall sample originally selected.

The refusal rate was somewhat higher than that found in most other Institute surveys, presumably due to the sensitivity of the subjects covered in this survey and the complexity of the questionnaires involved. Comparison with the response rate achieved in the Household Budget Surveys, the principal data source hitherto on household incomes in Ireland, is relevant. The two national Household Budget Surveys, carried out in 1973 and 1980, had response rates of 57 per cent and 56 per cent of the effective sample. (The HBS is particularly onerous for respondents since a two-week expenditure diary must be completed by household members.) The response rate in the ESRI survey clearly is comparable then with those of the national HBS. As is the case with the HBS, post-sample correction through *reweighting* of the results is employed to adjust for biases which may be introduced by the pattern of non-response.

#### 4.5 *Reweighting and Representativeness*

Non-response only introduces bias into the resulting sample if it is non-random, i.e., if certain groups are under-represented and others over-represented. The importance of such bias depends on the extent to which the groups differ from each other in a manner which affects the analysis in question. Where the extent of under-representation can be accurately measured, it is possible to "reweight" the sample to correct for such biases by giving a higher weight in the analysis to under-represented groups, and a lower weight to over-weighted groups. Such a reweighting procedure is applied to the HBS by the CSO, and has also been applied to the ESRI survey.

When compared with information from external sources, the sample of 3,294 households was found to over-represent rural compared with urban households — a higher response rate was achieved for the former. Households headed by persons aged under 35 were also under-represented, as were those headed by semi-skilled and unskilled manual workers. In addition, the fact that the sampling frame is based on persons on the Electoral Register rather than households means that households with one or two adults are under-represented and those with three or more adults over-represented in the sample.

A reweighting scheme was developed to correct for these identified biases, based on the 1986 Labour Force Survey results. The reweighting was implemented on the basis of four key variables: (i) household location (urban versus rural); (ii) number of adults in the household; (iii) occupation of the household head; and (iv) age of the household head. A full cross-tabulation of the Labour Force Survey responses for these four variables was supplied by the CSO. This involved 2 categories for location, 6 for number of adults, 4 socio-economic groupings for occupation, and 3 age ranges, so the total number of cells in the cross-tabulation was 144.

The same cross-tabulation was derived for the sample, and weights calculated

as the ratio of the population to the sample figures for each cell. When applied to the households in the sample, then, these weights produce results "grossed-up" to population levels and corresponding with the population (as reflected in the Labour Force Survey) in terms of the weighting variables used. In this instance certain cells in the 4-way cross-tabulation contained very small numbers, and cells were amalgamated to avoid this. No significant difference in the results was produced: the reweighted sample still corresponds almost exactly with the Labour Force Survey in terms of the four variables used.

Having carried out the reweighting, the representativeness of the sample may be assessed by reference to data from a number of external sources. As one independent check, further data from the 1986 Labour Force Survey were obtained from the CSO, showing the breakdown of households by the number of members in paid work. Table 4.1 shows the percentages in the reweighted sample and in the Labour Force Survey having 1, 2, or 3 or more such members. The two are very similar, the sample when reweighted reflects very closely the pattern shown by the Labour Force Survey in terms of this variable — which is a particularly important influence on household income. The same is true of the distribution of households by number of persons unemployed, another key variable in the context of the analysis of poverty.

Table 4.1: *Distribution of Households by Number of Members Engaged in Paid Work*

<i>Number of Members in Paid Work</i>	<i>Percentage of Households Labour Force Survey 1986</i>	<i>Percentage of Households ESRI Survey 1987</i>
None	30.8	31.1
1	43.5	41.2
2	18.6	20.3
3 or more	7.1	7.4
	100.0	100.0

*Sources:* CSO Labour Force Survey special tabulations; ESRI Survey.

A number of other sources of information may be used to assess the representativeness of the sample (which from this point on refers to the *reweighted* sample). The demographic composition of the sample may be compared with the population figures from the 1986 Census. Table 4.2 shows the breakdown of the persons in each by age and sex. The sample reflects the population pattern well. Where there are differences, the sample has a higher proportion of children

Table 4.2: *Persons in 1986 Census and ESRI Sample by Age and Sex*

<i>Age Group</i>	<i>Males</i>		<i>Females</i>	
	<i>Census</i>	<i>ESRI</i>	<i>Census</i>	<i>ESRI</i>
0-4	9.4	10.4	8.9	10.7
5-14	20.3	21.9	19.3	19.9
15-24	17.7	15.8	17.1	15.4
25-34	14.2	15.4	14.1	15.4
35-44	12.1	10.6	11.7	10.6
45-54	8.9	8.8	8.5	9.0
55-64	7.8	8.4	8.2	8.0
65-74	6.3	6.1	7.3	7.0
75 and over	3.2	2.7	4.9	3.9
	100.0	100.0	100.0	100.0
As percentage of all persons	50.0	50.1	50.0	49.9

*Sources:* 1986 Census, Summary Population Report, Tables 4B and 4C; ESRI Survey.

(up to 14 years of age) and a lower proportion of those aged between 15-25, 35-44 and 75 and over than the Census. These differences are not substantial, though, and in the case of the elderly would be largely attributable to the fact that the sample refers only to those in private households while the Census of course refers to the entire population. Since a relatively high proportion of the elderly are in institutions, the private household population has a significantly lower proportion of this age group than does the population as a whole. (Those aged 65 and over make up one-third of the institutional population compared with only 10 per cent of these in private households as shown by the 1986 Census.)<sup>8</sup>

Administrative statistics on the numbers in receipt of social welfare payments of different types provide a further external source against which the representativeness of the sample can be assessed. The numbers in the sample in receipt of payments from the various schemes, grossed-up to implied population totals, are compared in Table 4.3 with the number of individual recipients (not including dependants) shown by the administrative records at end-1986 and end-1987. (Most households in the survey were interviewed between January – August 1987). This shows quite a close correspondence between the sample and administrative figures for the major schemes.

The grossed-up sample figures for Unemployment Benefit and Unemployment

<sup>8</sup>Census of Population 1986 Summary Report, page vii and Table 13.

Table 4.3: *Number of Recipients of Major Social Welfare Schemes, Population and (Grossed Up) ESRI Sample.*

	Recipients in Population		Recipients in grossed-up ESRI sample
	end-1986	end-1987	
Old Age and Retirement Pension <sup>a</sup>	236,722	239,633	223,300
Unemployment Benefit	87,676	84,605	82,000
Unemployment Assistance	146,016	153,591	145,600
Disability Benefit, Invalidity Pension, Injury and Disablement Benefit	114,750	98,572	86,900
Widow's Pension <sup>a</sup>	97,146	99,204	62,800
Unmarried Mothers Allowance	12,039	13,930	6,900
Deserted Wife's Benefit Allowance	10,610	12,172	7,850
Supplementary Welfare Allowance	b	11,774	10,200
Family Income Supplement	4,947	5,532	3,100

<sup>a</sup> contributory and non-contributory

<sup>b</sup> not available

Source: Statistical Information on Social Welfare Services, 1986, Table 4 and 1987, Table 5.

Assistance are very close to the totals shown in the administrative records. The sample figure for Old Age Pensions (Contributory and Non-contributory), at about 94 per cent of the administrative totals, is in fact higher than might be expected, since only 91 per cent of the population in the relevant age group live in private households. However, it appears likely that there has been some misclassification as a result of confusion by respondents who in fact are receiving widow's pension, which would help to explain why the numbers in the sample in receipt of the latter are considerably below the expected figure. The grossed-up sample totals for the sickness and disability-related schemes are below the administrative figures, and the same is true for the relatively small schemes for deserted wives and unmarried mothers and Family Income Supplement. The sample figure for Supplementary Welfare Allowance is close to the expected total.

Comparison with other external sources is complicated by differences in coverage and in the concepts and definitions employed. This is the case, for example, with the data from tax records published by the Revenue Commissioners, and the National Accounts aggregates of income from different



sources. These are discussed later in this chapter in the context of the representativeness and reliability of the income data in the sample, having first described the content of the survey and the derivation of the income figures.

#### 4.6 *Content of the Survey*

The survey gathered a wide range of information through a number of different questionnaires for each household. (These questions are too lengthy to include with this paper, but are available on request from the authors.)

- (i) For each household, one questionnaire covered household composition, including age, sex, marital status and inter-relationships of members, the nature of the accommodation, tenure type, housing costs, education being received, utilisation of health services in the previous year by each household member, and expenditure on utilities such as electricity, gas and telephone.
- (ii) For each individual aged 15 or over and not in full-time education, an individual questionnaire dealt with the respondents' income, savings and assets in some detail; current labour force status and experience over the previous year; attitudes on issues related to poverty and needs, and to the social welfare system; educational background and employment/unemployment experience during their working lives; debts and arrears; indicators of style of living; access to social support networks; and indicators of psychological stress.
- (iii) Where a full individual questionnaire could not be completed — because the person was ill, never at home or refused to co-operate fully, for example — an abbreviated questionnaire with key information on income and labour force status was filled in, either with the co-operation of the individual concerned or some other household member.
- (iv) For each farmer or farm operator, a separate farm questionnaire was used to gather information on output and activity levels and on direct and overhead costs.
- (v) For households which did not respond, a special form was used to record information on the reasons for the non-response and on the location of the household.

Thus for each of the 3,294 households in the sample, a household questionnaire and an individual full or abbreviated questionnaire for each adult was obtained. Over 6,500 full questionnaires and about 1,650 abbreviated personal questionnaires were completed. In addition, about 600 farm questionnaires were obtained for these households.

This brief outline is intended to indicate only the main categories of information gathered in the survey. Detailed descriptions of the data will be given later in this chapter and, where appropriate, in the course of the presentation of the results of the analysis. We now consider the checking and validation of the survey responses.

#### *4.7 Data Checking and Treatment of Missing Information*

Each questionnaire was first checked at coding stage, before the data were entered on computer. This involved a variety of checks for plausibility and consistency, to identify response or interviewer error. Such errors were corrected having referred back to the interviewer, and in some cases returning to the respondent, where necessary. When keyed, further data checks were implemented to ensure that values fell within plausible ranges and that responses were internally consistent.

It was then necessary to identify and examine cases with missing responses, particularly with respect to income. As already mentioned, 27 responding households were found to have provided such incomplete information that they were dropped at this stage. For the remainder, where necessary, a detailed case-by-case exercise replaced missing income values on the basis of the information available for that household as well as in the survey as a whole. The majority of these cases involved respondents who supplied take-home income but did not know their gross pay and the details of deductions. These were calculated on the basis of the tax rates in force, taking the person's marital status and spouse's earnings into account, as well as the appropriate PRSI contributions rate for the occupation and earnings level in question. Other deductions such as superannuation contributions were also imputed where judged appropriate. In a small number of cases, neither gross nor net income was provided for an individual, but was imputed on the basis of information such as the total income of the household and that of other members, and/or the pay received by others in that occupation in the sample. Missing social welfare receipts were attributed to those who stated they were in receipt under a particular scheme on the basis of the rates prevailing, taking the person's family circumstances into account.

#### *4.8 Farm Income Estimation*

It was necessary to take special account of the problems in obtaining reliable measures of farm income because of the relatively high proportion of the Irish labour force engaged in farming activity. Most respondents were not likely to have detailed farm accounts. Various methods of overcoming these problems were explored. After consulting An Foras Taluntais (AFT) — now Teagasc — and the Central Statistics Office, it was decided to develop an additional farm questionnaire to collect data on the major elements of output and costs. AFT

assisted with the design of this questionnaire and also provided advice and practical assistance in the subsequent estimation of farm incomes.

The general approach adopted was to collect as much information on output and costs directly from the farmer or farm operator as was possible. The farms were classified into a number of "cells" according to the farm size, soil type and farm system; this enables the information supplied by AFT for the average figures on similar farms in their National Farm Survey to be used to estimate those elements of output and cost on which information could not be directly collected.

The concept of income used is family farm income as defined by the AFT National Farm Survey, i.e., gross output plus grants less total direct and overhead costs. This represents the total return to the family labour, management and capital input in the farm business in a similar way to the net profit used in the case of other self-employed persons. It is important to note that the data collected on farm incomes refer to the calendar year 1986. The Farm Survey shows that this year was a distinct low point for farm incomes. Not only was there a fall in farm incomes in 1986, but this followed falls in previous years; 1987 and 1988 have seen a substantial recovery in farm incomes from these levels, as discussed in Chapter 7.

#### 4.9 *Unit of Analysis*

As indicated above, the survey gathers information at individual and household level. The household unit itself is defined as a person or a group of persons who all live regularly together (at the address selected) and for whom food is provided (at least one meal per day) by the same person or rota of persons. This is the same definition as that used by the CSO in the Household Budget Survey, the Census, etc. There was one minor difference in the criteria applied to decide whether particular individuals were to be included in a particular household: this was in respect of students. In the HBS, students aged 15 or older, who were living away from home during term time, were included as members of their parents' households only if they were at home for the full 14-day period of diary record keeping required by that survey. In our survey, since such a diary record is not required and since students in flats etc., tend to be under-recorded in surveys,<sup>9</sup> this group have been included in their parents' household provided they come home for holidays.<sup>10</sup>

Ideally one would like to have full information on the income sharing arrangements within households, in order to analyse issues related to poverty and income distribution. It is difficult to collect direct evidence on this, and

<sup>9</sup>For example, because they are difficult to contact, or are not on the Electoral Register.

<sup>10</sup>No individual questionnaire was required from any of those in full-time education, so this did not pose a problem; these individuals were recorded as household members temporarily away from home.

was quite impossible for the present survey, given the amount of other information being sought. (Some data on this topic are however being collected in the follow-up survey mentioned in Chapter 1.) The most common response to the lack of information on the internal distribution of resources within the household in previous work on Irish data — and elsewhere — has been to conduct the analysis at the level of the household. This implicitly treats the household as if there was complete income sharing within it.

As discussed in Chapter 2, an alternative approach is to conduct the analysis on the basis of a narrower family group, usually defined as an adult or couple, together with their dependent children. We shall use the term "tax unit" as a general term referring to an adult or couple, with dependent children, if any, since this is the term most commonly used in the international literature. If most income sharing takes place within tax units, and very little between them, analysis at that level provides a more accurate picture of incomes on which to base poverty analysis. If, on the other hand, there is extensive income sharing between the units in multiple tax unit households, then household based analysis will be more accurate. A complete picture is thus only possible using both concepts, ideally with further information about the actual extent of income sharing.

The information gathered in the ESRI survey allows us to use either the household or the tax unit, and both are employed in the present study. The primary concentration in analysing poverty is on the household, but the difference which using the tax unit would make is also explored. In looking at the operation of the social welfare system, on the other hand, the main focus is on the tax (or benefit) unit, since it is on this that policy is for the most part based. Again, though, the difference which using the household would make is examined.

#### 4.10 *The Income Concept*

Detailed information on the income of respondents from various income sources has been gathered in the survey. This covers income from employment or self-employment (where the latter term is broadly defined to include employers), rent, interest and dividends, private sick pay and pensions, social welfare payments, and other regular receipts such as transfers from other households.

For most income sources, information is gathered first of all on the amount *currently* received: for employment income, private pensions, sick pay, and social welfare receipts, that is in general the amount received last week (or fortnight/month, etc., if paid on that basis). For certain income sources which are variable by nature, the survey followed the Household Budget Survey and most other such surveys in looking for receipts over a longer period, in order to obtain a more reliable estimate of the usual level of income than the receipts in the particular week before the survey would give. Thus for rent, interest,

and dividend income, the amounts received over the past year are asked. For non-farm self-employment income the most recent twelve-month period for which respondents have information is asked. The information on which farm incomes are estimated, as described above, refers to the calendar year 1986. Current income is then estimated as the weekly equivalent of these amounts received over a longer period.

In the present study, we follow the standard practice, of the HBS and the UK Family Expenditure Survey, in focusing on *current weekly* income — estimated on the basis of current receipts with the exceptions already noted. It may also be important, though, to look at income over a longer period, particularly in assessing the impact of poverty and the social security system on different household types. For this reason further information was gathered in the survey which will allow income over the previous twelve months to be estimated. This includes data on annual salary and on the number of weeks spent in work and in receipt of the various social welfare payments in the past year. This long-term income concept will be used in further research to supplement our analysis based on current income, in order to determine how many families move in or out of poverty due to short-term income changes, and how many are in poverty on a long-term as well as short-term measure of income.

The information gathered allows various income concepts to be derived, including those used by the CSO in their analyses of the Household Budget Surveys:

- (a) income before taxes and state transfers: referred to by the CSO in their analyses of the Household Budget Survey as "direct" income, this consists of income from work and property;
- (b) gross income: direct income plus State transfer payments;
- (c) disposable income: gross income less income tax and PRSI contributions.

In the present study we follow the general practice of focusing mainly on disposable income, since this is the most directly relevant to the spending power or command over resources which determine a family's standard of living. The survey also contains extensive information on non-cash benefits provided by the State in the areas of health, education and housing. Taking these into account in the measurement of poverty and living standards raises complex conceptual and empirical issues, mentioned in Chapter 2 and discussed in considerable detail in Chapter 9. The role of these non-cash benefits and the wider redistributive impact of Government expenditure in these areas will be the subject of a separate study.

Disposable income is gross income net of income tax and PRSI, which are

compulsory deductions. All other deductions, including superannuation contributions, VHI contributions, regular savings or loan repayments to an employer are added to take-home pay in order to arrive at disposable income. It could be argued that in the case of superannuation contributions the deduction is not discretionary and such contributions should not be included in disposable income. However, a full treatment of the impact of these contributions would also take into account the corresponding addition of pension rights as an element in households' wealth. For the present we follow the customary treatment of analysing disposable income including those contributions, which *inter alia* allows comparisons with Household Budget Survey data. In the case of the self-employed (including employers), the income figure used is profit net of expenses allowable for tax, and net of income tax. The concept of income used for farms is family farm income, as described in the AFT National Farm Survey reports.

Some researchers in Ireland and the UK have excluded housing costs from net disposable income on the grounds that differences in housing costs mainly reflect differences in the choices available to people, due to imperfections in the housing market. As against this, higher expenditure on housing may simply reflect a greater preference for better accommodation. While we focus for the most part on disposable income, the impact of looking at income net of housing cost is also explored in Chapter 9.

#### 4.11 *Reliability of the Income Data*

A crucial issue in assessing the sample in the context of the analysis of poverty is the reliability of the income data. This has a number of distinct elements, and it is important to distinguish between them. With survey data, it is sometimes argued that deliberate *understatement* of incomes by respondents is likely to be a major problem. Secondly, misstatement of income — either under or overstatement — may occur because of errors on the part of the respondents. These both refer to the quality of the information made available by those in the sample: a distinct concern is about the extent to which those responding in the survey represent the population as a whole in terms of the income distribution. All three of these problems tend to be conflated under the broad term understatement.

Acknowledging that understatement (in this broad sense) characterises all income surveys such as the HBS, Murphy (1984) points out that there is no reliable basis for determining the extent of income understatement or the degree to which it varies between different income sources and types of households. One of the main reasons for the common perception that understatement is substantial is the finding common to budget surveys that total expenditure exceeds total income at all income levels. Murphy notes in this regard that "although this substantiates the existence of understatement to some degree it really throws

no light on the situation because the two concepts are not directly compatible" (p. 61). Expenditure may be financed from sources such as borrowings, savings, capital gains, retirement gratuities, redundancy lump sums and occasional gifts or transfers from other households, none of which is included in income as it is measured. In assessing the income-expenditure gap, it is also important to recall that while expenditure refers to the current week (or rather an average of the last fortnight, over which expenditure diaries are kept), this is not the case with some important components of income. For the self-employed, income generally refers to an average over an earlier period, which may be some considerable time ago — (in the HBS, generally one or two years prior to the HBS reference year). Finally, the income-expenditure "gap" may also reflect some overstatement of expenditure (see for example Townsend, 1970).

As far as deliberate understatement is concerned, there are certain circumstances where this may be likely to occur. Where the income in question is not being declared, or is being understated, for income tax purposes, then the respondent may also be likely to understate in a survey. By its nature this income tends to be unmeasured elsewhere as well, making assessment of its magnitude virtually impossible. Those in receipt of social welfare payments related to unemployment or sickness disability may also conceal any income from working which is not known to the Department of Social Welfare.

However, recent investigations carried out for the Department suggest that this is not widespread. The incentives for deliberate understatement of income in a survey such as the HBS or the ESRI survey are if anything less rather than greater than in making returns for tax or in complying with social welfare means-tests.

Misstatements in income responses could arise from many sources. For wages and salaries, respondents may know their take-home pay, but not the deductions which make up the difference between it and gross pay. While some are able to consult pay slips, many are not. For the self-employed, there may be difficulty in accurately distinguishing "true" profit, with for example the separation of expenses of the business and personal expenses being problematic. Where income is variable, an average or total over a period may be difficult to establish. Clearly where one individual in the household is providing information on the income received by another — which is avoided whenever possible — the scope for error is considerably greater. While all the responses are checked for internal consistency, etc., at coding stage, some can also be verified against external information. This is true of employees in situations where pay scales are known — teachers or civil servants, for example. It is most relevant though for social welfare receipts, which for the ESRI sample were individually checked against the rates for the scheme in question.

The third aspect of the problem is possible bias in the survey response,

producing a situation where some parts of the "true" income distributions are over-represented and others under-represented. There are reasons why we might expect *a priori* that particular household types might be likely to be under-represented. This could be because they are under-represented in the sampling frame, in a manner which the reweighting procedures fail to deal with, or, alternatively, they could have a greater-than-average propensity to refuse to participate. Evidence from the investigation of this aspect of the representativeness of surveys elsewhere — discussed in more detail below — suggests that in practice the main problem is likely to be under-representation at the very top of the income distribution.

These possible problem areas with income surveys are of course common to the ESRI survey and the HBS. It is none the less of interest to compare the average income figures from the 1987 HBS, which have just been published, with the results of the ESRI survey. For disposable income, on which we concentrate in this study, the two are very close — average household income was £201 per week in the HBS (CSO 1989) and £198 in the ESRI sample. Due to differences in the timing of the surveys, and in particular the fact that the reference year for farm incomes in the ESRI survey was 1986 but in the HBS it was 1987, if anything a wider gap would be expected between the two. While both are subject to the problems inherent in surveys, these represent independent observations and thus enhance confidence in the overall average income level. No data on the distribution of income in the HBS are available as yet — when these do become available for analysis, an in-depth comparison with the ESRI sample will be possible.

An alternative external check on the reliability of the income data could be based on a comparison with the distribution of income published by the Revenue Commissioners. There are, however, a number of difficulties to be overcome in putting the two distributions on a comparable basis. First, the Revenue Commissioners data include only taxable income and exclude, for example, income from short-term social welfare payments. The ESRI database will allow a comparison to be made using this taxable income concept, since the data collected distinguished between taxable and non-taxable incomes. But this raises a second difficulty. The Revenue Commissioners' figures for taxable income are calculated over the relevant tax year, while the income measures presently defined for the ESRI survey refer to current income. Thus, for example, a person who is employed for only half of the year, at an annual rate of £10,000, would have an income of £5,000 in the Revenue Commissioners statistics. The income measures presently calculated for the ESRI survey, on the other hand, would record the person as having either a zero current taxable income (if interviewed during a spell of unemployment) or a current taxable income, if annualised, of £10,000 per annum (if employed at the date of interview). Sufficient



information has been collected in the ESRI survey to allow a twelve-month income estimate to be constructed, taking account of the number of weeks worked in the previous twelve months. Until this procedure has been implemented one would expect quite marked differences between the two distributions, even if they were both based on perfectly accurate data. For instance, the ESRI database would be expected to have a greater number of zero and very low incomes corresponding to those interviewed at a time of unemployment, while the distribution based on income tax data would be expected to have greater numbers in income categories above the very lowest, corresponding to persons engaged in paid work for less than a full tax year.

Until the direct comparison of the distributions of taxable income in the ESRI survey and the Revenue Commissioners' statistics can be derived, we must rely on similar comparisons for an assessment of the reliability of survey-based income measures. In the Irish case, Nolan (1978) compared the income distribution in the 1973 Household Budget Survey with a distribution derived from the Revenue Commissioners' statistics. The main difference found was a higher share going to the top decile in the tax-based distribution. This may be partly due to the shift in the unit of analysis (since the grouping of tax units into households tends to increase equality). But to the extent that the tax-based distribution is more accurate, this suggests that there may be under-reporting or under-representation of the highest income levels in the HBS. For the UK, Atkinson, Gomulka and Sutherland (1988) compared the distribution of taxable incomes in the Survey of Personal Incomes, which is a large scale random sample from the tax records, and the Family Expenditure Survey. They reached a similar conclusion: "It appears that understatement arises for the top two groups but not for the upper middle ranges" (p. 234).

In principle, national income aggregates can also provide a check on the reliability of survey-based income data. For example, average disposable income per household in the sample may be multiplied by the total number of households in the country to give an estimated national total. One may then attempt to compare this total with a figure derived from the national accounts. This exercise is, however, fraught with severe difficulties. The basic source of these difficulties is that there are no national accounts figures for the aggregate household sector. Instead, figures are published relating to what is termed the personal sector. This includes not only households, but a wide range of "non-profit making institutions serving households" e.g. second- and third-level education institutions. The investment income of life assurance and pension funds is also included in the national accounts concept of "personal disposable income", but is not included in survey measures of household disposable income. Further differences between the two measures arise because the national accounts concept includes certain

non-cash transfers and imputed rent from owner-occupation of housing, and the household figure excludes the institutional population.

A detailed study in the UK of the relationship between income in the Family Expenditure Survey and national accounts aggregates, taking into account the differences in definitions and concepts outlined above, was undertaken by Atkinson and Micklewright (1983). They found that when the appropriate adjustments had been made, divergences in the figures for earnings and social security benefits were relatively small. For self-employment and investment income, they emphasised the role of under-representation (especially of top incomes) due to differential non-response, as well as understatement, in explaining the remaining discrepancy between the survey-based figure and the adjusted national accounts total.

One simpler check on the overall representativeness reliability of the income data in the ESRI survey is based on a comparison of sample and population distributions of entitlements to health services. Eligibility status for public health services depends on income. The sample and population proportions of medical card holders (category I), those entitled to a hospital services card (category II), and others (category III) are in fact found to tally quite closely. About 34 per cent of persons in the sample were covered by a Medical Card, compared with 38 per cent in the population — part of the difference being attributable to the exclusion of the institutional population from the survey. The percentage of persons in the sample in entitlement Category III (on the basis of their reported income) was 14 per cent, close to the 15 per cent of the population in this category.

#### 4.12 *Summary*

This chapter has outlined the information collected by the ESRI Survey for the analysis of poverty, income distribution and the usage of State services. The wealth of information available for the 3,300 households and 8,200 individuals who responded provides an unprecedented resource for the analysis of poverty and social security in Ireland. Detailed information has been gathered on the components of households' and individuals' incomes, housing tenure and costs, indicators of households' standards of living, debts and arrears, savings and assets. As well as this wide range of objective information related to poverty and social security, the survey has collected new information on respondents' subjective response to their situations, and on their opinions regarding poverty and related issues. Taken together, this information will allow the analysis of the nature and extent of poverty, and of the forces at work in transmitting and producing poverty, to proceed on a much firmer basis than has been possible up to now.

The nature of the survey, the response, post-sample reweighting and representativeness of the survey were discussed. The response rate was considered satisfactory for an onerous survey dealing with some particularly sensitive topics.

When compared with data from external sources, the sample appeared to represent the population adequately in terms of a number of key variables.

The income and income recipient concepts to be employed were also described. The income information and concepts accord closely with those employed in the Household Budget surveys and the UK Family Expenditure Surveys. The data gathered allow both the household and the narrower tax unit to be used as the recipient unit for analysis, and both are employed in the present study. While it is difficult to find satisfactory external sources against which to assess the reliability and representativeness of the income data, the sample corresponds closely with mean income in the 1987 Household Budget Survey and with the population proportions in the three income-based entitlement categories for public health care.

## Chapter 5

### *THE EXTENT OF POVERTY: AGGREGATE RESULTS USING PURELY RELATIVE POVERTY LINES*

#### *5.1 Introduction*

In critically reviewing the methodological issues which arise in attempting to measure poverty, in Chapter 2, it was argued that a variety of approaches provide different perspectives and are of value. No one method, and no simple answer, can reflect the complex nature of the phenomenon being studied. The data gathered in the ESRI survey, as described in Chapter 4, offers an unprecedented opportunity to explore a range of analytic approaches with a common set of households. In this and the next chapter two of these approaches are applied: these are the purely relative poverty line method, dealt with in the present chapter, and the consensual income poverty line approach, the subject of Chapter 6.

The deprivation indicator method of deriving a poverty line was also discussed in Chapter 2. The pattern revealed by a range of such indicators, and what can be learnt from them, are the subject of Chapter 8. However, in the present study these indicators are not used as the basis on which to derive an aggregate measure of poverty: their possible use in that context, and the issues to which this gives rise, are among the topics discussed in Chapter 8. Another of the methods reviewed, the "official poverty line" approach, is not used in this study in measuring poverty because of the shortcomings emphasised in Chapter 2. Rather, we concentrate in measuring poverty on standards independent of the social welfare system. In assessing the effectiveness of that system in reaching its own objectives, though, in Chapters 10 and 11, the safety net levels of support are used as measures of the system's own minimum income standards rather than as poverty lines.

In this chapter, the purely relative poverty line approach is applied to the ESRI sample to derive a range of relative income thresholds and quantify the extent to which people fall below them. A major advantage of the approach is that it can also be applied in an identical way to data for earlier years, from the 1973 and 1980 Household Budget Surveys. This allows an extremely valuable comparison over time to be made, which is also described here. Limited comparisons with other countries are also possible using this approach, and subject to considerable qualification these are also discussed. The characteristics of the

households falling below the thresholds and how these are changing over time are obviously of great importance, both in trying to understand the forces at work and framing policy responses, and this merits an in-depth analysis described separately in Chapter 7.

The present chapter focuses on the aggregate pattern, and begins with a discussion of the purely relative poverty line approach itself and the way it is applied here, in Section 5.2. Section 5.3 presents the aggregate results on the numbers falling below a range of relative poverty lines in 1987, on the basis of the household recipient unit. Section 5.4 assesses the implications of using the narrower family unit. Section 5.5 looks at trends over time, on the basis of a comparison with the 1973 and 1980 HBS. In doing so, the importance of going beyond simply counting the numbers below a poverty line, to use summary measures which also reflect the intensity of poverty, is emphasised and illustrated. Section 5.6 compares the results for Ireland with those available on a similar basis for other countries, and Section 5.7 summarises the main findings of the analysis.

### 5.2 *Purely Relative Poverty Lines: The Methodology*

The purely relative poverty line approach bases an income poverty line simply on a particular proportion of the mean or median income in the population or in the sample being analysed. The most common procedure in applying the method has been to take half the mean or median as the poverty line. However, as emphasised in Chapter 2, this is arbitrary, and the method itself provides *no* basis on which to select a particular cut-off. The use of a single line is also subject to the disadvantages also stressed there, that the conclusions reached – in terms of the characteristics of the poor or trends over time, for example – may be viewed as highly dependent on the particular line chosen.

The approach adopted here, therefore, is to employ not a single line but a number of relative cut-offs. This allows the sensitivity of the results to the location of the poverty line to be assessed, and allows much firmly-based conclusions to be reached. The cut-offs employed are 40 per cent, 50 per cent and 60 per cent of mean equivalent income. A range of cut-offs rather than a single poverty line (though based on social security support rates) was used in Rottman, Hannan and Hardiman, Wiley's (1982) Irish study for the same reasons, following Layard *et al.*'s report for the UK Royal Commission on the Distribution of Income and Wealth (1978). Studies using the relative poverty line approach and employing 40 per cent, 50 per cent and 60 per cent thresholds rather than just the 50 per cent one include the cross-country study for the EC Commission by O'Higgins and Jenkins (1988), and the analysis of the Luxembourg Income Study (LIS) cross-national data base by Buhman *et al.* (1988).

Both mean and median income have been used as the basis for relative poverty

lines elsewhere. For example, mean income forms the basis of recent official British figures on families at low incomes, and of the EC study by Jenkins and O'Higgins, while Buhman *et al.*'s analysis of the LIS data and Ringen's (1988) estimates for Sweden employ the median. Mean income has the advantage of being more easily understood in presenting the results, and can be seen as broadly reflecting the general standard of living in the community. The argument for using the median is that the mean will be influenced by very high incomes which have little relevance for "ordinary" living standards (see for example Fuchs (1967) who originally proposed the use of the median). This could be important if the income distribution was particularly highly skewed and/or was shifting sharply over time.

In practice, the mean and the median tend to follow a very similar trend over time, and it would be difficult to justify a strong preference for one rather than the other as a better indicator of general living standards in an economy such as Ireland. The median will almost always be below the mean and thus a benchmark calculated as for example 50 per cent of the median will be below the corresponding line based on the mean. However, the particular proportions used are themselves arbitrary, as already made clear. The use of a number of proportionate cut-offs is intended to reflect the patterns over a range of income levels, rather than having particular significance in themselves. In the present study the mean is used as the basis for these cut-offs, since it is easily understood as a measure of general living standards. Reference is also made however to the difference which using the median instead would make.

The income recipient unit we use in applying relative poverty lines is principally the household, though later in the chapter the effect of using the narrower tax unit is also examined. It is then critical that the different needs of households of differing size and composition be taken into account. The simplest way to do so would be to treat each individual as having equal needs, and divide household income by the number of members to get income per capita. However this takes no account of the fact that persons at different ages are not equivalent in terms of needs, and that there may be economies of scale in consumption — two people may be able to live more cheaply in one household than separately, for example.

We therefore employ the customary approach, whereby adult equivalence scales are used. These set out relativities between different household types, which allow them to be converted to a comparable basis. If, for example, a single person living alone is taken to equal 1, a couple living together may be attributed the value 1.7. *Equivalent income* is then calculated by dividing total household income by the equivalence scale for the household type in question. If the 2-adult household in the example has twice the income of the single adult household

— i.e., the same income per person — then equivalent income will be higher for the larger household, reflecting economies of scale.

The issue must then be faced as to what the appropriate relationship between different household types is — which set of equivalence scales is to be chosen? This is a complex and quite controversial research topic in itself. No consensus has emerged from research internationally on an appropriate methodology for developing equivalence scales, and an extremely wide spectrum of scales has been applied in practice. (A comprehensive review of this literature is provided by Whiteford, 1985.)

For Ireland, a number of different sets of scales have been used in previous research, as discussed in Chapter 3. Some have been based on the relativities implicit in the rates of payment provided by the social welfare system (see Rottman, Hannan *et al.*, 1982; Murphy, 1984; Roche, 1984; Rottman and Reidy, 1988), while others have made use of scales developed elsewhere (Fitzgerald, 1981). Recently, results from the first study to estimate equivalence scales based on the expenditure patterns of Irish households have been published (Conniffe and Keogh, 1988). This used the 1980 HBS expenditure data to estimate the "cost of children" — the extra income a couple with children would require in order to attain the same standard of living as a couple without children. It employs the Stone-Geary linear expenditure system, and differentiates between children of different ages.

Conniffe and Keogh cover children only, not the relativities between households with different numbers of adults. They also employ a specification producing scales which vary with the income level involved.<sup>11</sup> It is intended to make use of these results in further research focusing specifically on child poverty. Here, in order to cover all household types and to facilitate comparisons with results elsewhere, we necessarily employ a more *ad hoc* approach. This involves using not one but a number of equivalence scales. This permits the sensitivity of particular results to the precise scales adopted to be assessed. Results which hold over all the scales can therefore be put forward with a good deal more confidence than those based on one set of scales assumed to be appropriate.

The three sets of scales used here are as follows:

- (A) The scales used in studies for the EC Commission and in the cross-country element of our own EC project, where
- the household head is 1;
  - each additional adult is 0.7;
  - each child is 0.5.

<sup>11</sup>The specification produces an estimate of the "cost of a child" in nominal terms, which then represents a different proportion of income for households at different income levels. Most of the equivalence scales applied in empirical studies of poverty and income distribution have been simpler, employing a relativity between households of different types which does not vary with income.

- (B) A scale allowing less for additional adults and children than A, where the household head is 1; each additional adult is 0.6; each child is 0.4.  
(This is similar to scales derived from the UK Supplementary Benefit Scheme rates of support and widely used in the analysis of poverty and income distribution there.)
- (C) A scale based broadly on the relativities implicit in the Unemployment Assistance/Supplementary Welfare Allowance schemes (including Child Benefit), where the household head is 1; each additional adult is 0.66; each child is 0.33.

In order to facilitate comparison with the results from the Household Budget Surveys, "Child" is in this context taken to be those under 14 years of age.

These scales cover a considerable range, and in broad terms encompass those adopted in previous Irish research on poverty and income distribution.<sup>12</sup> Most emphasis may perhaps be due to scale C, since it is derived from specifically Irish sources. This should not be over-stressed though, given that basing scales on those implicit in the social security system is not a particularly satisfactory procedure, for reasons analogous to the objections to the "official poverty line" approach set out in Chapter 2. It is therefore important to assess at all stages the sensitivity of particular results to the scale employed, and the range of scales used here allows this to be done.

Using each of these scales, the number of adult equivalent units in each household is calculated, and equivalent income then determined. The mean equivalent income over all households in the sample is calculated, and the relative poverty lines are then 40 per cent, 50 per cent and 60 per cent of the mean.

The income concept used is disposable income, defined as income from work and property, plus cash social welfare transfers, minus income tax and employee PRSI contributions. Disposable income defined in this manner corresponds with the concept employed by the CSO in the HBS. Superannuation contributions by employees are included in disposable income, though it is intended to examine the impact of treating them separately in the future. Likewise the imputed rent attributable to owner occupation is not included in income at this stage, but will be the subject of further analysis.

<sup>12</sup>See Chapter 3 Section 3.4 for discussion of the equivalence scales used in previous Irish studies.



### 5.3 Relative Poverty Lines: Aggregate Results for 1987

Mean disposable weekly income for the households in the ESRI sample was £198. When adjustment was made for differences in household size and composition using the three sets of equivalence scales, mean income per adult equivalent was found to be:

- £79.5 using scale A;
- £86.4 using scale B;
- £85.5 using scale C.

On the basis of these means, the relative poverty lines may be derived. Concentrating first on the most commonly-used 50 per cent line, this produces poverty cut-offs of between £39.7 and £43.2 for a single adult household, depending on the equivalence scale used. For other household types, the poverty line in nominal terms is simply this figure multiplied by the number of adult equivalent units in the household. For a 2-adult plus 2 children household, for example, with scale C the number of equivalent units for this household type is 2.32. The 50 per cent relative poverty line for this type of household is thus  $(£42.75 \times 2.32) = £99$ .

When the 50 per cent line is applied, with the three variants because three distinct sets of equivalence scales are used, the number of households in the ESRI sample below the line is as shown in Table 5.1. Depending on the scale used, between 17½ per cent and 19 per cent of households are below this line. Focusing not on households but on the persons in them, the table also shows that between 20 per cent and 23 per cent of all persons in the sample were in these household below the 50 per cent line.

Table 5.1: 50 Per Cent Relative Poverty Line, With Three Sets of Equivalence Scales, Applied to ESRI Sample

	Equivalence Scale		
	A	B	C
Percentage of households/persons below the line:			
Percentage of households	18.9	18.5	17.5
Percentage of persons	22.9	21.2	19.8

These results show first of all that while the exact equivalence scale employed does make some difference to the percentages below the line, the variation is not substantial enough to seriously alter the overall picture. Secondly, the percentage of persons below the line is greater than the percentage of households,

irrespective of the scale used — “poor households”, defined in this way, must be larger than average. In fact, while average household size in the sample as a whole was 3.6 persons, the average for those below the 50 per cent line was about 4.2.

Broadening now to the other two relative poverty lines, Table 5.2 shows the percentage of households and persons below the 40 per cent and 60 per cent lines, calculated in the same manner and using the three sets of scales as before. Again, the equivalence scale used makes some difference, particularly at the 40 per cent line. The percentage of *persons* in households under each line is still greater than the percentage of households under the line/scale combination in question — these households are consistently larger than average. The difference between the percentage of persons and of households below the line is greatest for equivalence scale A, which incorporates the largest allowance for the needs of extra adults and children of the three sets used. This means that equivalent income for larger households is lower using this than the other sets of scales, so more of the large households fall under the three poverty lines. Similarly, this scale produces a higher percentage of persons (though not of households) under each of the three poverty lines than the other two scales.

Table 5.2: *Alternative Relative Poverty Lines Applied to ESRI Sample*

<i>Percentage of households/persons below line:</i>	<i>Equivalence Scale</i>		
	<i>A</i>	<i>B</i>	<i>C</i>
<i>40 per cent poverty line:</i>			
Percentage of households	10.0	8.9	7.5
Percentage of persons	12.8	10.5	8.2
<i>60 per cent poverty line:</i>			
Percentage of households	29.0	30.5	30.0
Percentage of persons	33.5	32.2	31.4

Clearly, there is a very considerable difference between the numbers falling below the 40 per cent, 50 per cent and 60 per cent relative poverty lines, irrespective of the equivalence scale used. Since the ratios chosen are essentially arbitrary, there is no basis within the method itself on which one of the lines may be selected as “the” poverty line. It is useful, though, to put the income levels involved into perspective. The 40 per cent line incorporates, for a single adult household, a cut-off of between £32 and £34.5 per week, depending on

the scale used. At the time of (most of) the survey, such a person would have received £33 per week under the Supplementary Welfare Allowance scheme, and almost £37 on the long-term urban rate of Unemployment Assistance.<sup>13</sup> The 50 per cent line entails levels of £40-43 per week for a single adult, while such a person would have received £41 per week on flat-rate Unemployment Benefit (with full contributions). The 60 per cent line allows between £48 and £52 per week to a single adult: this lies between the £45.75 and £53.34 then payable in non-contributory and contributory Old Age Pensions respectively.

These results illustrate the extreme sensitivity of the measured number "in poverty" to the precise location of the poverty line. Within the relatively narrow equivalent income range covered, a large proportion of the population is concentrated (as shown in Figure 5.1). Thus, moving from the 40 per cent to the 60 per cent line — an increase of only about £17 per week in the poverty line for a single adult — increases the percentage of persons below the line from about 8-10 per cent to 31-33 per cent. The gap in nominal terms between the 40 per cent and 60 per cent lines is of course greater than this for larger household types. For a 2-adult plus 4 children household, for example, the comparison is between a 40 per cent line of about £100 and a 60 per cent line of about £150 (using scale C for illustration). None the less the sensitivity of the number found to be in poverty to the exact location of the poverty line over a relatively narrow range is to be emphasised.

As noted above, some studies have used the median rather than the mean as the basis for relative poverty lines. The median is invariably below the mean of actual income distributions, and in the case of the ESRI sample median equivalent disposable income is about 20 per cent below the corresponding mean, for each set of equivalence scales. Given the concentration of households in a relatively narrow income range just referred to, this means that applying the *same* proportions to the median — i.e., taking 40 per cent, 50 per cent and 60 per cent — rather than the mean would produce substantially lower numbers below each proportionate cut-off. Using equivalence scale A, for example, about 4½ per cent of persons in the sample are below 40 per cent of median equivalent income, 12 per cent are below the 50 per cent cut-off, and 20 per cent are below the 60 per cent one. These figures compare with the results using the means in Tables 5.1 — 5.2 above, where 13 per cent were below the 40 per cent threshold, 23 per cent below half mean income, and 33 per cent below the 60 per cent line. However as emphasised in the earlier discussion, the particular proportions of mean or median income used in deriving relative poverty lines are themselves a matter of choice, the method itself provides no basis in which

<sup>13</sup>The social welfare payment rates quoted here applied up to July 1987, while the survey was completed only in September, but most of the respondents were interviewed before the increase in rates in July.

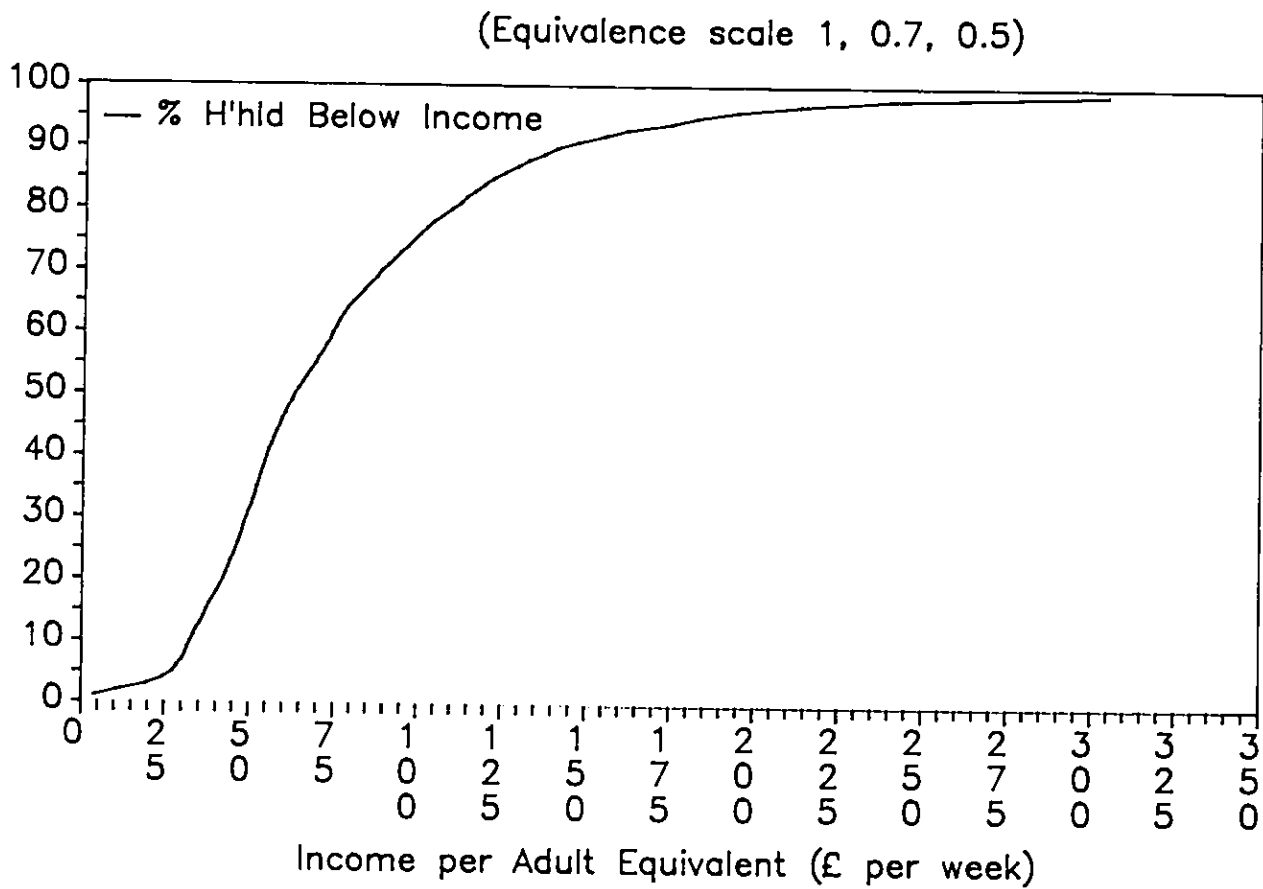


Figure 5.1: Households by Equivalent Disposable Income, 1987

to look at 40 per cent, 50 per cent and 60 per cent rather than any other proportions. These particular ones are applied, with mean income, in the present study because they span a wide range of commonly applied standards; they are not necessarily the proportions which would be most useful if the median were the basis of the lines.

So far, the analysis has used the household as the income recipient unit. As discussed earlier, in reality income may not always be fully shared among all household members, and a narrower recipient unit may also be relevant. We now examine the impact on the relative poverty line results of using such a recipient unit.

#### 5.4 *Relative Poverty Lines Using Tax Units*

As discussed in Chapter 2, analysis at household level implicitly treats all members as if they had the same standard of living. It may in fact be the case that most income sharing within households takes place between married couples and their dependent children; older children, and other household members may be rather more financially independent. If this is so, then some household members may experience financial poverty, while others are above the poverty line. In order to explore the importance of this issue, we have conducted a relative poverty analysis at sub-household level. The unit chosen is commonly referred to in the international literature as the tax unit, and coincides with the income tax unit in Ireland when child tax allowances were in force, i.e., a single person or married couple, together with dependent children. A dependent child is defined here as aged below 15 or still in full-time education. Two-thirds of households in the sample contain just one tax unit, but 21 per cent contain two and 13 per cent contain three or more tax units.

The aggregate results when the three relative poverty lines were applied at tax unit level to the ESRI sample, using equivalence scale A, are shown in Table 5.3.

Table 5.3: *Percentage of Persons/Tax Units Below Relative Poverty Lines, ESRI Sample*

	<i>Percentage of Tax units</i>	<i>Percentage of Persons</i>
40 per cent line	12.4	12.8
50 per cent line	22.6	25.1
60 per cent line	32.8	35.4

*Note:* based on equivalence scale A.

The percentage of tax units falling below the relative income poverty lines is significantly greater than the proportion of households below each of the corresponding standards: 22.6 per cent of tax units as against 18.9 per cent of households at the 50 per cent line, for example (see Table 5.2). However, by definition, households contain at least as many persons as a benefit unit, and sometimes more; it is therefore technically possible for the percentage of tax units below an income standard to be higher than the percentage of households below that standard even when the two analyses identify exactly the same *persons* below the income standard.

A more relevant comparison focuses on the percentage of *persons* contained in households and in tax units identified as below the relative income poverty lines: this provides a common standard of comparison between the household and benefit unit calculations. The percentage of persons below the relative poverty lines on a tax unit basis in Table 5.3 may therefore be compared with the percentage of persons in *households* below the corresponding lines. From Tables 5.1 and 5.2 these can be seen to be 12.8 per cent, 22.9 per cent and 33.5 per cent for the 40 per cent, 50 per cent and 60 per cent lines respectively (using scale A). Thus, a slightly higher percentage of persons fall below the relative poverty lines on the tax unit basis, except at the 40 per cent cut-off, where the proportions are identical.

The factors underlying this pattern can best be illustrated by an example of a household containing two tax units, with one below the relative income poverty line, and the other above it. There are two possible reasons for differences between household and tax unit based counts of persons below a *given* income standard. First, the shortfall between the income of the first tax unit and the poverty line may be less than the excess of the other tax unit's incomes over the poverty line; in this case, at household level, it appears that there is no one below the poverty line. Second, the shortfall may be greater than the excess of the tax unit's income over the poverty standard; in this case it appears that the household as a whole is below the poverty line.

These factors are complicated by the fact that the mean equivalent incomes on which the relative poverty lines are based are also changed by the shift in the level of analysis. The sum of the mean equivalent incomes of all tax units in a household is below the corresponding equivalent income because there are now, in multiple tax unit households, more adult equivalent units per household, when each head of tax unit counts as 1, where before all adults except the head of household counted as 0.7 (using scale A). The results indicate that the cases where income shortfalls at tax unit level are masked at household level are much more common than cases where a shortfall in one tax unit pulls the whole household's income below the line. The exception to this rule is the 40 per cent relative poverty line, where the two factors net out. Even in this case, one should

note that the actual persons identified as being in poverty may differ under the two approaches.

In terms of the overall picture, then, the use of the narrow recipient unit does not appear to make a substantial difference. Neither the tax unit nor the household is unambiguously more appropriate, since the actual extent of income sharing — about which very little is known — probably varies a great deal across different households. It is important to keep in mind the implicit assumption of complete sharing when the household is used, and in assessing the impact of the social welfare system in Chapters 10 and 11 both units will be used.

For the present, we will continue to focus on the household unit, and pursue the relative poverty line approach. We have seen that the use of a range of poverty lines has the major advantage that results which hold consistently across all lines can be identified and put forward with considerable confidence. This is of particular relevance in looking at trends over time and comparisons with other countries, the topics examined in the next two sections. In first examining trends over time, the importance of broadening the measure of poverty beyond the simple headcount of persons below a particular line is also emphasised and illustrated.

### 5.5 *Relative Poverty Lines and Trends Over Time*

The relative cut-off approach is particularly useful in looking at trends over time, in that it can be readily applied to other data sets and comparable results derived. In this study, the relative poverty line method was also applied to the results of the Household Budget Surveys for 1973 and 1980, the only such surveys for earlier years covering both urban and rural areas. With the co-operation of the CSO, this analysis was carried out using information at household level, rather than relying on aggregated published information. Access to the information held by the CSO, was on a basis which ensured the absolute preservation of confidentiality for the respondents.

The three relative poverty lines, again with variants of each using the equivalence scales A, B, and C, were calculated for the two HBS samples. These lines are of course relative to mean income in the sample in question. Mean *disposable household income* was £36.16 per week in the 1973 HBS and £106.45 per week in the 1980 one. Mean *equivalent* income was about £14-15 in 1973 and £43-46 in 1980, depending on the scale used.

Focusing first on the 50 per cent line once more, Table 5.4 compares the percentages of households and persons under (the three variants of) this line in the ESRI survey and the two HBS samples. The pattern over time is consistent across the three sets of scales: the percentage of households below the 50 per cent line fell between 1973 and 1980 but rose between 1980 and 1987, while the percentage of persons in these households rose steadily over the period. The

Table 5.4: 50 Per Cent Relative Poverty Line Applied to ESRI Sample 1987 and HBS 1973 and 1980.

<i>Percentage of households/persons below 50 per cent line:</i>			
	<i>Equivalence Scale</i>		
	<i>A</i>	<i>B</i>	<i>C</i>
<i>Percentage of households:</i>			
1987 ESRI	18.9	18.5	17.5
1980 HBS	17.2	17.6	16.8
1973 HBS	18.2	17.9	17.7
<i>Percentage of persons:</i>			
1987 ESRI	22.9	21.2	19.8
1980 HBS	19.2	17.4	16.2
1973 HBS	17.8	15.9	14.8

increase in the percentage of persons below the line is quite substantial — about 5 per cent of all persons irrespective of the equivalence scale used, which represents a rise of up to one-third on the 1973 level. Most of this increase took place between 1980 and 1987. For 1973-1980, since fewer households fell below the line in the latter year, the increase in the percentage of persons below the line reflects an increase in the average number of persons in these households. For the 1980-87 period, though, both an increase in the percentage of households below the line and a rise in the size of these households contributed to the substantial increase in the percentage of persons falling below the 50 per cent line.

To see whether these findings also hold over other relative poverty lines, Tables 5.5 and 5.6 make the same comparison over time using the 40 per cent and 60 per cent relative lines respectively. The 40 per cent line reveals a less consistent picture than the 50 per cent line. Perhaps most importantly, using equivalence scale C there is no longer an increase in the percentage of persons below the line between 1980 and 1987. Such an increase is still seen with the other two scales, though, and is also found over the entire 1973-87 period for all three scales. For the percentage of households in poverty — which is less important in evaluating welfare implications than the percentage of all persons — the pattern over time now varies depending on the equivalence scale used.

Using the 60 per cent line, Table 5.6 shows a steady increase from 1973 — 1980 — 1987 in the percentage of persons under the cut-off, similar to that found with the 50 per cent line. Again, the increase took place for the most part between 1980 and 1987, and is substantial — at about 5-7 per cent of all persons. With this line, the percentage of households below the line also rises between 1973-80 and 1980-87, though mostly in the later period.



Table 5.5: 40 Per Cent Relative Poverty Line Applied to ESRI Sample 1987 and HBS 1973 and 1980.

	Equivalence Scale		
	A	B	C
<i>Percentage of households/persons below 40 per cent line:</i>			
<i>Percentage of households:</i>			
1987 ESRI	10.0	8.9	7.5
1980 HBS	8.5	8.6	8.0
1973 HBS	8.0	8.5	8.3
<i>Percentage of persons:</i>			
1987 ESRI	12.8	10.5	8.2
1980 HBS	10.4	9.3	8.5
1973 HBS	8.5	7.5	6.8

Table 5.6: 60 Per Cent Relative Poverty Line Applied to ESRI Sample 1987 and HBS 1973 and 1980

	Equivalence Scale		
	A	B	C
<i>Percentage of Households/persons below 60 per cent line:</i>			
<i>Percentage of households:</i>			
1987 ESRI	29.0	30.5	30.0
1980 HBS	27.9	27.9	27.6
1973 HBS	27.8	27.0	26.0
<i>Percentage of persons:</i>			
1987 ESRI	33.5	32.2	31.4
1980 HBS	29.7	27.6	26.7
1973 HBS	28.7	26.4	24.5

To summarise the main results of this comparison over time, then:

- (i) between 1973 and 1987, the percentage of persons in households falling below each of the relative poverty lines rose, irrespective of the equivalence scale used;<sup>14</sup> this was primarily because these households were larger

<sup>14</sup>Roche (1984) applied what is in effect a relative poverty line to 1980, and found, in contrast to the results described here, a substantial fall in measured poverty over the period. The differences between the two analyses are discussed in detail in Nolan and Callan (1989a) which highlights Roche's use of the growth in real national income (as well as the increase in the CPI) to uprate the 1973 poverty line to 1980. This gives a considerably lower poverty line for 1980 than our results, which are based on average income in the 1980 sample itself. Roche's indexation procedure appears less appropriate, given the conceptual and other differences between national income and the income of households.

relative to the average in the later year, rather than to more households falling below the lines;

- (ii) between 1980 and 1987, there was a particularly substantial increase in the percentage of persons in households falling below the 50 per cent and 60 per cent relative lines, irrespective of the equivalence scale used; this reflected both an increase in the (relative) size of these households and an increase in the percentage of households below the lines; the percentage of persons below the 40 per cent line rose with two of the sets of equivalence scales and fell slightly with the third.
- (iii) over the entire period 1973-1987, the percentage of persons in households falling below each of the relative poverty lines rose, irrespective of the equivalence scale used.

So far, this analysis has focused on the percentage of households/persons below the relative lines. However, as noted in Chapter 2, this "headcount" of the poor has serious limitations and some perverse features as a summary measure of poverty. Ideally, we want to take into account not only the number falling below a particular line, but also the depth of their poverty. The use of a range of lines rather than a single cut-off helps to provide this perspective, showing for example how many of those below 50 per cent of mean income are/are not also below 40 per cent. However, it is also important to supplement the headcount with more sophisticated aggregate measures which reflect how far people are falling below the poverty line in question. A variety of such measures has been proposed in recent years, as detailed in the references mentioned in Chapter 2.

We have applied one particularly attractive set of aggregate measures of this type, developed by Foster, Greer and Thorbecke (1984) and Foster and Shorrocks (1988), to the data for the 1973 and 1980 HBS and the 1987 ESRI sample. (The use of these measures and their application to the 1980 and 1987 data are described in more detail in Nolan and Callan, 1989a). Using their notation, where

$$y = (y_1, y_2, y_i, \dots, y_n)$$

is a vector of household incomes in increasing order,

$z (>0)$  is the poverty line,

$q$  is the number of persons with incomes below  $z$ , and

$n$  is the total number of persons,

then  $q/n$  is the headcount measure of the proportion of persons in poverty, which they term  $P_1$ .

Now define

$$g_i = (z - y_i),$$

the income shortfall of the  $i$ th person. The sum of all these income gaps is

$$\sum_{i=1}^q g_i$$

the aggregate poverty gap. This is a money amount, and is particularly useful in assessing the effectiveness and efficiency of the social welfare system in alleviating poverty, as shown in Chapter 11.

In measuring poverty and making comparisons between distributions, though, it is helpful to normalise by expressing the gaps as a proportion of the poverty line, to yield

$$\frac{1}{qz} \sum_{i=1}^q g_i$$

termed by Sen the "income gap ratio". This reflects only the shortfalls of the poor, though, not the number or proportion of poor people. A measure incorporating both and termed by Foster and Shorrocks (1988) the "per capita income gap",  $P_2$ , is given by

$$\frac{1}{nz} \sum_{i=1}^q g_i$$

which is a product of the headcount and the income gap measures.

While this takes into account the income gaps of the poor as well as the number below the poverty line, it is insensitive to the distribution of income among the poor: a transfer from a poor person to a richer one when the latter is (and remains after the transfer) below the poverty line will not affect the measure. Foster *et al.* (1984) proposed a measure

$$P_3 = \frac{1}{nz^2} \sum_{i=1}^q g_i^2$$

which weights the shortfalls of the poor by those shortfalls themselves and is thus "distributionally sensitive". (Sen (1976) proposed a weighting which is based instead on the rank of the household.) Foster and Shorrocks (1988) have explored the nature of the poverty orderings provided by these measures, and illustrate some particularly desirable features (see Nolan and Callan, 1989a).

Calculating these more sophisticated aggregate poverty measures using the set of relative poverty lines and equivalence scales already described, a comparison between 1973, 1980 and 1987 is possible. Table 5.7 shows the measure  $P_2$ , the per capita income gap, for each year for each relative line/equivalence scale combination. Table 5.8 shows the corresponding results for the "distributionally sensitive" measure  $P_3$ . (Nolan and Callan (1989a) present figures for 1980 and 1987 on both a household and person basis: here we concentrate on the latter, which is more relevant for assessing welfare implications.)

Table 5.7: *Per Person Income Gaps ( $P_2$ ) Using Relative Poverty Lines and Different Equivalence Scales, 1973, 1980 and 1987*

Equivalence scale	Relative Poverty Line								
	40%			50%			60%		
	1973	1980	1987	1973	1980	1987	1973	1980	1987
A	0.022	0.031	0.036	0.043	0.054	0.065	0.075	0.085	0.100
B	0.020	0.029	0.033	0.039	0.049	0.058	0.068	0.078	0.093
C	0.018	0.027	0.030	0.036	0.046	0.054	0.062	0.074	0.087

Table 5.8: *Distribution-Sensitive Poverty Measure ( $P_3$ ) Using Relative Poverty Lines and Different Equivalence Scales, 1973, 1980 and 1987*

Equivalence scale	Relative Poverty Line								
	40%			50%			60%		
	1973	1980	1987	1973	1980	1987	1973	1980	1987
A	0.011	0.018	0.022	0.018	0.019	0.026	0.031	0.040	0.048
B	0.010	0.016	0.021	0.017	0.024	0.030	0.028	0.036	0.044
C	0.009	0.016	0.021	0.015	0.023	0.029	0.026	0.034	0.041

The results for both  $P_2$  and  $P_3$  show a consistent increase in the poverty measure between 1973-1980 and 1980-1987, with the cumulative increase from 1973 to 1987 being substantial (relative to the level of the measure in the first year). The more sophisticated poverty measures thus show an even stronger and more robust pattern than the simple headcount, holding across a wide range of relative poverty lines and equivalence scales. When the intensity of poverty as well as the numbers involved are taken into account, an unambiguous increase in poverty using relative poverty lines is shown by these measures over the period.

In evaluating the significance of these results the nature of the exercise must be emphasised. Purely relative poverty lines, by definition, concentrate solely on the position of those at low incomes relative to the average: they take no account of how that average is evolving. Over the period in question, though, there was a sharp contrast between 1973-1980 and 1980-87 in terms of the growth of average income. In the earlier period, average real disposable household income rose by about 8 per cent (comparing the 1973 and 1980 HBS samples), and average real; *equivalent* disposable income rose by about 11 per cent<sup>15</sup>. Between

<sup>15</sup>Average disposable household income rose from £36.16 per week in 1973 to £106.45 in 1980, or by 194 per cent. Average disposable equivalent income rose by about 202-204 per cent depending on the equivalence scale used. The CPI rose by 173 per cent.

1980 and 1987, by contrast, average real disposable household income fell slightly.<sup>16</sup>

The increase in measured poverty using relative poverty lines between 1973 and 1980 was thus against the background of rising real income levels, so that the poverty lines being applied are themselves rising in real terms. Between 1980 and 1987, though, while again a rise in measured poverty was registered by most of the poverty lines with the headcount measure and all the lines with the more sophisticated measures, average disposable incomes and thus the poverty lines themselves were falling. This highlights a general issue in the use of purely relative poverty lines to measure changes over time. As emphasised by Sen (1983), in focusing purely on the relative position of the poor such measures miss the impact of a fall in general prosperity: "The tendency of many of these measures to look plausible in situations of growth, ignoring the possibility of contraction, betrays the timing of the birth of these measures in the balmy sixties, when the only possible direction seemed forward" (p. 157).

Focusing on purely relative poverty lines alone in making comparisons over time may therefore fail to reflect important aspects of relevance in assessing changes in the extent and intensity of poverty. This is not to question the essentially relative basis of the concept of poverty as being founded in the living standards and expectations of a particular society at a particular point in time. However, the purely relative poverty line method is a crude and rigid way of operationalising a subtle notion, and may need to be complemented by other information if the complete picture is to be seen. At a minimum, it is necessary to distinguish between the implications of a rise in poverty in purely relative terms at a time when living standards are rising and the impact of a similar increase when living standards are falling. In the present context, the effect of the increase in relative poverty in Ireland in 1980s on the living standards of the poor must have been considerably more serious than in the 1970s.

This is not to argue in favour of concentrating instead on an "absolute" or fixed standard against which to measure poverty over time. Over any significant period of sustained growth, such a standard will become increasingly irrelevant to common conceptions of what constitutes poverty, as living standards and expectations rise. Purely relative poverty lines have the great merit of clarity: they convey clearly what is happening over time in terms of a standard linked

<sup>16</sup>Average disposable household income was 90 per cent higher in the 1987 HBS than in the 1980 one, on the basis of the summary 1987 results just published, while the CPI rose by 91 per cent. A small fall in both average real disposable income and real equivalent disposable income over the period is shown using the ESRI sample means for 1987 — equivalent income from the HBS for that year is not yet available. The relationship between the 1987 HBS and ESRI average disposable income figures was discussed in Chapter 4 above.

firmly and explicitly to average income, and this provides an invaluable benchmark. In practice, ordinary living patterns and expectations may not change in line with average income in such a mechanistic way. Measuring the way in which the extent, and equally important the *meaning*, of poverty is changing requires a more wide-ranging analysis. Purely relative lines provide an essential starting-point in analysing such changes.

Analogous issues arise in making poverty comparisons not over time for a given country, but between countries at a particular point in time. The use of purely relative poverty lines in making such comparisons between Ireland and other developed countries is the subject of the next section.

### 5.6 *Relative Poverty Lines and Cross-Country Comparisons*

Cross-country comparisons of poverty and income distribution face enormous obstacles. The first is the major problem of obtaining comparable data. The data produced for different countries are from various sources — surveys, tax and other administrative records or a combination of the two — and differ in content and coverage. Secondly, when making poverty comparisons in particular, critical conceptual issues as to how to make a meaningful comparison must be addressed.

One straightforward way in which to make such comparisons is through purely relative income poverty lines. Cross-country studies using this approach include several for the EC and the OCED and those based on the Luxembourg Income Study database (Buhman *et al.*, 1988). The LIS has brought together micro-data sets for different countries which are as closely co-ordinated as possible in terms of the coverage and income concepts involved. As yet Irish data are not included — though it is expected that the ESRI sample will in time become part of the data bank — and Ireland is not included in the comparative results produced.

Published studies applying the relative poverty line approach differ not only in the nature of the data but also in the precise methodology used and in the equivalence scale(s) adopted. It is therefore difficult to make an exact comparison with the results for Ireland presented above. Such an exact comparison, to the greatest extent possible, between Ireland and Britain is examined in detail in Nolan and Callan (1989b). This involves the application to the ESRI sample of the precise methodology, including the equivalence scales, used in a recent British analysis by the DHSS of "Households Below Average Income", based on the annual Family Expenditure Surveys. Results on a basis closely corresponding to the British figures are derived, and a meaningful comparison can be made. (The Irish figures used in this comparison differ slightly from the

results presented above because of differences in detailed methodology and equivalence scales).<sup>17</sup>

The central results from this exercise are presented in Table 5.9. The British figures are for 1985, the most recent year currently available, and it should be emphasised that they refer not to the UK but to Great Britain — Northern Ireland is not included.<sup>18</sup> The table shows the percentage of persons falling below relative income thresholds ranging from 50 per cent to 100 per cent of average equivalent disposable income.<sup>19</sup> A higher proportion of persons is below each of these lines in Ireland than in Britain. This is particularly pronounced for the lower cut-offs: almost twice as high a proportion were below the 50 per cent relative line in Ireland.

Similar comparisons with countries other than Britain on the basis of closely matched data sources and methodology are not yet possible (though harmonisation with the LIS data set offers the prospect of such comparisons over a range of developed countries). However, it would appear from the available

Table 5.9: *Percentage of Persons Below Relative Income Cut-offs, Great Britain and Ireland*

<i>income cut-off; 1985 % of mean equivalent disposable income</i>	<i>Ireland 1987*</i>  <i>% of persons</i>	<i>Great Britain</i>  <i>% of persons</i>
50%	17.4	9.2
60%	28.5	20.1
70%	39.6	32.0
80%	48.9	43.1
90%	57.1	52.1
100%	63.8	60.7

\*The Irish figures differ from those presented earlier in the chapter due to differences in the detailed application of the relative poverty line method — see text.

Source: Great Britain: DHSS 1988 Table C1 Ireland: analysis of ESRI survey

<sup>17</sup>The DHSS analysis calculated the mean giving each individual rather than each household equal weight, and the equivalence scales used, though close to the set B used here, are not exactly the same.

<sup>18</sup>A separate analysis of Northern Ireland Family Expenditure Survey data, focusing on poverty and income distribution, is currently being carried out by V. Borooah at the University of Ulster.

<sup>19</sup>Following the British procedure, employee's superannuation contributions as well as income tax and social security contributions are now deducted in arriving at disposable income.

information that Ireland also has a higher proportion of the population below half mean income than most of our more developed EC partners, though less than Portugal and Greece<sup>20</sup>. On the basis of published results for other non-EC countries using the relative poverty line approach but based on median rather than mean income, Ireland also appears to have a higher proportion below half median income than Sweden, Norway or Switzerland, but less than the USA<sup>21</sup>.

In assessing the implications of these findings, issues somewhat analogous to those discussed in the context of comparisons over time arise. The purely relative approach obviously ignores differences in absolute standards of living across countries (as well as in the extent to which non-cash benefits are provided). However, such a thoroughgoing relativistic approach may not provide all the information we would wish to take into account in making a comparison of poverty in different countries. For example, even if a rich country is found to have more relative poverty than a much poorer one, the poor in the latter may still be regarded rather differently. If the average standard of living in the countries differ greatly, then what poverty *means* may also be quite different, and this may also be relevant to assessing the implications of poverty.

In discussing these issues, Nolan and Callan (1989b) suggest that the general approach recommended by Atkinson (e.g. 1985, 1987) to making comparisons of poverty and inequality between distributions may usefully be applied in this context. Atkinson emphasises the value of seeking strong and widely acceptable, if necessarily sometimes partial, rankings of distributions, accepting that a complete ranking on a precise measurement of the *difference* between two distributions may not be attainable on this basis. In making cross-country poverty comparisons, this could mean that ranking country A, with higher mean income and less poverty measured in purely relative terms than country B, as having less poverty than B should be generally acceptable. However, if country A has a higher mean income but also *higher* poverty measured in purely relative terms, then the ranking may have to be acknowledged as problematic. In either case, measuring the "distance" between the two distributions, rather than just ranking them, will require judgement about the weight to be given the relative versus the absolute standard of living of the poor in each country, on which there are legitimate differences in views.

<sup>20</sup>This conclusion is based on the results for EC countries produced by O'Higgins and Jenkins (1988), as well as the findings of the research teams in Belgium, the Netherlands and Luxembourg involved in the cross-country element of our own project for the EC.

<sup>21</sup>Buhman *et al.* (1988) present results based on percentages of median income and a variety of equivalence scales for countries in the LIS database (see Table 10). Differences in data sources and concepts make an exact comparison with Ireland problematic, in particular the fact that the LIS is based on annual rather than current income. A detailed comparison using harmonised concepts, with estimated annual incomes for Ireland, will be necessary before firm conclusions can be reached.



Considering the comparison between Ireland and other countries in this light, many of the countries which apparently have a smaller proportion of the population below relative poverty lines also have a higher mean income than Ireland. This is the case for Britain, for most of the richer EC countries, and for Sweden, Norway and Switzerland. Subject to the limitations of a comparison simply on the basis of the headcount with one relative poverty line, it may then be generally acceptable to conclude that these countries have less poverty than Ireland. Likewise, Portugal and Greece, which appear to have a higher proportion of their populations below relative lines, have lower mean incomes than Ireland, and may be viewed as having more poverty. This approach can therefore achieve a great deal in terms of ranking countries. This is, however, partial, some cases cannot be unambiguously ranked — for example, it appears that the USA may have a higher proportion under relative poverty lines (though this requires confirmation in a more detailed comparison) but also has a much higher mean income level than Ireland. Further, if we are trying to measure the “distance” between Ireland and a richer country with less relative poverty — such as Britain — the difference in purely relative terms may not be all we wish to take into account. We may also wish to give some weight to the fact that living standards are lower in Ireland — the poor are in some sense “poorer”.

The application of relative poverty lines in cross-country comparisons, while it does not provide all the answers in itself, represents an essential first step. It allows the comparison to be brought to the stage where such substantive issues such as the importance of absolute versus relative factors and the role of non-cash benefits are faced, on the basis of reliable and consistent results on the extent of purely relative income poverty. The purely relative comparisons noted here need to be developed — in particular by working towards harmonised databases and applying a range of relative lines and more sophisticated aggregate poverty measures. Comparisons of this sort, though they must be interpreted with care, are clearly of great value and are an indispensable starting-point.

### 5.7 *Conclusions*

In this chapter, the purely relative poverty line approach has been applied to the ESRI sample for 1987, as well as to the 1973 and 1980 Household Budget Survey samples. Income poverty lines based on average equivalent disposable household income in the samples were calculated, and the number of households and persons falling below them derived. A single poverty line was not used — the method provides no basis on which to select a particular line. Instead, 40 per cent, 50 per cent and 60 per cent of mean income, as well as three different sets of equivalence scales, were used to examine the numbers below a range of income thresholds.

The results for 1987 showed that households below 40 per cent of mean

equivalent income contained between 8-13 per cent of the persons in the sample, those below half mean income contained 17-19 per cent, and those below 60 per cent had 31-33 per cent of persons, with the precise figures varying with the equivalence scale employed. The income thresholds themselves were, for a single adult household, about £32-34 per week for the 40 per cent line, £40-43 for the 50 per cent line, and £48-52 for the 60 per cent line. For a couple with two children, the lines were about £80-85, £100-107 and £120-129 respectively.

The results thus show clearly the sensitivity of the measured poverty population to precisely where the poverty line is drawn within quite a narrow income range.

Comparing 1987 with the 1973 and 1980 Household Budget Survey results, the same methodology applied to the earlier years revealed that there was an increase in the percentage of persons below each of the relative poverty lines over the 1973-87 period. A consistent increase between 1973 and 1980 was recorded at each line, irrespective of the equivalence scale used. For 1980-87, though, the increase was larger than in the earlier period using the 50 per cent or 60 per cent line; the lowest, 40 per cent, line did not show a consistent rise with all equivalence scales.

The limitations of focusing purely on the numbers below a given poverty line were emphasised, and more sophisticated aggregate poverty measures were also calculated in order to take into account the extent to which people are falling below the line. These showed a consistent increase in measured poverty, at all poverty lines and equivalence scales, between 1973-80 and 1980-87.

Comparing Ireland with Britain using similar data sources and applying the same methodology to each, a higher proportion of the Irish population was found to be below a range of relative poverty lines. Tentative comparisons with other developed countries suggested that Ireland also has a higher proportion below purely relative income poverty lines than most of the other richer EC countries, as well as Sweden, Norway and Switzerland. Ireland appears to have a smaller proportion of the population below relative poverty lines than Portugal or Greece, and perhaps also the USA.

While the value of measuring poverty in purely relative terms was emphasised, the implications of the results have to be assessed with care. The particular relative cut-offs selected are arbitrary, and results which hold over a range of lines are much more valuable than those using any single line. In looking at trends over time or in making comparisons across countries, results on a purely relative basis do not tell the whole story. For example, the fact that relative poverty rose in Ireland between 1973-80 as well as 1980-87 has to be set against the background of significant growth in real incomes in the earlier period compared with stagnation in the later one. Similarly, relative poverty is not only higher in Ireland than in Britain, but living standards are of course lower. What poverty *means* changes over time and is not the same in countries with quite different living

standards. This must also be taken into account in making comparisons. Also, the extent to which the State provides services to those at low incomes may differ significantly across countries. Purely relative poverty lines provide an indispensable starting-point, and a basis on which to address these complexities.

This chapter has concentrated on measuring and analysing trends in relative poverty in Ireland at an aggregate level, without exploring the characteristics of those below the various poverty lines. This will form the subject of Chapter 7, which in examining the composition of low-income groups and how this has changed over time begins the process of attempting to understand the observed aggregate trends. First, though, the next chapter looks at an alternative approach to measuring aggregate poverty, the consensual income poverty line method, and presents the results of applying it to the ESRI sample.

## Chapter 6

### *AGGREGATE RESULTS USING CONSENSUAL INCOME POVERTY LINES*

#### *6.1 Introduction*

The consensual income poverty line approach, as outlined in Chapter 2, seeks to derive poverty lines for a particular society based on views in the population in question about minimum income needs. This does *not* involve merely classifying people on the basis of whether they consider themselves to be poor: rather, it aims to reflect a social consensus in the society about the income required to attain an acceptable living standard. Those developing this approach argue that it directly incorporates the relative nature of people's conception of poverty, and that it is democratic in allowing "the people" rather than experts to decide where the poverty line should be. It is, however, questionable whether the method as currently applied can actually be interpreted as measuring a poverty line on which there is a genuine social consensus.

Consensual income poverty lines have been developed primarily in the Netherlands and the US. Theoretical underpinnings for this approach have been built up since the 1970s, most importantly by Dutch researchers at Leyden and Tilburg (see Goedhart *et al.*, 1977 van Praag *et al.*, 1980, 1982, Kapteyn, van de Geer and van de Stadt, 1985, Hagenaaars, 1986). These have explored the way in which poverty lines may be based on respondents' evaluations of income levels, and the relationship between these subjective evaluations and welfare. A number of variants of the basic approach have been used, within which there are also varying degrees of sophistication.

In the present study, two distinct variants of the general method are applied. Both are based on sample responses to a question about the minimum income which people feel they themselves need "to make ends meet". The first method, developed by Dutch researchers, utilises all the responses in the sample to fit a relationship with actual income and derive a poverty line from this function. This, termed the Subjective Poverty Line (SPL) method, is dealt with in Section 6.2. The second method, developed and applied in Belgium, concentrates on a sub-set of the responses, from those who say they are having difficulty currently making ends meet. This, termed the CSP method (for the Centre for Social Policy at the University of Antwerp where it has been developed), is discussed and applied in Section 6.3. (Both these methods have been applied by the countries participating in the comparative element of our project for the EC Commission).

6.2 *The SPL Method*

A consensual income poverty line method has been developed since the late 1970s, and theoretical foundations in terms of utility theory elaborated, by researchers at Leyden and Tilburg. The simplest variant of this, the SPL method, is based on survey responses to a question of the following type:

“In your opinion, what would be the very lowest net weekly income that your household would need in order to make ends meet?”

This, termed the Minimum Income Question, produces for each respondent an income level  $y_{\min}$ . This variable has been shown to be related to the respondent’s actual income level and a number of other factors such as family composition. The SPL method first estimates this relationship

$$y_{\min} = f(y; x),$$

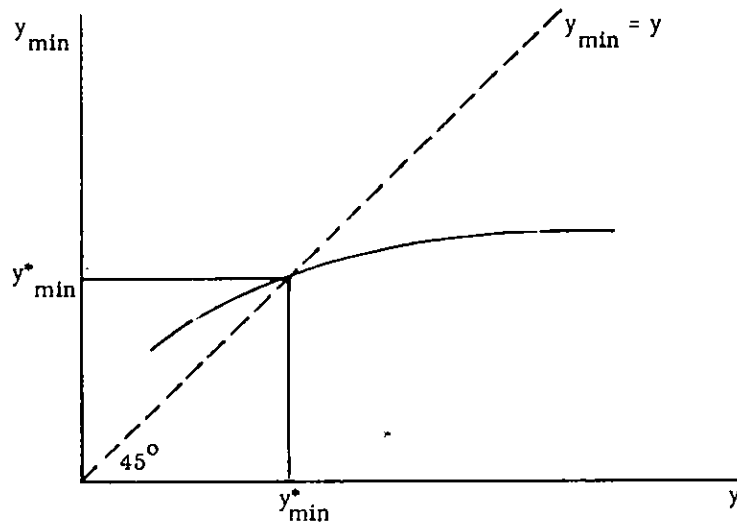
where  $y$  is actual (after tax) income and  $x$  is a vector of other factors, by regression. (In doing so, a logarithmic transformation is included because it has been found empirically to be preferable.) The function  $f$  is monotonically increasing in  $y$ , and there exists an income level  $y^*_{\min}$  defined by

$$y^*_{\min} = f(y^*_{\min}; x),$$

such that for all incomes  $y$  less than  $y^*_{\min}$ ,  $y < y_{\min}$ , and for all incomes  $y$  greater than  $y^*_{\min}$ ,  $y > y_{\min}$ .

This is illustrated in Figure 6.1 (for given  $x$ , e.g. a particular family size). As actual income rises, so does the respondent’s perceived minimum income

Figure 6.1: *The SPL Poverty Line*



required,  $y_{\min}$ . At low incomes, required income will often be above actual income, whereas at high incomes the converse is true. Thus the curve showing the (estimated) relationship between  $y$  and  $y_{\min}$  begins at low  $y$  above the 45° line, but at high incomes is below it. Where the curve cuts the 45° line,  $y_{\min}$  is equal to actual income  $y$ : this is taken to be the poverty line,  $y^*_{\min}$ , the point where families of this type can just make ends meet.

The level of  $y_{\min}$  for a particular respondent is influenced not only by actual income, but also by the range of other factors in  $x$  — Figure 6.1 focuses on a set of households which are identical in terms of these variables. Clearly, then, households with different characteristics will have the  $y_{\min}/y$  curve located differently, and thus will have different poverty lines. A variety of such variables, including size and composition of the family, educational background, geographical location, and information on the “reference group” of the household, have been included in the relationship in particular studies.

At this stage, though, we concentrate on what is the most important single influence, household size. This allows a national poverty line to be derived which distinguishes between households on the basis of their composition only — which is more relevant in the present context than poverty lines which also have different levels for different groups or geographical areas. (It also allows us to obtain results directly comparable to those being produced by the other research teams in the cross-country EC element of our project.)

A relationship of the following form is thus estimated:

$$\ln(y_{\min}) = b_0 + b_1 \ln(S) + b_2 \ln(y) + e$$

where  $S$  = household size and  $e$  is the error term. The household size variable used at this stage is quite crude, constructed simply as the number of persons in the household. (In the future, this will be elaborated to take into account, for example, the ages of household members.)

When this relationship is estimated for the households in the ESRI sample, the result is as follows ( $t$  — statistics are in parentheses below the coefficients):

$$\ln(y_{\min}) = 3.08 + 0.32 \ln(S) + 0.27 \ln(y)$$

(68.84) (25.65) (27.91)

$$\bar{R}^2 = 0.49$$

Taking a single adult household for illustration, this implies for example that if actual net household income were £50 per week, predicted  $y_{\min}$  would be higher, at £62. If actual household income was instead £100, predicted  $y_{\min}$  would now be below actual income, at £75. Actual income of £150 would imply predicted  $y_{\min}$  of £84, and so on.

The income level at which predicted  $y_{\min}$  would exactly equal actual income

on the basis of this relationship is given by

$$\ln y^*_{\min} = \frac{b_0 + b_1 \ln(S)}{1 - b_2}$$

For a single adult household, this turns out to be £68 per week. For a couple with two children, the corresponding figure is £125 per week, and for a couple with four children the figure is £149. These income levels represent the poverty line produced by this simple variant of the SPL method for different household types.

Applying these poverty lines to the sample, 32 per cent of households are found to be below the line for their household type. It is to be emphasised, though, that while this is similar to the overall percentage below the 60 per cent relative poverty line as described in the previous chapter, the structure of the two poverty lines is quite different. Table 6.1 compares the SPL line for a range of household types with the 60 per cent relative poverty line (using equivalence scale C) for these types. While the SPL figure for a single adult household is well above the 60 per cent line, the SPL level for two adults and four children is below the 60 per cent line for that household type.

Table 6.1: *Levels of Income Standards for Different Household Types, SPL and 60 per cent Relative Line*

<i>£/week</i>	<i>SPL line</i>	<i>60% Relative Poverty Line*</i>
<i>Household Type</i>		
Single adult	68.10	51.3
Two adults	92.29	85.16
Two adults and one child	110.26	102.09
Two adults and two children	125.09	119.02
Two adults and three children	137.96	135.94
Two adults and four children	149.10	152.88
One adult and two children	110.26	102.09

Note: \*Equivalence scale C.

This reflects a common feature of poverty lines derived using the consensual or subjective approach: they generally are found to incorporate an implicit set of equivalence scales which allow relatively little for the “needs” of additional household members, compared with scales derived by other methods. Buhman *et al.*, (1988) document this feature clearly, comparing the implicit scales in subjective lines from a number of international studies with those derived from social security support rates, those used for statistical purposes by organisations

such as the EC and OECD, and those derived from the analysis of expenditure patterns in a number of countries. The economies of scale in consumption implied by the consensual line results are thus considerably greater. The results for Ireland imply that a household of two adults and four children needs only 2.2 times the income of a single adult to reach the same welfare level. The equivalence scales incorporated in the social welfare system, as broadly reflected in scale C used here, incorporate the considerably higher multiple of 3.

As noted above, the relationship predicting stated  $y_{\min}$  may be elaborated in a number of ways. First, the family composition variable may be more sophisticated, taking into account not only the number of persons but their ages, weighting adults and children differently for example. (Kapteyn, Koorman and Willemse (1988) also look at the relaxation of the constraint that the cost of an increase in family size is a fixed percentage of income irrespective of the level of income involved.) Secondly, other variables which may influence stated  $y_{\min}$  — such as location, educational background and reference group — could be included in the equation. This is of more relevance in trying to understand the observed pattern of responses than in deriving a national poverty line, however. For the latter, it would not appear desirable to incorporate higher poverty lines for those in particular locations or with particular educational backgrounds, for example.

The Dutch researchers who developed the SPL have also produced a somewhat more complex method of deriving a consensual income line. This, termed by Kapteyn *et al.*, (1985) the Leyden Poverty Line (LPL) method, is based on the estimation of individual "welfare functions of income". This is done using responses to a question of the type:

"What level of total net (weekly or monthly) income would you, in your circumstances, consider to be

Very bad,  
Bad,  
Inadequate,  
Adequate,  
Good,  
Very good?"

This is termed the Income Evaluation Question. The estimated welfare functions of income (WFI) indicate, on a scale from 0 to 1, what level of welfare an individual derives from particular levels of income. Choosing a welfare level to represent poverty, the corresponding income level can be derived. This "evaluated" income level can then be related to actual income, and an income poverty line derived, in a manner analogous to technique used in the SPL method with  $y_{\min}$  and  $y$ . (See Callan and Nolan, (1987a) for a more complete



discussion, and Goedhart *et al.*, (1977), Hagenars, (1986) for development and justification of the methodology.)

The data required to implement the LPL method have been gathered in the ESRI survey, and both this approach and the elaboration of the SPL method will be explored in future work. In the present study the objective is to obtain an overview of the kind of results provided by this general approach. The nature and meaning of the results, together with particular problems which arise with the approach, are discussed below, having first presented the results of applying the CSP method to Irish data.

### 6.3 *The CSP Method*

This method has been developed at the Centre of Social Policy (CSP) at the University of Antwerp, by a team led by H. Deleecq. It is fully described in Deleecq (1989), and also discussed in Callan and Nolan (1987). The starting-point is, as with the SPL approach, the answers to the Minimum Income Question on how much respondents feel they need to "make ends meet".

In using these responses, though, the CSP method also takes into account a separate question as to whether respondents were "getting by" with

Great difficulty,  
Some difficulty,  
Difficulty,  
Fairly easily  
Easily  
Very Easily.

Whereas the SPL methods utilise the  $y_{\min}$  responses of all households, the CSP uses only those of households which stated that they had some but not great difficulty in getting by. These were considered to be in the best position to say which level of income should be used as a standard.

For this sub-set, the stated minimum income required is compared with actual income, and the *lower* of the two amounts for each household is taken to be "necessary" income for that household. For each distinct household composition type — couples without children, two adults with one child, etc., — the average "necessary" income is then calculated. Extreme values (those beyond two standard deviations from the mean) are eliminated and the average recalculated. Where there is a sufficient number of households of a particular type in the sample (taken in Deleecq, 1989, to be at least 30), this average is taken to be the "socio-vital minimum" income level for that type. For household types with smaller numbers of observations, the minimum is calculated by extrapolation.

The ESRI survey also included the question on how much difficulty respondents felt they were having in "getting by", allowing the CSP method to

be applied. Households were first grouped by composition type, on the basis of number of children, adults, and elderly members. For seventeen such types there were sufficient households in the sample to allow the CSP procedure to be applied and the minimum income derived. In certain cases, however, the relativities implied were implausible — a household with two adults and three children required less than one with two children, for example — and some smoothing of the results was necessary. The minima for other less common household types were then derived by adding the “extra” required for further children/adults/elderly, calculated from the types for which the numbers were sufficient.<sup>22</sup>

The “socio-vital minimum” for a single adult derived in this way was £55 per week, and for two adults with two children the figure was £146. When applied to the ESRI sample, 31 per cent of households were found to be under the “necessary” income level for the household type in question.

This is obviously very close to the 32 per cent of households found to be below the consensual line derived from the SPL method, and similar to the 29-30 per cent of households below the 60 per cent relative income cut-off. However, the actual households involved are not the same in each instance, because the relativities between the needs of households of different size and composition incorporated in the three lines are quite different. This is illustrated in Table 6.2, showing the income levels for some important household types in the two consensual lines, and in the 60 per cent relative line again (using equivalence scale C).

Table 6.2: *Levels of Income Standards for Different Household Types from CSP, SPL and 60% Relative Lines*

<i>L/week</i>	<i>CSP</i>	<i>SPL</i>	<i>60% relative line*</i>
Single adult	54.6	68.10	51.3
Two adults	110.0	92.29	85.16
Two adults and one child	141.60	110.26	102.09
Two adults and two children	145.50	125.09	119.02
Two adults and three children	150.10	137.96	135.94
Two adults and four children	154.6	149.10	152.88
One adult and two children	90.10	110.26	102.09

\*Equivalence scale C

<sup>22</sup>For example, subtracting the value of the standard for the two adults plus three children household type from that for the two adults plus four children type provides an estimate of the extra cost of a child. This is added to the two adult plus four child standard to derive the level for the two adults plus five children household type.

Comparing first the two consensual lines, the CSP and the SPL, there are very major differences between the two for particular household types, despite the fact that a similar number of households overall is below each line. For a single adult household, the SPL line is well above the CSP standard, whereas the opposite is the case for a couple or a couple with children. Compared with the 60 per cent relative line, the CSP standard is similar for a single adult household, but is very much higher for a couple. Indeed the CSP standard implies *no* economies of scale for a couple compared with a single adult. By contrast, extreme economies of scale for "extra" children are implied, so that a couple with four children needs little more than one with only one child.

Taken together with the fact that in some instances smoothing of the CSP results was necessary in the first place to avoid situations where larger households had lower standards than smaller ones, the implausible relativities between households of different types must undermine confidence in the results. A relatively small number of households is involved — because the method concentrates purely on the responses of those who state they are having difficulty making ends meet — and the variation in responses for a given household type is wide. Excluding outliers further reduces the number on which the standards are based. More general problems with the consensual approach, applying to both the CSP and SPL methods are discussed in Section 6.4 below.

One of the major advantages of the consensual approach is that it can be readily applied in different countries to yield directly comparable results (given comparable data, of course). The minimum standard is in each case specified by the people of the country in question. Such a cross-country comparison using the SPL method was implemented by van Praag, Goedhart and Kapteyn (1980) for the EC countries. This was based on a pilot survey with very low response rates (overall only 22 per cent of the questionnaires were usable). The Irish poverty line estimated in this study was found to be higher as a proportion of average income than in most of the other EC countries. (The numbers below these lines were not presented.) For a number of the countries the Leyden method was also used to estimate poverty lines, and the numbers under these estimated (reported in van Praag, Hagenaaers and van Weeren, 1982). While the Irish poverty line is unsurprisingly the lowest in absolute terms of the eight countries included, it shows a relatively high proportion of the population below it — only France has a higher proportion. (This data set is analysed in considerably more detail in Hagenaaers, 1986.)

It will be possible to compare the results from the application of the consensual approaches to Ireland in the present study with the corresponding results for the other countries in the EC element of our project, when these are published. At present, an exact comparison is available only with the results of the application of the CSP method to Belgium, as reported by Deleeck (1989). This shows 21

per cent of Belgian household in 1985 below the estimated CSP standard.

The consensual poverty measures are to be clearly distinguished from simply relying on households' subjective assessments of their *own* positions, i.e., whether they consider that they themselves have inadequate income. It is interesting to compare such subjective assessments with the position of households *vis-a-vis* the consensual income standards. In responding to the question as to whether the household was "able to make ends meet with great difficulty ... easily", about 52 per cent of the ESRI sample stated that they were making ends meet with either "great difficulty" or "some difficulty". Of those below the CSP standard, about 77 per cent gave this response, as did about 70 per cent of those below the SPL standard. So while most of those below the consensual lines consider that they are under considerable financial pressure, there is by no means a one-to-one relationship between subjective evaluations and position *vis-a-vis* the consensual standards.<sup>23</sup>

#### 6.4: *Problems in Interpretation and Application*

In reviewing the consensual income poverty line approach along with other approaches in Chapter 2 above, reservations have already been expressed about the application of this methodology and the interpretation of the results. These arise from a number of considerations.

First of all, critical assumptions are involved about the way in which responses to the question on minimum income needs can be interpreted. Households — or rather one or more individuals in each household — are not asked their views about the appropriate poverty line or income necessary to avoid poverty for a household of their size/composition. Rather, they are asked the minimum needed by their own household to "make ends meet". Questions of the former type have been asked in some studies, (e.g. Rainwater, 1974), but it has been argued that the use of the word "poverty" and the fact that the line was being specified *for someone else* bias the results. However, it is far from clear that different people regard "making ends meet" in the same light. Further the relationship between "making ends meet" and avoiding either what the individuals themselves, or most people in the society, would regard as "poverty" is also quite uncertain. (Indeed it is worth noting that Deleeck (1989), in describing the CSP method and its application to Belgium, avoids the use of the term "poverty line", referring instead to "insecurity of subsistence").<sup>24</sup>

<sup>23</sup>Similar results were found in the case of Belgium by Deleeck (1989). He reported that while 31 per cent of all households stated they had difficulty making ends meet, 69 per cent of these under the CSP standard did so (Table 6, p. 102).

<sup>24</sup>Deleeck (1989) states that the standard "is not an absolute poverty line, but an indication of the income which is commonly accepted as a decent minimum and with which one can live normally. *This is the reason why we speak of insecurity of subsistence rather than of poverty*" (p. 100).

A second point to be emphasised is that, despite the claims sometimes put forward for the approach, the methods described here do *not* represent a democratic consensus in the society as a whole as to the minimum necessary level of income. Both the SPL and CSP methods reflect in effect the views of a sub-set of all those in the sample. In the case of the CSP method, this is explicitly those who are actually currently having some but not great difficulty making ends meet — irrespective of their actual income level. The SPL method, while it used the views of all households in estimating the relationship between  $y_{\min}$  and  $y$  (and family size), then sets the poverty line at the point where predicted  $y_{\min}$  is equal to  $y$ . This is on the basis that those with incomes well above, or well below, this point “misperceive” the poverty line, and that there is only one income level where this distortion or misperception does not take place. Thus, as Goedhart *et al* (1977) put it, all the observations are needed only “to find out which people’s opinion on minimum income we should honour” (p. 514).

Another point often made about the views expressed by people in response to questions of this type is that the response is unconstrained — a high level of minimum income does not have any implications, for example in terms of extra taxation required to finance it. As Piachaud (1987) emphasises, even if people above the poverty line accurately perceived the cost of providing what most people regard as necessities, there may remain a gap between what people say is desirable and what they are prepared to pay for in increased taxes. There may not in fact be a social consensus — the opinions of the poor, of the majority, of taxpayers and of the rich may be at odds with one another.

Some important problems in the actual operationalisation of the consensual method must also be noted. For example, as pointed out by Walker (1987) and others, it may make a difference who in the household actually responds to the minimum needs question — husband or wife or working child. Also, all respondents may not have the same household income concept in mind — some may think of the nuclear family within the household, others may include grandparents or working children, etc. The concept of “net income” which people are familiar with may also in some cases be rather different to the researcher’s definition, superannuation contributions and other deductions at source, and regular bills, may be discounted. More generally, Walker expresses the concern that attempts to operationalise the method may not have done it justice. People are typically asked for immediate responses to tightly worded questions about complex and sensitive issues to which few of them will previously have given much thought, and they may mouth back what they think the experts want to hear. More sophisticated approaches than large scale surveys may be necessary, he argues, including in-depth group discussions teasing out the intricacies involved, to elucidate people’s views in such a sensitive and complex area.

### 6.5 *Conclusions*

An approach to setting a poverty line which has recently been suggested, the consensual income poverty line approach, was applied and assessed in this chapter. Two variants were used — the SPL and CSP methods. Both are based on responses to a question about what people in the sample regarded as the minimum income needed “to make ends meet”. In deriving a poverty line from these responses, both methods try to focus on those who are in some sense “near” the poverty line, on the basis that those either well below or well above the line are likely to have a distorted view. Thus, they do *not* try to reflect a majority view over the sample as a whole.

Applying the two variants, each produced a poverty line below which about 32 per cent of the households were found. Despite this overall similarity, the actual poverty lines were quite different in structure with very different levels for particular households composition types. The CSP line had some particularly implausible features in this respect, with for example no economies of scale comparing a couple with a single adult household, and very substantial economies for extra children. These features were judged to significantly undermine confidence in the results of the CSP method. The SPL line, while showing internal consistency, also allowed relatively little for the extra needs of additional household members — it has an extremely high poverty threshold for a single person (relative to any of the purely relative poverty lines, for example), with only small additions for further members.

A number of major qualifications about the approach, both conceptual and empirical, were noted. Perhaps most importantly, very little is known about how people formulate their responses to the question about income needed “to make ends meet”, how these responses can meaningfully be interpreted and how they relate to notions of poverty. Some further information has been gathered in our follow-up survey designed to shed some light on the relationship between stated minimum income needs and views as to what constitutes poverty. Using this, and elaborations of the consensual method possible with the data in the original survey, the value of the approach will be explored. At this stage, in our view, the method's value as a means of defining what would be generally accepted as a meaningful poverty line has not been demonstrated. Less ambitiously, though, the responses to questions about income needs can be of considerable interest in analysing perceptions of need and how these relate to income and to life-style, and their use in that context will be the subject of further research.

## Chapter 7

### *RISK AND INCIDENCE OF POVERTY, 1973-80-87*

#### *7.1 Introduction*

In this chapter we focus on the composition of low-income households. The main aim is to identify groups which are at especially high and/or increasing risk of current income poverty, and/or form a large proportion of the population in poverty. This descriptive analysis is an essential building block for the analysis of the causation and dynamics of poverty, as well as having a more immediate relevance for the understanding of the nature of poverty in Ireland in recent years.

Some issues of definition and measurement are dealt with in the next section, which also briefly recalls the results of earlier work on this topic for Ireland. Attention is then focused on an examination of the demographic correlates of current income poverty (Section 7.3), followed by an investigation of the economic and social correlates of poverty (Section 7.4). In Section 7.5 the interaction between demographic and economic and social variables is explored. Section 7.6 draws together the conclusions.

#### *7.2 Risk and Incidence of Poverty*

The "risk" of poverty for any group is defined as the probability of falling below a poverty line faced by members of that group, as measured by the *proportion of that group* which actually falls below the income standard. The incidence of poverty for a particular group is the *proportion of all those in poverty* who belong to that group. Groups which have a higher incidence of poverty than their share in the total population face a higher than average risk of poverty; groups with a lower than average risk are under-represented in the poverty population.

The main characteristics used here to classify households into different groups are the socio-demographic and economic characteristics of the whole household (such as numbers of adults and children or the numbers of household members at work), or of the head of household (such as his or her age, sex or labour force status).

The analysis in this chapter is based exclusively on relative income poverty lines. This is mainly because for these poverty lines, and these alone, it has been possible to derive comparable results from the Household Budget Survey of 1973 and 1980. Thus, changes in the risks of poverty for different groups, and changes in the composition of the households below the poverty line, can be identified.

The sensitivity of the results with respect to the equivalence scale used in comparisons between the years will be assessed. The increase in mean disposable income per equivalent adult between 1980 and 1987 was almost exactly counterbalanced by inflation, so these lines can also be interpreted as representing approximately the same real income in these two years, which gives them an additional interest.

Comparison with the poverty lines produced by the other methods discussed in Chapters 2 and 5, shows that the level of the 60 per cent cut-off is below that of the social subsistence minima produced by the CSB and SPL minima, while the 40 per cent cut-off is very close to the implicit official minimum income standard. In the present context the relative poverty lines have the advantage of allowing us to examine the sensitivity of the results to the level of the poverty line *independently* of changes in the equivalence scales. The CSB, SPL and "official" minima would not allow this, since they each have their own implicit equivalence scale.

In reviewing previous studies on poverty in Ireland in Chapter 3, it was noted that despite quite large differences in their estimates of the overall extent of poverty, there was much greater agreement on the characteristics of the poor and the relative risks faced by different groups. In the studies using the 1973 HBS (Roche 1980, Fitzgerald 1981, Rottman, Hannan *et al.*, 1982) the characteristics which had the strongest association with a high risk of poverty were unemployment, old age, lone parenthood, and large family size. Roche's (1984) analysis of the 1980 HBS revealed some striking changes in the risk and incidence of poverty over this period. In particular, there was a reduction in risk for households headed by an elderly person, while the risk of poverty for households with children rose sharply. Unemployment remained the single characteristic with the strongest association with poverty.

In this chapter we analyse further the changes in risk and incidence of poverty over this 1973-1980 period, and carry through to an in-depth examination of the 1980-87 period and the pattern in 1987 itself. We begin with the demographic correlates of poverty.

### *7.3 Demographic Correlates of Poverty*

#### *Key Trends 1973-1980-1987*

A major trend identified in the aggregate results in the Chapter 5 was that while the percentage of households below the relative poverty lines was relatively stable between 1973-1980 and 1980-87, the percentage of persons in poverty rose during each period, for the poverty lines based on 50 per cent and 60 per cent of mean income per adult equivalent. The divergence between the trends in the proportions of households and persons below the relative poverty lines



indicates a marked shift in the composition of households below the relative poverty lines. This is highlighted in Table 7.1, which shows for each year the proportion of the households below the 50 per cent line (using scale C) made up by different composition types. These types distinguish between

- (i) 1 adult only households,
- (ii) 2 adults only,
- (iii) 3 or more adults with no children,
- (iv) 2 adults with children,
- (v) Others with children.

The CSO definition of a child as aged under 14 has been followed in all tables, unless otherwise specified, in order to allow comparisons with the Household Budget Surveys.

Table 7.1: *Composition of Households under 50 per cent Relative Poverty Line, 1973, 1980 and 1987*  
*Equivalence scale: 1, 0.66, 0.33*  
*Composition of total households in parentheses*

	1973		1980		1987	
	HBS		HBS		ESRI Survey	
<i>Household type</i>						
1 adult	32.4	(13.5)	29.5	(16.4)	12.6	(16.6)
2 adults	23.9	(19.3)	17.2	(20.2)	15.0	(18.5)
Other adult only	10.4	(18.5)	9.8	(14.5)	14.0	(20.2)
2 adults with children	14.6	(26.4)	22.3	(30.2)	36.2	(28.3)
Others with children	18.7	(22.4)	21.2	(18.6)	24.0	(16.4)
Total	100	(100)	100	(100)	100	(100)

The most striking development over the period was the increase in the proportion of households under the 50 per cent line made up by 2-adult households with children. This increase was substantial between 1973 and 1980, when it was partly due to a rise in the incidence of such households in the total population, but accelerated rapidly between 1980 and 1987, at a time when the importance of such households in the total population was falling. It was counterbalanced by a reduction in the incidence of poverty in 1- and 2-adult households without children. These changes were due to shifts in the risks facing the 1- and 2-adult households, since their incidence in the total population did

not change substantially. Analysis using the alternative equivalence scale with a higher weight on additional adults and children (1, 0.7, 0.5) shows a very similar pattern. (The incidence of poverty is then lower in households without children, particularly in single adult households, and higher in households with children, because of the change in the equivalence scale; but the trends are very similar to those in Table 7.1).

The nature of the trends emerges more clearly from an analysis of the *risks* of poverty for the different household types. This is done in Table 7.2, again for the 50 per cent relative poverty line and the equivalence scale 1, 0.66, 0.33. The table shows clearly the dramatic fall in the risk of poverty for single-adult households, and the equally dramatic rise in the risk of poverty for households with 2 adults and 4 or more children. The risk of poverty for the former group falls to one-third of its initial level; the risk for the latter group more than doubles.

Table 7.2: *Trends in risk of Poverty by Broad Household Type at 50 per cent Relative Poverty Line, 1973, 1980 and 1987*

*Equivalence Scale: 1, 0.66, 0.33*

	1973 HBS	1980 HBS	1987 ESRI
1 adult	42.3	30.2	13.5
2 adults	21.9	14.3	14.4
Other adults only	10.0	11.4	12.3
2 adults, 1 child	9.6	6.9	16.7
2 adults, 2 children	5.0	10.2	19.4
2 adults, 3 children	9.0	10.7	21.7
2 adults, 4+ children	14.7	23.2	36.5
Others with children	14.8	19.1	24.0
All households	17.7	16.8	17.5

#### *The Risk of Poverty in 1987*

A more detailed analysis of the risks of poverty in 1987, now showing those below the 40 per cent and 60 per cent lines as well and distinguishing between elderly and non-elderly adults, helps to reveal what lies behind these dramatic shifts. Two household types stand out in Table 7.3 as having a relatively high risk of poverty at all three income standards: the small group of 1-adult households with children, and the much larger group of 2-adult households with 4 or more children. These are the highest risk groups for all three standards. (Re-defining a child as still in full-time education led to very similar results).

Table 7.3: *Risks of Poverty for Common Household Types, 1987*

<i>Type of Household<sup>a</sup></i>	<i>Per cent of hh in sample</i>	<i>40% line<sup>b</sup> per cent Risk (%)</i>	<i>50% line<sup>b</sup> per cent Risk (%)</i>	<i>60% line<sup>b</sup> per cent Risk (%)</i>
1 adult	7.5	10.5	24.5	46.2
1 adult, 1+ child	1.4	17.2	29.2	69.6
2 adults	8.9	6.7	15.3	27.8
2 adults, 1 child	6.1	5.8	16.5	23.5
2 adults, 2 children	9.5	3.4	18.9	27.2
2 adults, 3 children	7.0	5.4	21.7	34.8
2 adults, 4+ children	5.5	9.6	36.5	50.3
1 elderly	9.1	1.7	4.5	31.2
1 adult + 1 elderly	4.7	15.5	20.1	26.2
2 elderly	4.9	4.6	7.4	11.9
All Households	100	7.5	17.5	30.0

<sup>a</sup>Here, elderly is aged 65 or over, adult is aged between 14 and 64, child is aged under 14.

<sup>b</sup>Relative poverty line with equivalence scale 1/0.66/0.33.

Households composed entirely of elderly persons are at relatively low risk of poverty at the 40 per cent and 50 per cent lines, but there is a sharp rise in the risk for single elderly adult household at the 60 per cent line. Non-elderly single-adult households are at relatively high risk at all three standards, a fact which is obscured when they are aggregated with the lower-risk elderly adults. It is also noticeable that households consisting of an elderly person living with a non-elderly adult only show a much higher risk of poverty than all-elderly households.

### *Children*

The position of children is highlighted in Table 7.4, which shows that the risk of poverty has increased much faster for children than for adults over the 1973-87 period. This general trend is robust to a change in the equivalence scale to scales A or B described in Chapter 5. Clearly, in assessing the relative risk of children versus adults, the equivalence scale used is a major influence. It is worth noting in this context that equivalence scales based on the analysis of household expenditure patterns (e.g. Conniffe and Keogh, 1988) typically exhibit economies of scale in consumption with respect to the *numbers* of children — extra children require decreasing additions to income to maintain the same welfare level. The strength of the association between numbers of children and risk of poverty would be lower for scales which incorporated such economies, but would

Table 7.4: *Risks of Poverty for Adults and Children, 1973, 1980 and 1987**Equivalence scale: 1, 0.6, 0.33*

	1973 HBS	1980 HBS	1987 ESRI
<i>Children</i>			
40 per cent line	7.2	10.1	9.1
50 per cent line	15.7	18.5	26.0
60 per cent line	27.4	29.5	39.0
<i>Adults</i>			
40 per cent line	6.6	7.7	7.8
50 per cent line	14.4	15.2	17.3
60 per cent line	23.1	25.4	28.2

still be present. Also, expenditure-based scales sometimes differentiate between children of different ages, with higher expenditures being associated with older children. Re-analysis of the 1980 HBS and 1987 ESRI data using an age differentiated scale (Nolan and Callan, 1989b) did not substantially alter the major results reported above. The rise in the risk of poverty for children as against adults is therefore quite a robust result. In Section 7.5 the degree to which this is associated with the rise in unemployment will be examined.

#### *The Elderly*

One of the major underlying influences in producing the pattern of changes between 1973 and 1987 described above has been the substantial improvement in the relative income position of the elderly, who comprise a substantial proportion of the single person households. The real value of social welfare pensions rose by about 17 per cent between 1980 and 1987, and by about 107 per cent over the whole period between 1973 and 1987. This contrasts with an increase of only 6 per cent in real average industrial earnings between 1980 and 1987, and of 88 per cent between 1973 and 1987. Given the very substantial increase in the tax "take" over the period, a comparison with after-tax earnings would reveal a much greater differential. Retirees over the 1973-80 and 1980-87 periods are also more likely to have had an occupational pension, and to have had a better one, than in earlier periods. This influx, coupled with the fact that of those who were already elderly in 1973, those who survived were more likely to be younger and may therefore have had better private pensions entitlements than those who died, could also have contributed to an improvement in the relative income position of the elderly.

These factors are reflected in the large reductions in the risks of poverty facing households headed by an elderly person (here, aged 65 or over) shown in Table 7.5 for each of their cut-offs.

The nature of the improvement in the position of households headed by an elderly person between 1973, 1980 and 1987 is apparent. At the 40 per cent line, the improvement was concentrated in the 1973-80 period. The risk remained broadly unchanged between 1980 and 1987, at about half the overall risk for all households. At the 50 per cent line there was a substantial fall in the risk during both sub-periods. At the 60 per cent line, the fall was exclusively in the later sub-period, again reducing the risk to about half the average risk for all households. (The risks are, if anything, somewhat lower for households composed *entirely* of elderly persons, as shown in Table 7.4 above). Thus while households headed by an elderly person comprise 23 per cent of all households in the sample, they constitute only 10 to 12 per cent of the households in poverty. These results are robust with respect to changes in the equivalence scale to the alternatives already outlined.

Table 7.5: *Risks of Relative Poverty for Households Headed by an Elderly Person 1973, 1980 and 1987*

<i>Relative Poverty line<sup>a</sup></i>	<i>1973 HBS</i>	<i>1980 HBS</i>	<i>1987 ESRI</i>
40%	13.2	7.1	5.6
50%	33.8	24.4	9.7
60%	44.8	46.6	23.7

<sup>a</sup>Equivalence scale 1/0.66/0.33.

#### *Female-Headed Households*

Female-headed households also appear to have experienced an improvement in their relative income position as is illustrated in Table 7.6. In 1973, the risk of poverty for female-headed households was about twice that for male-headed households, at all three poverty lines. By 1987 this differential had been almost eliminated at the 60 per cent cut-off, and reversed at the two lower cut-offs. The exact results are somewhat sensitive to the equivalence scale used, but the overall trend is clear. The scale of 1, 0.7, 0.5 suggests an even *stronger* decline in the risk of poverty for female-headed households, so that by 1987 they have a much lower risk than male-headed households even at the 60 per cent line (21.7 per cent as against 31.3 per cent).

It is notable, however, that most of the female-headed households in poverty in 1987 are headed by women under 65 years of age. A full breakdown of the

Table 7.6: *Risks of Relative Poverty by Sex of Head of Household, 1973, 1980 and 1987*

<i>Relative Poverty line<sup>a</sup></i>	<i>Sex of HOH<sup>a</sup></i>	<i>1973 HBS</i>	<i>1980 HBS</i>	<i>1987 ESRI</i>
40%	Male	6.7	8.3	8.3
	Female	14.5	6.8	5.5
50%	Male	14.5	15.6	19.4
	Female	30.4	22.4	10.6
60%	Male	22.9	25.8	29.8
	Female	38.5	36.3	32.8

<sup>a</sup>Equivalence scale 1/0.66/0.33

<sup>b</sup>Female-headed households are defined in this context as those where a woman without a spouse in the household is stated to be the head.

risk of poverty by age and sex of the household head, shown in Table 7.7, helps to clarify the picture. It is clear that when the age factor is taken into account, the small group of households headed by young women (aged less than 35) have a higher risk of poverty than those headed by men of the same age. Female heads of household in the middle age group are at lower risk than their male counterparts, while households headed by elderly women are at particularly low risk, at the 40 per cent and 50 per cent lines. At the 60 per cent line, the results for the female-male differential for household heads aged 35-64 and 65 or over are sensitive to the exact equivalence scale used. The scale 1, 0.66, 0.33 suggests that female-headed households are at higher risk, while the scale 1, 0.7, 0.5 suggests that male-headed households are at higher risk. The sensitivity of these results is partly because the non-contributory old age and widows' pensions were close to the 60 per cent line, with the exact relationship depending on the equivalence scale. The trends in the risk of poverty are still robust however.

Table 7.7: *Risk of Poverty by Age and Sex of Household Head, 1987*

<i>Equivalence Scale: Relative Poverty Line:</i>	<i>1, 0.66, 0.33</i>		<i>1, 0.7, 0.5</i>	
	<i>40%</i>	<i>50%</i>	<i>60%</i>	<i>60%</i>
Male HOH < 35	4.5	19.4	28.8	32.3
Female HOH < 35	11.7	21.7	41.6	41.6
Male HOH 35-64	10.3	21.4	32.7	34.4
Female HOH 35-64	7.4	14.4	38.0	28.2
Male HOH 65+	7.7	13.0	22.0	19.6
Female HOH 65+	2.4	4.7	26.5	11.5

The small group of households headed by a women aged under 35 fared less well than did households headed by a man of the same age. The trend for female heads of household aged 35 or over, and particularly those aged 65 or over, was, however, consistently more favourable than the trend for their male counterparts.

Further light can be shed on the issue of male-female differentials in the risk of poverty by moving to a tax unit level of analysis, which separates out single parent families and single persons within larger households. The results on Table 7.8 suggest that the overall differences in risks of poverty between male- and female-headed tax units are small. This contrasts with the household level analysis in Table 7.6, where male-headed households were seen to have a much higher risk of poverty at the 40 per cent and 50 per cent lines. When the analysis at tax unit level is extended to control for the age of the head of tax unit as well, the male/female differential in risk of poverty remains small. The pattern of higher than average risk for the younger age groups, and lower risk for the elderly, is confirmed. The strength of the trends in the household-level analysis suggests, however, that re-analysis of the 1973 and 1980 data on a tax unit basis, if such were possible, would show a significant reduction in male-female risk differentials, leading to the small differences observed in 1987.

Table 7.8: *Risks of Relative Poverty for Male- and Female-Headed Tax Units, 1987*

<i>Equivalence Scale:</i>	<i>1, 0.66, 0.33</i>		<i>1, 0.7, 0.5</i>	
	<i>Male-Headed Tax Units</i>	<i>Female-Headed Tax Units</i>	<i>Male-Headed Tax Units</i>	<i>Female-Headed Tax Units</i>
40% line	11.0	11.9	13.6	11.1
50% line	22.0	18.1	24.0	19.4
60% line	32.3	33.8	33.0	27.0

#### *7.4: Economic and Social Correlates of Poverty*

##### *Key Trends in the Incidence of Poverty*

The dramatic shifts in the demographic characteristics of households below the relative poverty line have been associated with some equally substantial shifts in the economic characteristics of that population. The most striking features, as shown in Table 7.9 using the 50 per cent poverty line, are the rise in the proportion of low income households headed by an unemployed person (from 1 in 10 in 1973, to 1 in 3 in 1987); the fall in the proportion of low-income households headed by a retired person (from 1 in 5 to 1 in 10, at a time when the importance of retired persons in the overall population increased); and the

Table 7.9: *Composition of Households under 50 per cent Relative Poverty Line, 1973, 1980 and 1987, by Labour Force Status of Head of Household*

<i>Labour Force Status of HOH</i>	<i>Equivalence Scale: 1, 0.66, 0.33</i>					
	<i>% of all households under line</i>			<i>% of all households in sample</i>		
	<i>1973 HBS</i>	<i>1980 HBS</i>	<i>1987 ESRI</i>	<i>1973 HBS</i>	<i>1980 HBS</i>	<i>1987 ESRI</i>
Employee	12.7	10.3	9.6	49.2	47.1	38.6
Self-employed (excl. farmers)	3.9	3.5	4.9	6.9	6.8	7.5
Farmer	13.2	25.9	23.7	14.3	16.1	11.8
Unemployed	10.2	14.7	34.2	2.8	3.9	10.3
Ill	6.9	7.3	3.4	2.3	2.5	1.2
Retired	20.3	18.9	9.3	10.8	13.7	14.4
Home Duties	28.3	17.4	7.8	11.5	9.1	11.3
Other (Not in Labour Force)	4.6	2.0	7.1	2.2	0.8	4.9
Total	100	100	100	100	100	100

sharp fall in the proportion of low-income households headed by a person engaged in home duties.

The proportion of households below the 50 per cent relative poverty line headed by a farmer fell slightly between 1980 and 1987, but not by as much as the decrease in their importance in the general population; in both years farmer-headed households accounted for around 1 in 4 of all households below this line — the largest group apart from households headed by an unemployed person. It should be emphasised, however, that the farm income data relate to 1986, the year in which farm incomes were at their lowest level in recent times; very substantial increases were recorded in 1987 and 1988. Households headed by employees, though under-represented compared with their importance in the sample as a whole, still make up about 10 per cent of households under the 50 per cent line. Other significant groups are those where the head of household is ill or disabled, or in home duties.

#### *The Role of Unemployment*

Clearly a critical factor in shaping the changes in the composition of low-income households was the increase in unemployment, particularly between 1980 and 1987. The overall unemployment rate rose from 8 per cent to 18½ per cent between these two years. Within this unemployed population, there was also



an increase in the incidence of long-term unemployment: the proportion of the unemployed out of work for more than a year rose from 34 per cent to 45 per cent. This is reflected in the increased incidence of households headed by an unemployed person towards the bottom of the income distribution.

The proportion of poor households headed by an unemployed person can be expressed as the product of two factors: the risk of poverty for a household with an unemployed head relative to the average risk, and the incidence of unemployed heads of household in the general population. Algebraically this may be written as:

$$\frac{POV_u}{POV_t} = \left[ \frac{POV_u/TOT_u}{POV_t/TOT_t} \right] \times \frac{TOT_u}{TOT_t}$$

where  $POV$  = the number of poor households,  $TOT$  = the number of households in the general population, and the subscripts  $u$  and  $t$  stand for unemployed heads of household and all heads of household respectively. We may then ask whether the observed increase in the proportion of poor households headed by an unemployed person is due simply to the overall increase in unemployment, or whether an increase in the "relative risk factor" (the bracketed expression above) also play a role.

Table 7.10 presents results on the risks of poverty for an unemployed person, relative to the overall risk, (i.e., the bracketed expression) for 1973, 1980 and 1987. These figures show that the risk of poverty for households headed by an unemployed person was between 2½ and 5½ times the average risk, except in the case of the 40 per cent line in 1987. The ratios increased slightly between 1973 and 1980, but fell between 1980 and 1987. Thus, over the later period, when the proportion of households in poverty headed by an unemployed person rose sharply, this was entirely due to the increase in unemployment in the total population, and not to an increase in the relative risk of poverty for households with unemployed heads.

The fall in the relative risk factor over the 1980-87 period can be attributed

Table 7.10: *Risks of Poverty for Households Headed by an Unemployed Person, Relative to the Average Risk, 1973, 1980 and 1987*

*Equivalence Scale: 1, 0.66, 0.33*

	1973	1980	1987
40% line	5.4	5.7	1.6
50% line	3.6	3.8	3.3
60% line	2.8	2.8	2.4

to two main influences. The first of these is the fact that unemployment compensation rates in the social welfare system increased faster than take-home pay over this period. The second is that, with a constant risk for the unemployed, an increase in unemployment raises the risk for the total population, and thereby depresses the relative risk factor.

*Trends in the Risk of Poverty*

Analysis of trends in the risk of poverty for household heads with different labour force status helps to clarify the overall picture, and disentangle these two influences on the relative risk factor for the unemployed. Table 7.11 shows these trends for the 50 per cent relative poverty line. The risks faced by employees, the self-employed and those affected by temporary illness were quite stable over the period. The risk for the unemployed was stable in the first sub-period, but fell slightly over the 1980-87 sub-period. This net fall reflects the influence of increases in social welfare rates relative to take-home pay. The increase in long-term unemployment among the unemployed, often involving movement from Unemployment Benefit to the lower Unemployment Assistance rates of social welfare payment, partially offset this influence.

The risk of poverty for those not in the paid labour force (retired, engaged in home duties, or others such as those with long-term illnesses) fell considerably over the period. The factors mentioned in connection with the relative

Table 7.11: *Risks of Relative Poverty Classified by Labour Force Status of Head of Household, 1973, 1980 and 1987*

*Equivalence scale: 1, 0.66, 0.33  
50 per cent relative poverty line*

<i>Labour Force Status of HOH</i>	<i>1973 HBS</i>	<i>1980 HBS</i>	<i>1987 ESRI</i>
Employee	4.6	3.7	4.4
Self Employed	10.6	8.6	11.6
Farmer	16.7	27.0	35.8
Unemployed	63.8	63.1	58.9
Ill	53.4	49.6	51.2
Retired	33.1	23.3	11.4
Home duties	43.6	32.2	12.3
Other (Not in Labour Force)	37.9	42.9	25.7
Total	17.7	16.8	17.5

improvement in the income provision of the elderly (improved social welfare and private pensions relative to disposable income from employment) are, of course, again relevant here.

The risk for households headed by a farmer rose sharply. The high risk for farm households in the ESRI survey reflects the fact that the farm income data related to activity in 1986, which saw the nadir of farm income in recent years. Average family farm income increased by one-third in 1987 and by a further 27 per cent in 1988 (Power, Connolly and Roche, 1989 a and b).

Table 7.12 provides a useful summary of the impact of increased unemployment and reduced risks of poverty for the elderly on the total risk of poverty over the period 1980 to 1987. The first and last columns give the contribution of each labour force status to the total risk of poverty in 1980 and 1987 respectively, i.e., the number of low income heads of household in that category, divided by the *total* number of households. The second column calculates what would have happened if only the risks of poverty within each labour force status had changed between 1980 and 1987. The third column calculates what would have happened if these risks had stayed constant, but the actual changes in the distribution of labour force statuses (e.g., the increase in unemployment) had occurred.

Table 7.12: *Changes in Total Risk of Poverty Classified by Labour Force Status of Head of Household, 1980-1987*

	<i>Contribution to total risk in 1980 (actual)</i>	<i>Contribution to total risk in 1987 holding distribution by LFS constant (risks by LFS change)</i>	<i>Contribution to total risk in 1987 holding risks by LFS constant (distribution by LFS changes)</i>	<i>Contribution to total risk in 1987 (actual)</i>
	<i>Per cent</i>			
Employees	1.7	2.1	1.4	1.7
Self Employed	0.6	0.8	0.6	0.9
Farmer	4.3	5.8	3.2	4.1
Unemployed	2.5	2.3	6.5	6.0
Ill	1.2	1.3	0.6	0.6
Retired	3.2	1.6	3.4	1.6
Home duties	2.9	1.1	3.6	1.4
Other	0.3	0.2	2.1	1.3
Total	16.8	15.1	21.4	17.5

The major features which emerge from this analysis are that the increased incidence of unemployment would, other things being equal, have raised the total risk of poverty by 4 percentage points. The main offset to this incipient increase was due to a decline in the risk of poverty for the retired, and those in home duties; tending to reduce the total risk by just over 3 percentage points. The net effects of other influences were small. For instance, a rise in the risk of poverty for employees was offset by a decline in their total incidence, and similarly for farmers.

#### *Risk of Poverty in 1987*

Focusing now on the relationship between the risks of poverty in 1987 by labour force status and the location of the poverty cut-off, Table 7.13 shows that while there is variation between the three lines some important relativities are quite robust. The highest risk groups at all cut-offs are households headed by an unemployed or ill person and households headed by a farmer. The lowest risk group is households headed by an employee, but households headed by a retired person are the next most secure.

A classification of the risk of poverty in 1987 by socio-economic group of the head of household into unskilled and semi-skilled occupations, skilled manual, lower non-manual, higher non-manual and farming reveals some interesting results. The risk of poverty is higher for the unskilled and semi-skilled group and the farmers at each poverty line. The lowest risk is that facing the higher-non-manual group. This result holds even after controlling for whether or not the head of household is currently engaged in paid work.

Table 7.13: *Risks of Poverty by Labour Force Status of Head of Household, 1987*

<i>Labour Force Status of HOH</i>	<i>Per cent of hh in in sample</i>	<i>40% line<sup>a</sup> Risk (%)</i>	<i>50% line<sup>a</sup> Risk (%)</i>	<i>60% line<sup>a</sup> Risk (%)</i>
Employee	37.9	1.9	4.4	11.1
Farmer	12.4	24.1	35.8	45.0
Self-employed	7.5	7.2	11.6	19.1
Unemployed	10.3	12.8	58.9	74.4
Ill but intending to seek work	1.2	30.6	51.2	65.3
Ill and not intending to seek work	4.8	7.3	25.0	63.0
Retired	14.4	5.1	11.4	21.5
Home duties	11.3	7.9	12.3	42.1
All households	100.0	7.5	17.5	30.0

<sup>a</sup>Equivalence scale 1/0.66/0.33.

Examination of the risk of poverty classified by number of income earners in 1987 shows sharp declines as the number of income earners increases. The decline as the number of income earners rises from 1 to 2 ranges from a half to a third; the risk facing households with 3 or more income earners is halved again, approximately. A similar pattern emerges for a classification of risk of poverty by the number of persons engaged in paid work.

#### 7.5: *The Interaction between Demographic and Economic Variables*

Clearly the trends in the risk and incidence of poverty on a demographic and economic categorisation of households are closely linked. One particularly interesting question is the extent to which the increased risk of poverty for families with children is due to the increased incidence of unemployment. In order to answer questions of this type we can "decompose" the changes in risk, in the following way. The overall risk of poverty is given by the number of poor households (irrespective of labour force status) divided by the total number of households (irrespective of labour force status). Algebraically this can be written as follows:

$$R = \frac{\sum_{i=1}^k P_i}{\sum_{i=1}^k N_i}$$

where  $P_i$  is the number of poor households,  $N_i$  the total number of households in the  $i$ th labour force status, and there are a total of  $k$  labour force statuses.

This expression can be rewritten as a weighted sum of the risk within each labour force category, with the weights equal to the proportion of all households who are in each labour force status:

$$R = \sum_{i=1}^k w_i R_i \text{ where } R_i = P_i / N_i \text{ and } w_i = N_i / \sum_{i=1}^k N_i.$$

The increase in the risk of relative income poverty for families with children can be decomposed, therefore, into two components. The first is that due to changes in the labour force status distribution ( $w_i$ ), of which the increase in unemployment is the most important. The second is that due to changes in the risk of poverty within each labour force status ( $R_i$ ). There are two polar methods of calculating this decomposition: the first asks what the risk would be if the weights are held constant at the initial level, while the second holds the weights constant at the final level.<sup>25</sup> The results of applying both methods for the 1980-87 period are reported in Table 7.14: fortunately, there is no difficulty in interpreting them because the two methods are in broad agreement on the major trends.

<sup>25</sup>There is an obvious parallel with current- and base-weighted price indices.

Table 7.14: *Decomposition of the Increased Risk of Relative Poverty for Families with Children**Poverty Line: 50% of mean disposable income**Equivalence Scale: 1, 0.66, 0.33*

Category	Risk 1980	Due to changes in risk		Due to changes in labour force status (e.g., rise in unemployment)		Risk 1987
		A	B	A	B	
		2 adults + children	12.4	2.5	0.9	
Others + children	19.2	-3.4	-1.1	8.1	5.8	23.9

Method A:  $(\Sigma w^{80}R^{87} - \Sigma w^{80}R^{80}) + (\Sigma w^{87}R^{87} - \Sigma w^{80}R^{87})$ Method B:  $(\Sigma w^{87}R^{87} - \Sigma w^{87}R^{80}) + (\Sigma w^{87}R^{80} - \Sigma w^{80}R^{80})$ 

where the first term gives the change due to changes in risk, and the second term gives the change due to changes in the distribution of the population by labour force status.

The results show that the predominant cause of the increased risk of poverty for households containing children is indeed the increase in unemployment. Changes in the distribution of households over labour force statuses account for between about 75 and 90 per cent of the increased risk for 2 adult households with children, and for over 100 per cent of the increased risk for other households with children. Thus, there is at most a rather subordinate role being played by factors other than increased unemployment and other changes in the distribution of labour force statuses in the increased risk of poverty for children. This is not to say that households with children are not at any higher risk than households without children. Households with children are, indeed, at higher risk than other households even after controlling for labour force status. What the analysis of Table 7.14 shows, however, is that the increased risk of poverty for households with children over the 1980 to 1987 period is predominantly due to the increase in unemployment.

### 7.6 Conclusions

The analysis of the risk and incidence of poverty using relative poverty lines has revealed some features which are particularly relevant to the understanding of poverty and to the formulation of policy. Perhaps most importantly, significant changes over time in the composition of low income households have been found, which alter perceptions of the nature of the problem and the appropriate responses. Several major results were found which were not sensitive either to the exact poverty line chosen, or to the equivalence scale used.

The central trends identified between 1973 and 1987 were an increase in the incidence of low-income households headed by an unemployed person, partly offset by an improvement in the relative position of the elderly. Households headed by an unemployed person had a relatively high risk of poverty in all years, but increases in social welfare rates (in real terms, and relative to other incomes) actually reduced this risk over the 1980 to 1987 period. However, the overall increase in unemployment, particularly over the later sub-period, and the lengthening duration of unemployment spells led to an increased incidence of poverty for such households: they formed 1 in 3 of all households below the 50 per cent line in 1987, as against 1 in 10 in 1973. Income increases for the elderly from social welfare payments and increased coverage by occupational pension schemes (both in real terms and relative to other incomes) led to reductions in the risk of poverty for this group over the whole period. Since the proportion of elderly households in the population did not alter greatly, this tended to offset the increase in poverty caused by increased unemployment. The percentage of households under the 50 per cent line headed by a retired person or one in home duties fell from almost 1 in 2 to 1 in 6. The demographic consequences of these changes were that the risk of poverty for households with children increased sharply, while that for 1- and 2-adult households fell dramatically.

While the picture of relative income poverty in 1987 was one in which unemployment loomed large, there were other groups at high risk or forming a high proportion of those at low incomes. Households headed by an ill person were also at high risk. The risk for farmers had also increased, and despite a decline in their total numbers, the proportion of low income households headed by farmers remained at around 1 in 4. This figure must be qualified, however, since the farm income data related to 1986, which was the low point of farm incomes in recent years: 1987 and 1988 saw increases of 34 and 27 per cent per annum in average family farm incomes. Although this increase was unevenly distributed, with incomes on a substantial proportion of farms actually falling, an overall increase of this magnitude — over 50 per cent in real terms — must have reduced the risk of poverty for farm households quite sharply. While households headed by an employee were at low risk, their importance in the general population is such that they constitute an element of the low income population which cannot be ignored.

Further analysis of the characteristics of low income households, their interrelationships, and of the major changes which have been taking place over time form a major part of the planned programme of research. So too is an examination of the dynamics of poverty: which groups move into and out of poverty, and with what frequency? And for which groups is poverty a more permanent experience? In pursuing these topics we will also have regard to the

differential impacts which low incomes may have on patterns of living or deprivation for various groups or household types. The manner in which these patterns of living may be analysed using the data gathered in the ESRI survey is the subject of the next chapter.



## Chapter 8

### *INCOME AND STYLE OF LIVING INDICATORS*

#### 8.1 *Introduction*

The measures of poverty implemented in Chapters 5, 6 and 7 were all based on current disposable income. While this is an important component of the "command over resources" determining a household's standard of living, it is far from being the sole determinant. The most widely accepted conception of poverty emphasises that it involves exclusion from "ordinary living patterns, customs and activities" (Townsend, 1979, p. 31). It is clearly important, therefore, to supplement these income-based analyses with analyses of households' standard of living as revealed by more direct measures of households' activities and possessions.

Section 8.2 deals with the issue of establishing what are the "ordinary living patterns, customs and activities" in present-day Irish society. Section 8.3 deals with summary measures or indices of style or standard of living derived from the basic data. Section 8.4 examines how the influence of current disposable income on some of these measures of households' standard of living. Section 8.5 draws together the preliminary conclusions and implications for further research on this topic.

#### 8.2 *Identifying Ordinary Living Patterns*

A wide range of questions on possessions and activities were included in the survey. At this stage, the 20 items/activities listed in Table 8.1 are available for analysis. For each of these items, we have information on

- (a) whether the respondent's household feels that the item/activity in question is a necessity, i.e., something that "every household (or person) should be able to have and that nobody should have to do without";
- (b) whether the household has the item in question;
- (c) if not, whether they would like to have it but must do without due to lack of money.

We first look in Table 8.1 at the proportions of our sample which do not have each item, together with views as to whether the item is or is not a necessity. As well as those lacking an item, the percentage who have an *enforced* lack —

Table 8.1: *Indicators of Actual Style of Living and Socially Defined Necessities*

	<i>Percentage lacking</i>	<i>Percentage experiencing enforced lack</i>	<i>Percentage stating necessity</i>
**Refrigerator	5	3	92
**Washing machine	20	10	82
Telephone	48	31	45
*Car	38	22	59
Colour TV	20	11	37
A week's annual holiday away from home	68	49	50
**A dry damp-free dwelling	10	9	99
**Heating for the living rooms when it is cold	3	2	99
Central heating in the house	45	30	49
**An indoor toilet in the dwelling	7	6	98
**Bath or shower	9	7	98
**A meal with meat, chicken or fish every second day	13	9	84
**A warm, waterproof overcoat	13	8	93
**Two pairs of strong shoes	16	11	88
To be able to save	57	55	88
A daily newspaper	45	16	39
*A roast meat joint once a week	24	13	64
*A hobby or leisure activity	33	12	73
**New, not secondhand, clothes	10	8	77
*Presents for friends or family once a year	24	13	60

\*\*Included in 10-item summary index of items regarded as a necessity and possessed by over 75 per cent of respondents.

\*Additional items regarded as a necessity and possessed by a simple majority of respondents.

they cannot afford it in their own view — is shown. The responses used are those of the household head or, if these were not given, those of the spouse. (The figures are given as percentages of those responding, with 95 per cent or more of the sample responding to the relevant questions.) The rates of possession

of consumer durables and basic housing facilities are consistent with the information given in the 1980 Household Budget Survey; there have been significant increases in the rates of possession of almost all these items. This reinforces confidence in the reliability of these data.

The table shows wide variation in the proportion possessing each item, ranging from a fridge and heating which 95 to 97 per cent of the sample have, to the ability to save and to have a week's holiday which were enjoyed by only 43 per cent and 32 per cent of the responding households. There is some significant variation in the relationship between lacking an item and *enforced* lack. For the ability to save, the toilet or the dry dwelling, for example, most of those lacking the item said this was because they could not afford it. For the washing machine, colour TV, or newspaper or hobby, though, only about half of those lacking the item said it was because they could not afford it. While replies to this question may have to be treated with particular caution - since people may not like to admit that they cannot afford an item, and there may be different degrees of unwillingness or acceptability for different items - none the less the information is a useful complement to that on actual possession/lack.

It is also interesting to compare the pattern of responses to the question about whether items were considered necessities with the actual percentages possessing/lacking each. In general those items which were more widely possessed did tend to be more generally thought of as necessities - with a fridge, heating, indoor toilet and bath/shower possessed by most and felt by nearly all respondents to be necessities. There were some notable exceptions, though: on the one hand only 43 per cent of respondents were able to save but 88 per cent thought being able to do so was a necessity, while on the other 80 per cent of respondents had a colour TV but only 37 per cent thought it was a necessity. This means that the basis on which indications of deprivation are chosen - whether on the basis of *views* in the population as to which are necessities, *a la* Mack/Lansley, or the actual possessions/activities of the majority or most people, *a la* Townsend - will make a difference to the index used, as detailed in the next section.

### 8.3 *Indices of Deprivation*

Clearly, even if all the individual items in the table were regarded as satisfactory indicators of deprivation, one would attach less significance to the lack of a single item than to the lack of several items. The fact that a person says that they cannot afford a single item from the list is not taken to imply that the person is poor. For this reason we concentrate on summary indices of deprivation, which count the number of items lacked by a household. Thus, counting one for each item lacked, the score may range from zero to the total number of items included in the index.

As noted in Section 8.2, not all of the 20 items are regarded as necessities

or actually possessed by a majority of the population. It could be argued that the inclusion of some of these items in an index of deprivation would therefore be misplaced. How should the selection of items for inclusion in an index of deprivation be undertaken? Several approaches were distinguished in Chapter 2. Here we will focus on two main approaches. The first is an approach based on Townsend's broad concept of poverty, emphasising exclusion from "ordinary living patterns". This approach would select those items possessed by a majority of the population for inclusion in the index. (This must be further distinguished from Townsend's own index, which included three items not possessed by a majority of the population). The second approach is that of Mack and Lansley (1985), who could also claim to be implementing Townsend's broad definition, but emphasising the exclusion from "living conditions and amenities which are customary, or at least widely encouraged and approved, in the societies to which they belong" (Townsend, 1979, p. 31). The Mack and Lansley approach selects those items which are regarded as necessities by a majority of the population. Both Townsend and Mack and Lansley include a further criterion: that possession of each item in the index should be negatively correlated with income. Since each of the 20 items under consideration was negatively correlated with income in the ESRI sample, this condition is not discussed further here.

In implementing the Mack and Lansley approach, however, it is important to note that two items which are widely regarded as necessities are not possessed or done by a majority of households. Only 32 per cent of households had had a week's holiday away from home, and 43 per cent had been able to save. While Mack and Lansley do not explicitly state that a necessity must be possessed by a majority of the population, this may be regarded as implicit in their approach.<sup>26</sup> No item actually included in their index is possessed by less than 70 per cent of their sample. Therefore, we add this condition to our interpretation of their approach.

Given this extra condition, the only difference in the items entering a Mack-Lansley index as against a "Townsend" index are items which a majority of the sample had, but did not regard as necessities. These items were a colour television (possessed by 80 per cent of the population), a daily newspaper (which 55 per cent of the population had), central heating (again possessed by 55 per cent) and a telephone (possessed by 52 per cent of the population). Under these circumstances it is clear that the main differences between the "Townsend" and Mack-Lansley approaches arises not from the set of items included in the index, but from the attempt to control for tastes using the "would like, can't afford" criterion. Further consideration of the "Townsend" set of items will therefore

<sup>26</sup>It is acknowledged that a majority of households might regard an item as a necessity, even if it is only possessed by a minority, in a Third World context.

be deferred until it can be compared with the set of items used by Townsend himself.

The 14 items which satisfy the extended Mack-Lansley criteria (that a majority regard the item as a necessity, and a majority possess it) are indicated in Table 8.1. Four items are excluded because they are not regarded as necessities by a majority (telephone, colour TV, central heating and a daily newspaper) and two because a majority do not undertake the activity defined in the item (saving and a week's holiday).

It might be argued that for an item to be regarded as a "socially defined necessity" something more than a simple majority should be required. In the present case, the item which has the smallest majority vote as a necessity is a car, which 59 per cent of the sample regarded as a necessity. This may reflect divergences of opinion between urban and rural households on this question. An alternative index may be defined by the stricter criterion that 75 per cent of the sample must regard the item as a necessity: this results in an index of 10 items possessed and regarded as a necessity by at least three-quarters of the sample.

Table 8.2 below shows the distribution of households according to the number of items from the 14-item summary index which they lack, and the number for which this lack is "enforced".

Table 8.2: *Distribution of Deprivation Scores on a 14-Item Summary Index*

<i>Deprivation Score</i>	<i>Lack</i>	<i>Enforced Lack</i>
0	30.0	50.7
1 or more	70.0	49.3
2 or more	48.2	29.6
3 or more	34.2	19.7
4 or more	24.3	13.1
5 or more	16.1	7.9
6 or more	10.9	5.2
7 or more	7.6	3.3
8 or more	5.2	2.0

The impact of the attempt to control for taste differences is readily apparent from the lower scores for the enforced lack index. The mean score for the lack index is 2.2 as against 1.3 for the enforced lack index. While only 30 per cent of all households lack none of the items, almost half the sample have no enforced

lack. Moving towards the other end of the scale, 16 per cent of households lack 5 or more items, as against 8 per cent for whom the lack of 5 or more items is because they cannot afford them. In the next section, the relationship between the alternative indices and income will be investigated. For the moment, it is sufficient to note that the use of the "would like, but cannot afford" question to control for taste is not without its drawbacks. There is evidence in the Mack and Lansley study that answers may reflect a lowering of expectations; as people get used to doing without an item, they may no longer perceive themselves as forced to do without it for lack of money (or, alternatively, may be embarrassed to admit that they cannot afford the items).

As noted in Chapter 2, Mack and Lansley focus on the persons with an enforced lack of three or more items (on an 18 item scale for adults) as an indicator of numbers in poverty, though the rationale for doing so is not entirely clear. It is worth noting, however, that 20 per cent of households have an enforced lack of three or more items from the 14-item scale in Ireland, as against a corresponding figure of 12 per cent lacking three or more items (from an 18-item scale) for the UK in the Mack-Lansley study.

As was noted earlier, an index of items possessed and regarded as a necessity by at least three-quarters of the sample was also constructed, implementing a stricter definition of what constitutes a necessity. Table 8.3 below shows the distribution of scores on this index.

Table 8.3: *Distribution of Deprivation Scores on a 10-Item Summary Index*

<i>Deprivation Score</i>	<i>Lack</i>	<i>Enforced Lack</i>
0	53.6	66.6
1 or more	46.4	33.4
2 or more	26.8	18.1
3 or more	15.0	10.1
4 or more	8.0	5.4
5 or more	5.3	3.0
6 or more	3.6	1.6
7 or more	2.1	0.7

Using this stricter criterion, we find that over half the sample possess all the items defined as necessities; two-thirds of the sample say they do not lack any of the items for want of money. However, there are still 15 per cent of households which lack three or more items from this reduced scale, and 10 per cent who

say they cannot afford three or more items. In its other features the pattern of results does not diverge markedly from the 14-item index using the less strict definition of necessities.

#### 8.4 *Relationship between Income and Deprivation Indices*

One would expect income differences to have significant effects on standard or style of living. The preliminary analysis in the present section indicates that this is, indeed, the case. A more comprehensive analysis will, however, have to take account of a variety of other influences on living standards in order to tease out this relationship more precisely. The present analysis shows simply that while current income has a significant effect, there is a large role for other factors in determining standard or style of living.

One way of summarising the relationship between a deprivation index and income is to examine the mean score on the index recorded by deciles of the equivalent income distribution. This is done in Table 8.4, using the 14-item index as a benchmark. These results suggest a significant relationship between equivalent income and deprivation as measured by an index of lacks or enforced lacks. The mean score for the bottom decile is about 4 times that of the top decile for the "lack" index, and over 7 times that of the top decile for the "enforced lack" index. However, the decline in the deprivation index as income rises is not a smooth one. In particular, there is little difference between the scores for each of the bottom three deciles, although these scores are higher than those for other deciles.

Table 8.4: *Mean Scores on 14-Item Deprivation Index by Equivalent Income Decile*

<i>Decile</i>	<i>Lack</i>	<i>Enforced Lack</i>
Bottom	3.3	2.2
2nd	3.7	2.7
3rd	3.5	2.2
4th	2.9	1.6
5th	2.6	1.4
6th	1.8	0.9
7th	1.3	0.8
8th	1.5	0.7
9th	0.9	0.4
Top Decile	0.8	0.3

The corresponding figures for the 10-item index reveal a similar pattern (Table 8.5). The level of the index is, of course, lower for all categories. The bottom three deciles have similar deprivation scores, but higher than for other deciles. The score for the bottom decile is now over 10 times that of the top decile for the enforced lack index; however, the overall relationship with income is not necessarily strengthened by restricting the index to a stricter definition of necessities. It may be, for example, that such a high proportion of households with incomes above a certain level will possess *all* the basic items that further increases in income will have little impact on the index.

Table 8.5: *Mean Scores on 10-Item Summary Deprivation Index by Equivalent Income Decile*  
*Equivalence Scale: 1, 0.66, 0.33*

<i>Decile</i>	<i>Lack</i>	<i>Enforced Lack</i>
Bottom	1.6	1.2
2nd	1.8	1.6
3rd	1.7	1.3
4th	1.3	0.9
5th	1.3	0.8
6th	0.7	0.4
7th	0.5	0.3
8th	0.8	0.4
9th	0.5	0.2
Top Decile	0.4	0.1

The "enforced lack" index was designed to capture differences in style or standard of living which were due to differences in tastes rather than differences in income. On this basis, it would be expected that the relationship of the enforced lack index to income would be stronger than that for straightforward lack index. It was noted above, however, that the "enforced lack" index might be affected by lowered expectations, i.e., respondents on low incomes coming to accept the lack of certain items as normal, and not something which they would like but could not afford. This would tend to reduce the strength of the relationship between the enforced lack index and income. The relative strength of these two factors might be expected to determine whether the link with income is strengthened by moving from a "lack" index to an "enforced lack" index. The distribution by decile suggests that the relationship with income strengthens. The scores for all deciles are reduced, but the scores for the bottom three deciles



fall by between 11 and 35 per cent, while the scores for the top three deciles fall by between 50 and 75 per cent. However, the overall correlation between equivalent income and the deprivation index falls, albeit very slightly, when this method of controlling for tastes is employed. Clearly, further work is needed to establish the causes of this phenomenon. In the interim, continued use of both indices, rather than placing entire reliance on one or the other, would seem to be warranted.

There is considerable variability in the deprivation scores recorded by those at similar income levels. A similar pattern was also found to hold in Townsend's data, as stressed by Piachaud (1981). He attributed a large part of such differences in deprivation scores to differences in tastes. But analysis of the ESRI data finds similar variability even in the "enforced lack" index. This confirms that other factors must also enter into a comprehensive explanation of the phenomenon.

One such factor which might be expected to influence deprivation scores over and above income levels is the stage of the family cycle. If, for instance, households tend to accumulate consumer durables in a gradual way, households at an earlier stage of the cycle may tend to score higher on the deprivation index for a given level of income. If so, the relationship between income and deprivation indicators may tend to be stronger for families at a given stage of the family cycle. Table 8.6 illustrates the relationship for the commonest stage of the family cycle, the middle child rearing stage with both pre-school and school-age children in the household (see Rottman, Hannan *et al.* for details of the classification used).

Table 8.6: Mean Scores on 14-Item Summary Deprivation Index by Equivalent Income Decile for Households at Middle Child-rearing Stage of Family Cycle

<i>Decile</i>	<i>Lack</i>	<i>Enforced Lack</i>
Bottom	3.6	2.9
2nd	3.1	2.3
3rd	2.7	1.8
4th	2.5	1.5
5th	1.8	1.0
6th	1.3	0.7
7th	1.1	0.6
8th	0.8	0.2
9th	0.5	0.2
Top Decile	0.6	0.1

These results, particularly for the "enforced lack" index, do show a stronger relationship with income. The change is not so clearcut for all stages of the family cycle, but it is clear that family cycle variables have a role to play in explaining variation in deprivation scores, along with differences in income and in tastes.

An alternative perspective on the relationship between deprivation and income can be provided using the income poverty lines derived in earlier chapters. The results in Table 8.7 help to establish the extent to which deprivation, as measured by the 14 item summary index, is greater for "poor" households than "non-poor" households. The breakdown of scores is shown for households above and below the 60 per cent relative poverty line. Since the distribution of deprivation scores by equivalent income decile found similar scores for the bottom three deciles, lower poverty lines would show somewhat smaller differences between "poor" and "non-poor" households.

Table 8.7: *Deprivation Scores on 14-Item Index for Poor and Non-Poor Households at the 60 Per Cent Relative Poverty Line*

<i>Deprivation Score</i>	<i>Lack</i>		<i>Enforced Lack</i>	
	<i>Non-Poor H'holds</i>	<i>Poor H'holds</i>	<i>Non-Poor H'holds</i>	<i>Poor H'holds</i>
0	37.2	13.4	60.6	27.8
1 or more	62.8	86.6	39.4	72.2
2 or more	38.8	70.1	20.2	51.3
3 or more	24.9	55.9	12.0	37.6
4 or more	17.0	41.1	7.0	27.0
5 or more	10.0	30.0	4.2	16.4
6 or more	6.8	20.1	2.5	11.2
7 or more	4.3	14.9	1.3	7.6
8 or more	3.0	9.9	0.9	4.5

The deprivation scores for poor households are clearly higher than those for non-poor households, at any given level of deprivation. For instance, households which fall below the 60 per cent relative poverty line are three times more likely than non-poor households to lack 5 or more items. The same relationship is found at a lower cut-off of 3 or more items on the "enforced lack" scale. There are, however, significant numbers of households below the relative income poverty lines with low or zero scores on this deprivation index, and smaller numbers of non-poor households with very high deprivation scores.

The issue of how different the deprivation scores would be expected to be for poor households is related to the debate on Townsend's hypothesis that "as resources for any individual or family are diminished, there is a point at which there occurs a sudden withdrawal from participation in the customs and activities sanctioned by the culture" (Townsend, 1979, p. 57). Piachaud (1981) argued that such a threshold was intrinsically implausible, and that reality is more accurately represented by a continuum from great wealth to chronic poverty. Debate on this topic has continued, with contributions from Desai (1986) claiming to confirm the existence of a threshold using statistical tests, and by Piachaud (1987) questioning this conclusion. Future work on our data will include more detailed econometric testing of this "threshold hypothesis". For the moment, it is sufficient to draw attention to an aspect of Townsend's use of the mode rather than the mean in his analysis of the relationship. The use of the mode can give a considerably sharper appearance to a relationship, as the comparison of modal and mean scores for the 20-item index in Table 8.8 shows.

Overall, the results on the relationship between income, poverty and deprivation seem quite similar to those in the surveys conducted by Townsend and Mack and Lansley in the UK. Deprivation scores tend to rise as income falls, but there is substantial variation around this tendency, even if an attempt

Table 8.8: *Comparison of Mean and Modal Deprivation Scores on 20-Item Index by Equivalent Income Decile*

<i>Decile</i>	<i>Mean</i>	<i>Mode</i>
Bottom	7.1	7
2	7.7	6
3	7.3	5
4	6.3	5
5	5.8	4
6	4.4	1
7	3.5	1
8	3.7	1
9	2.6	0
Top	2.0	1

is made to control for differences in tastes. It is also evident that there is a great deal of variation not explained by these factors.

Mayer and Jencks (1989) have also found similar results using data gathered in Chicago. They found using regression techniques that there are significant

influences not only from income adjusted for needs (using the official US poverty line) but also from age, non-cash benefits, and home-ownership, as well as from health status and access to credit. One other important influence discussed by them, and also evident here, is the influence of the equivalence scale used in adjusting income. Some of the items used in the deprivation scales, and, indeed some of the indices, are more closely related to *total* household income than to equivalent household income. This is not surprising, since the more adults are in a household, the more likely it is that certain household durables can be afforded. But it does raise questions about the appropriate measures of deprivation and of resources which will be examined in future work.

### 8.5 *Conclusions*

The analysis of deprivation indicators and their relationship to current income in this chapter gives rise to a substantial agenda for further research. Parts of this agenda have already been noted. Here, we draw together the results of the initial work in this chapter, and set out the agenda for further research more systematically.

The initial 20 indicators of standard or style of living allowed the construction of a picture of national living patterns, and of items regarded as necessities by a majority of the population. Summary indices of deprivation were built up of 14 items regarded as a necessity, and actually possessed, by a majority of the sample, and of 10 items regarded as a necessity and possessed by over three-quarters of the sample. No attempt was made to derive a distinct poverty line or subsistence standard from this information, but the information was used to examine the style of living of those at different income levels.

The results of this analysis showed considerable similarities to UK and US work on this topic. Those at lower income levels did have higher deprivation scores, but there was considerable variation in the scores at any given income level, even when an attempt was made to control for differences in tastes. While current disposable income clearly has a significant effect on living patterns, other factors also have a role to play. Households' accumulation of consumer durables over the life-cycle would lead, for example, to households with similar incomes scoring rather differently on the deprivation index: the possible importance of this factor was illustrated.

We may summarise the research issues arising under three broad headings, which will be treated in turn. The first is the construction of measures of deprivation; the second is measurement of resources; and the third is analysis of the relationship between deprivation, resources and other factors.

Looking first at the measurement of deprivation itself, one point to note is that additional data will soon allow better measures of participation in social life than those already used. The issue of whether the attempt to control for

taste differences using the "would like, but cannot afford" criterion to control for taste is confounded by the effects of lowered expectations will also be analysed in greater depth.

At a more fundamental level, it is important to note that the initial indices used here have been based on the approach of Townsend and others in implicitly assuming that poverty can be measured along a single underlying dimension. Preliminary work (Hannan, 1988) suggests that poverty may well be a multidimensional phenomenon. Households may be poor on one dimension, such as housing conditions, but not poor in terms of current income, which is the dimension treated in detail in this paper. Conversely, households may be poor in terms of current income, but not poor in terms of housing conditions. (To some extent this may reflect the income from owner occupation and public subsidisation of housing, which can be taken into account in the measurement of resources.) Further work on the dimensionality of poverty is a priority for future research.

Turning now to the issue of the measurement of resources, it should be noted that the information collected in the survey will allow broader income concepts to be used in later reports. For example, it will be possible to take account of income over a 12 month period, imputed income from owner-occupied housing, and non-cash benefits. Information on assets will also be relevant to broader concepts of command over resources. Special attention will also have to be given to incomes from farming and self-employment, which can fluctuate greatly from year to year without a corresponding influence on style of living.

The analysis of the relationship between deprivation and resources raises some further issues, beyond measurement of the two concepts themselves. Our initial analysis suggests that considerable attention must be given to identifying and controlling for the influence of other factors if the influence of income is to be correctly identified. For example, further examination of life-cycle influences is suggested by our preliminary analysis. Multiple regression techniques, allowing for the limited dependent variable (the deprivation index), will provide an appropriate framework for extending the analysis to include several variables. A further issue to be examined is whether there exists a threshold income, below which deprivation increases sharply. While our initial analysis does not support this hypothesis, more detailed work is needed to reject or confirm it.

## Chapter 9

### *POVERTY AND NON-CASH BENEFITS*

#### *9.1 Introduction*

So far, in looking at the position of households relative to income poverty lines, this study has followed most international analyses of poverty in focusing on *disposable* income. Most usually, both the measure of “needs” — the poverty line, however constructed — and the measure of “resources” have been framed in terms of current disposable income. This is widely recognised to be a rather narrow measure of needs and economic resources, while none the less being generally accepted as the best starting point for the analysis of poverty.

As discussed in Chapter 2, a broadening-out of the measure of resources could take several directions. The treatment of assets is one important issue: people who own their house or car are in a different position to those on the same income level who are not owners of these assets. The time-period over which resources are measured can also be widened, to look at annual or even lifetime income as well as current weekly income. While these merit consideration in the future, here we look at the conceptual and practical issues which arise in attempting to widen the measure of resources in another direction, namely to take into account what are termed non-cash benefits.

Households benefit from a range of services provided free or in a subsidised manner by the State, from security to public amenities to personal social services. In analysing the distributive impact of such services and their implications for living standards, though, the main emphasis has been on particular areas: health, education, housing, transport, and subsidies/vouchers/free provision of goods such as food and fuel. It has been argued that, in measuring poverty, concentrating on disposable income without taking these non-cash benefits into account could be misleading.

One of the main objectives of the Institute’s survey on Poverty, Income Distribution and Usage of State Services was to gather detailed information on the utilisation patterns of services provided by the State in Ireland, such as health and education. Analysis of these data will permit utilisation to be related to factors such as income level, social class and household composition. This will allow the redistributive effects of State expenditure on these services and their implications for living standards to be explored in depth, and will involve a separate study in itself. At this stage, though, it is worth highlighting the complex

conceptual and empirical problems which face attempts to assess the implications of these benefits for the measurement of poverty. The present chapter, then, draws for the most part on evidence from previous Irish studies on the distribution of non-cash benefits, and on the international literature on this topic. First, we look in Section 9.2 at the relationship between institutional structures, the method of deriving the poverty line, and the role of non-cash benefits in poverty measurement. Section 9.3 then discusses the conceptual issues raised by trying to broaden the measure of resources to include the effect on non-cash benefits. Section 9.4 briefly describes the importance and structure of non-cash benefits in Ireland. Section 9.5 examines one specific area which can be analysed in a relatively straightforward way, namely housing costs. The conclusions are summarised in Section 9.6.

### *9.2 Measuring Poverty and Non-Cash Benefits*

The first point to be made about the role of non-cash benefits in measuring poverty is that this will depend on how the poverty threshold itself is derived, and on the structure of the benefits themselves. This can be illustrated conveniently by a comparison between the US and Britain. In Britain, while a great deal of attention has been given to the broader redistributive impact of non-cash benefits, they have featured hardly at all in studies focusing specifically on the measurement of poverty. In the US, on the other hand, the treatment of non-cash benefits in measuring poverty has given rise to "the biggest debate by far" (Sawhill, 1988) among researchers on poverty in recent years.

In Britain, State health care and education are available, for the most part free of charge, to *all*. There is little direct provision of food or food vouchers to the poor. Local authority housing is concentrated on low income households, but conventionally the poverty line and the measure of resources excludes housing costs entirely. The common procedure is to derive the poverty line from social welfare support rates, and compare cash income (net of housing costs) with this line. Since health care and education are available free to all, they do not enter into either the measure of needs or the measure of resources, and are not considered a problem in this context. In the US on the other hand, in-kind benefits such as health care and food vouchers are largely targeted on those at low incomes. The official poverty line is derived — as described in Chapter 2 — by costing the "food budget" and multiplying by a factor to take into account the average proportion going on other expenditure. Thus, since the poverty line is based on an inclusive concept of "needs", it is argued that in measuring the resources of the poor the in-kind benefits received such as food stamps, school lunches, subsidised housing and Medicaid, should be taken into account.

Thus both institutional structures and the exact method of deriving the poverty standard itself will influence the appropriate treatment of non-cash benefits. In

the Irish case, the institutional structure of State provision of services is somewhere between the more "targeted" US system and the more "universalist" British one. Education at primary and secondary level is available free to all irrespective of income while third-level grants are means-tested, but fees for third-level education are well below average cost. Health services are available free of charge on a means-tested basis to about the bottom 40 per cent of the population, with reduced but still substantial eligibility (for hospital services) for most of the remainder.<sup>27</sup> Local authority housing is largely concentrated on lower-income households. We review in Section 9.4 below the available evidence on the complex distributional pattern of State expenditure on these services, but *a priori* we would expect them to have an important and differential impact on households at different income levels, of different compositions, and at different stages in the family cycle.

Considering the way in which the poverty standard is constructed, the range of methods reviewed in this study have different features and it is not possible to generalise about the implications of non-cash benefits across these methods. The "official" poverty lines based on social welfare rates, used in most previous Irish studies are similar to the British lines derived on this basis, implicitly assuming that recipients will not have to pay for health care or education. These services are therefore to be ignored in assessing both needs and resources. The consensual income poverty lines are based on people's own assessments of income needs, which for low-income households may be expected to take into account the fact that education and health care are provided free for such households. To the extent that they are based for the most part on the views of those at or about the poverty level, they may also therefore be taken to largely reflect needs excluding the costs of these services.<sup>28</sup> Measuring poverty directly through looking at indicators of deprivation, non-cash transfers do not affect the measurement (though they may help to explain why households on similar income levels can apparently have quite different levels of deprivation). With the budget standard method — not applied here — as the US example makes clear, ideally in-kind transfers should be taken into account in measuring resources to the extent that they have been included in assessing minimum needs.

With the remaining method of deriving poverty standards, the purely relative method — on which the present study places most emphasis — the role of non-cash benefits is more problematic. First of all, although the income thresholds produced by the method are derived as proportions of mean income, they may

<sup>27</sup> Those in Entitlement Category II are eligible for hospital services, though subject since 1988 to charges. Those in Category III are entitled to public hospital accommodation — again subject to charges — but not to consultant services.

<sup>28</sup> Chapter 6 explained how the two consensual methods applied there — the CSP and SPL methods — base their poverty lines largely on the views of those "near" the line, rather than on an average of views in the sample.



be assessed by most people not so much in this light, but rather as nominal cash amounts. For example, the fact that a certain percentage of the population in our sample was found to be below the equivalent of £42 per week for a single person (with scale C) has a value of its own, independent of the fact that the figure was derived in the first place as half mean equivalent income. In assessing the standard of living implied by that nominal figure, most people will be aware that education and health care do *not* usually have to be paid for by people at that income level. It may validly be compared on this basis with social welfare support rates for example, or with the income judged to be adequate by the Commission on Social Welfare, since these take into account the fact that these costs do not generally have to be borne by low-income groups

However, focusing on the relative position of different groups *per se*, leaving non-cash benefits out of the assessment could in some circumstances be seriously misleading. If non-cash benefits went largely or exclusively to the poor and substantially improved the position of those on low income relative to those on average or high incomes, then looking at disposable income alone would mislead as to the relative position of low income households. Similarly, using purely relative lines to examine trends over time or make comparisons across countries could be misleading if the structure and/or importance of non-cash benefits changed substantially or was very different in different countries. We look in Section 9.4 at the empirical evidence about the distribution of non-cash benefits in Ireland, to see whether beneficiaries are in fact for the most part low-income households. First, though, we consider the conceptual problems which have to be addressed in any attempt to broaden the measure of households' resources to include the value of these non-cash benefits.

### 9.3 *The Valuation of Non-Cash Benefits*

The issues which arise in assigning a value to in-kind transfers have been explored in greatest depth in the US. While some progress has been made on these methodological problems, no consensus on an appropriate treatment has been reached despite intensive examination at both official and academic level. As a result, as Sawhill (1988, p. 1078) points out, there are now *ten* alternative poverty figures published each year by the US Census Bureau, varying in the extent to which non-cash benefits are included and how they are valued.

Since it gives rise to probably the most intractable problems, medical care is useful as an example. If we simply add to income the actual cost of medical care provided by the State (or its market value if this could be assessed), this would imply that households with sick people are richer than the healthy at the same cash income level. If we ignore the State-provided care, though, then a richer household with a sick member which has to pay for its own health care

looks better off than the "poor sick" one, but may actually not be better off net of health care costs.

One obvious solution is to attribute to those eligible for State provision extra income equal to the insurance premium they would have to pay to obtain that level of cover in the market — assuming this can be established. It is important to emphasise that it is not just those who received State-provided care in the year in question, but all those *eligible*, who are to be given this additional income. While attractive, this also creates problems. As Smeeding (1982) points out, an elderly individual in the US has entitlement to State health care constituting in effect an insurance policy worth almost enough *by itself* to bring that person above the official poverty line — but he or she could still have insufficient cash income to buy food, clothing and shelter.

The central point which this illustrates is that benefits in kind are *not* to be equated with cash income and valued accordingly: in-kind transfers do not represent command over resources in the same way that cash income does. Basic microeconomic theory shows that any in-kind transfers will in general be valued less by a consumer than the cash amount corresponding to the cost of provision or the market price of the service provided, simply because there is no choice about its allocation. Efforts in the US to estimate the value placed by recipients on in-kind transfers show that this may be considerably below market price, but this value is very difficult to estimate satisfactorily.<sup>29</sup> (These problems are discussed in detail in the context of health care by Smeeding and Moon (1980); an interesting recent exploration of the methodology for valuing food stamps is Moffit (1989).)

The most comprehensive measure of resources used in measuring current poverty in the official US figures includes money income, food, housing, and medical benefits. It is interesting that education is not included even in this measure. Consideration of schooling costs brings out an aspect of the problem which does not appear to have received attention in the literature. In analysing the relative position of households with and without children, equivalence scales such as those employed in the present study are conventionally used. Where education is provided free by the State, these scales in reflecting the cost of children will not include any school fees. If we were to value the education provided and attribute this as extra income to families with children their position relative to those without children would improve. However, if we include this benefit in income, the implied cost should also surely be included in the needs of children, so that the equivalence scales would also change. The net effect would thus be a cancelling out of the extra income by additional needs when calculating

<sup>29</sup> Even a meaningful market price may in some instances be difficult to establish, where the State dominates the provision of the service in question.

equivalent income. This is not to say that the families with children are receiving no benefit: they are clearly better off than they would be if they had to pay for the education provided. But the fact that they do *not* have to pay has been embodied in the calculation of equivalent income (and thus in relative poverty lines derived from it).

This discussion makes clear that health care and education provided by the State pose extremely complex problems for the measurement of resources and of poverty. The other major non-cash benefit in the Irish case is local authority housing. This gives rise to particular issues, in that housing is also the area where — as noted earlier — taking assets into account, distinguishing between house owners and non-owners, is most important. In Section 9.5 below we look at the impact which taking housing costs into account has on measured poverty using relative poverty lines. First, though, we discuss the available evidence on the role and distribution of non-cash benefits in Ireland.

#### *9.4 Non-Cash Benefits in Ireland*

A major part of current State expenditure in Ireland goes on provision of services free or below market price. Focusing on the areas which are conventionally treated as non-cash benefits, about 32 per cent of Exchequer current expenditure excluding debt service payments goes on health care, education, housing and transport. This may be compared with the 35 per cent going on social welfare cash transfers. These services provided by the State clearly have a major impact on the standard of living of those receiving them. The distributional impact of State spending of this type has been analysed by the CSO (1980, 1983 and Murphy, 1984), and by Rottman and Reidy (1988) for the NESO, based on the Household Budget Surveys for 1973 and 1980. Their main findings can usefully be summarised to show the importance and patterns of non-cash benefits in Ireland.

The CSO redistributive exercises cover the major programmes “which directly benefit particular individuals and households and can realistically be assessed” (Murphy, 1984, p.57). These are health services, education, local authority housing, and “other”. (“Other” covers in-kind social welfare benefits such as free fuel and TV licences, and subsidies on public transport and — since abolished — on items such as food, gas and electricity, and mortgage charges). In allocating the “benefit” of State expenditure in these areas to households, that benefit is taken to be equal to the cost of providing the service, which is distributed among households on the basis of actual or estimated usage patterns. The methodology involves a variety of information and assumptions, described in detail in the CSO reports, Murphy (1984) Rottman and Reidy (1988) and Nolan (1981) comment on its strength and limitations. (A similar approach is used in the UK CSO’s annual redistribution studies based on the Family Expenditure Survey,

as discussed in, for example, O'Higgins (1980).) Without dealing with the methodology in any detail here, the main features of the results are outlined.

We look first at households without any adjustment for size and composition, classified by disposable income. Table 9.1 summarises the impact on those at different income levels of the four identified categories of non-cash benefits in the CSO's exercise for 1980.<sup>30</sup> The overall importance of these non-cash benefits is shown by the fact that adding these benefits to disposable income raises mean income by about 20 per cent. For those towards the bottom of the income distribution, these benefits are considerably more important relative to disposable income. For those in the bottom income category shown in the table (comprising 29 per cent of households), including non-cash benefits increases mean income by 42 per cent.

Table 9.1: *Non-Cash Benefits by Disposable Income Range, 1980 HBS*

	<i>Weekly Disposable Household Income</i>				<i>All</i>
	<i>Under £60</i>	<i>£60-99</i>	<i>£100-139</i>	<i>£140 and over</i>	
% of households	28.7	27.1	19.8	24.4	100
Average £ per week 1980:					
Disposable income	35.4	80.2	118.8	209.4	106.4
Non-cash benefits:					
– health	8.5	7.9	7.9	8.4	8.2
– education	3.1	8.6	11.9	14.6	9.1
– housing	1.4	1.3	0.7	0.3	1.0
– other	2.1	2.1	2.5	3.6	2.5
Total non-cash benefits	15.1	19.8	23.0	27.0	20.8
Disposable income plus non-cash benefits	50.5	100.0	141.8	236.4	127.2

Source: Redistributive Effects of State Taxes and Benefits on Household Incomes in 1980, Table 11.

This is not to say, of course, that lower income groups receive more through these benefits than higher income groups. The opposite is in fact the case, with the average receipt for the top income group in the table being almost twice the average for the bottom group. This is still considerably less favourable to higher income groups than is the distribution of disposable income itself, though, so lower groups do better *relative* to their disposable income. The bottom income group receives 9½ per cent of disposable income but 21 per cent of allocated

<sup>30</sup>The 13 published ranges (CSO 1983 Table 11) have been combined to make up four income categories for ease of presentation.

non-cash benefits. The top group, on the other hand, comprising 24 per cent of households, receives 48 per cent of disposable income and 32 per cent of non-cash benefits.

Looking at the composition of the non-cash benefits at different income levels, health spending is clearly the most important for lower income groups, accounting for over half the total going to the bottom category. The bottom groups do not do better in absolute terms, though, with a similar average benefit from health for each of the income groups. Education benefit goes less to the bottom group than to the other groups, and is highest for the top category. Housing is highest at the bottom group, though less important in absolute terms than health or education even for that group.

Household composition clearly has a major influence on the allocation of non-cash benefits, with the elderly having a high proportion of health spending and households with children receiving the benefit from education. The classification of households by disposable income takes no account of differences in needs due to size and composition. It is therefore also important to look at households classified by equivalent income, and this has been done by Rottman and Reidy (1988) using the same CSO allocation of non-cash benefits for 1980. The equivalence scales used are the same as those employed by Murphy (1984), where — with a single adult taken as 1 — extra adults count as 0.74 and children as 0.25/0.38/0.53 depending on age.<sup>31</sup>

Rottman and Reidy's main results are summarised in Table 9.2, showing the average benefit received by households classified by equivalent disposable income decile in 1980. The benefit from education expenditure is most affected by the adjustment for household size/composition: it is now spread fairly evenly over the bottom 80 per cent of the distribution. Health spending is now also less important at the very top, while housing continues to be concentrated towards the bottom. Overall, the bottom 20 per cent of the equivalent income distribution receives 25 per cent of the non-cash benefit from health spending, 22 per cent for education, 43 per cent for housing and 18 per cent of other allocated expenditure. These are well above the 7½ per cent of disposable income going to this group, and non-cash benefits clearly improve the position of those towards the bottom of the equivalent disposable income distribution. However, these benefits are not concentrated largely or exclusively on bottom groups: middle income groups also benefit substantially.

In assessing the overall redistributive impact of State intervention, the CSO also takes into account indirect taxes, estimated for different households on the

<sup>31</sup> These scales are derived from those implicit in Unemployment Assistance rates (plus those implicit in Unemployment Assistance rates (plus Childrens Allowance) in the 1970s, with differential levels for children of different ages based on UK scales developed by McClements (1977) — see Murphy (1984 p. 72).

Table 9.2: *Non-Cash Benefits by Equivalent Disposable Income Decile, 1980 HBS*

	<i>Equivalent Disposable Income Decile</i>										
<i>£ per week</i>	<i>Bottom</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>Average</i>
Average disposable income	31.4	46.9	61.0	79.8	94.8	110.1	123.9	142.5	160.1	214.2	106.5
Non-cash benefits											
– Health	10.1	10.7	10.8	9.4	8.4	7.8	7.4	6.8	5.8	4.8	8.2
– Education	11.2	8.8	9.5	11.6	11.2	10.3	9.1	8.4	6.7	4.4	9.1
– Housing	2.1	2.1	1.4	1.3	1.1	0.7	0.6	0.3	0.1	0.1	1.0
– Other	2.1	2.4	2.6	2.4	2.5	2.4	2.6	2.8	2.8	2.8	2.5
Total non-cash benefits	25.6	24.0	24.3	24.7	23.2	21.2	19.8	18.2	15.5	12.0	20.8
Disposable income plus non-cash benefits	57.0	70.9	85.3	104.5	118.0	131.3	143.7	160.7	175.6	226.2	127.3

Source: Rottman and Reidy (1988) Table 7.2 p. 205

basis of their expenditure patterns. Although those at higher income levels pay more indirect tax in absolute terms, indirect tax is a higher proportion of disposable income for lower income groups – it is regressive. Taking it into account therefore offsets to some extent the redistributive impact of non-cash benefits. Taking the two together, we can compare the distribution of disposable income with that of “final” income – disposable income plus non-cash benefits minus indirect taxes. This is done in Table 9.3, which also includes for comparative purposes what the CSO terms “direct” income, which is income from work and property (i.e., before social welfare cash transfers are added and income tax/PRSI contributions deducted to arrive at disposable income).

While final income is more equally distributed than disposable income, the difference is very much less than that between direct and disposable income. This is because of the major contribution which cash transfers make to increasing the shares of lower income groups which is very much more important than the impact made by non-cash transfers net of indirect taxes. A similar overall pattern is found for equivalent income, though with a slightly greater difference between disposable and final income.<sup>32</sup>

The available evidence for Ireland thus shows, in brief, that services provided by the State are of considerable importance not only to those on low incomes,

<sup>32</sup> Neither Murphy (1984) nor Rottman and Reidy (1988) present data on the equivalent disposable income distribution itself. However, Roche (1984) using quite similar though not identical equivalence scales does present the equivalent disposable distribution (Table 5.1 p. 157). Comparing this with the equivalent direct and final income distribution shown by Murphy, the broad conclusion in the text is supported.

Table 9.3: *Distribution of Direct, Disposable and Final Income Among Households, 1980 HBS*

<i>% going to quintile</i>	<i>Direct Income</i>	<i>Disposable Income</i>	<i>Final Income</i>
Bottom	0.5	5.2	5.8
2	8.5	11.6	11.9
3	17.1	17.2	17.2
4	25.7	24.0	24.0
Top	48.1	42.0	41.2
Total	100	100	100

Source: Murphy (1984), Table 5.

but throughout the distribution. When allocated among households on the basis of utilisation and valued at the cost of provision, they improve the relative position of those on low incomes, though their contribution is much less than that of cash transfers. Drawing direct conclusions from these findings for relative living standards and poverty would be hazardous, however, because of the conceptual complexities highlighted earlier.

"Final" income, produced in the CSO exercises by the addition to disposable income of non-cash benefits and the deduction of indirect tax, is *not* to be treated as analogous to disposable income. Disposable income represents actual money income received, conferring command over resources at current prices. Final income is a *construct*. It does not set out to measure command over resources, and non-cash benefits valued at cost of provision are not to be equated with cash income in assessing welfare, for the reasons spelt out above. Murphy (1984) emphasises that the objective of the CSO exercise is not to measure actual welfare or benefits accruing to recipients, but rather to determine where government expenditure goes. The exercise perhaps is best viewed as a "snapshot", as Nicholson and Britton (1976) put it, of the tax and transfer systems in operation. As O'Higgins (1980) argues, "if one's concern is to measure the distribution of the current flows of resources from the government to households as valued in the national accounts (i.e. by service costs) there is a robust common-sense case for the CSO procedures" (p. 36). To assess and compare welfare levels and measure poverty, though, final income can *not* be simply regarded as a more comprehensive and more satisfactory replacement for disposable income.

The discussion in Section 9.3 of the conceptual problems involved made clear that, although no consensus has been reached elsewhere on the appropriate methodology for this situation, some progress has been made. This will provide some avenues to explore using the ESRI data set in future work. In the present

paper, though, it is possible to examine one specific area which is amenable to a relatively straightforward treatment, namely housing. In this case, a common method of taking into account both State provision of subsidised housing and the difference between those who own their houses and those who have to pay for housing is to look at income net of housing costs. While this measure is by no means clearly superior to income before deducting these costs, it does provide useful additional information, as shown in the next section.

### 9.5 *Housing Costs and Relative Poverty*

Two households of the same composition and at the same income level may be spending very different amounts on housing, and thus have quite different scope for spending on other items. One approach to taking into account the value to a household of owning its own house is to add the imputed income from owner occupation to disposable income. Similarly, households paying below the market rent because they are in local authority housing could have the estimated value of the rent subsidy involved added to income.<sup>33</sup> It is difficult to value both these elements satisfactorily, however, particularly in Ireland where the private market rented sector is quite small and thus a benchmark true market rent against which to evaluate them is problematic.

An alternative treatment is simply to deduct the amounts actually being spent on housing from each household's income, and analyse this income net of housing costs. This has been a common practice in the UK, partly because of the particular structure of the social welfare system, where there has been a good deal of emphasis on a comparison of incomes net of housing costs with Supplementary Benefit (now Income Support) levels which exclude support for housing costs (see, for example, DHSS, 1988). A rationale has been that differences in expenditure on housing mainly reflect differences in assets held, and also different costs and thus constraints facing households across sectors and regions because of imperfections in the housing market. Income net of housing costs is thus viewed as in some sense a better measure of "available" income. However there is probably also an important element of choice involved: households choose to allocate different proportions of their income on housing, and observed variation in housing expenditure reflects differences in tastes as well as differences in choice sets. Income net of housing costs is therefore best regarded, in our view, as a complement to, rather than a substitute for, disposable income.

Housing costs may be deducted from disposable incomes in the ESRI sample and the purely relative poverty lines described in Chapter 5 recalculated. When

<sup>33</sup>This subsidy has two elements. The first is the implicit one — the difference between the maximum rent charged (which is calculated on an historic cost basis independent of market conditions) and the true economic rent. The second is the explicit subsidy, the difference between the rent actually paid (which is related to income and family circumstances) and the maximum rent.



this is done, the percentage of households with incomes net of housing costs below these lines are shown in Table 9.4. The aggregate results are not greatly altered by this change in income concept, as the comparison with the results on the basis of disposable income — also shown in the table — reveals. The most substantial difference is at the highest, 60 per cent line, where the percentage below the line falls by about one percentage point with either of the equivalence scales used in this comparison (scale A or scale C — see Chapter 5). This does not mean, of course, that the composition of the households below the lines has not changed more, an issue which will merit investigation in the future.

Table 9.4: *Percentage of Households below Relative Poverty Lines using Alternative Income Concepts, 1987*

Equivalence scale:	C (1, 0.66, 0.33)		A (1, 0.7, 0.5)	
	Disposable income %	Disposable income net of housing costs %	Disposable income %	Disposable income net of housing costs %
40 per cent line	7.5	7.5	10.0	9.4
50 per cent line	17.4	16.6	18.9	18.7
60 per cent line	29.5	28.6	29.0	27.7

### 9.6 Conclusions

Free or subsidised services provided by the State, particularly in the areas of health care, education, and housing, have a substantial impact on the living standards of Irish households. These non-cash benefits benefit households throughout the income distribution but are more important for lower income groups. Taking their effects into account in measuring poverty and comparing living standards poses particularly complex conceptual and empirical problems.

Their role in poverty measurement depends *inter alia* on how the poverty threshold itself is being defined. Some methods focus explicitly or implicitly on “needs” excluding those already met by State provision of services — the “official” poverty line method, for example. While this is not the case with the purely relative approach, the adequacy of the thresholds it produces is clearly to be assessed taking into account the services provided to people at those income levels.

Broadening the measure of household resources to encompass non-cash benefits — which ideally would allow relative lines based on that wider measure to be produced — faces the critical problem of valuation. Non-cash benefits are not equivalent to cash income, and their value to recipients will generally be below

the cost of provision or even the market price of the service in question. Simply adding the cost of provision of services utilised by a household to disposable income does not provide a meaningful measure of welfare — though it is valuable in tracing the flow of resources through the tax and public expenditure systems, which is the objective of the redistributive exercises carried out by the CSO. While some possible methods of valuation and allocation have been explored elsewhere, particularly in the US, this is probably the most thorny and contentious single issue in the methodological debates on poverty measurement there. It is intended to pursue these approaches to valuation of non-cash benefits with the ESRI data set in future work.

One area is however amenable to a relatively straightforward treatment. The importance of non-cash housing benefits, and of the fact that some people own their houses while other have to pay for housing, can be examined by looking at income net of housing costs. When purely relative poverty lines based on this income concept are applied to the sample, the percentage of households with income net of housing costs below these thresholds is in fact similar to the results produced by disposable income.

We now move from the analysis of the extent and nature of poverty to the role of the social welfare system in alleviating poverty. First, Chapter 10 looks at the extent to which the system sets a minimum income standard and is successful in bringing people up to that level. Chapter 11 then analyses the effectiveness and efficiency of the system on the basis of a range of independently-derived poverty thresholds.

## Chapter 10

### *FAMILIES AND PERSONS BELOW OFFICIAL INCOME STANDARDS*

#### *10.1 Introduction*

In this part of our analysis, we identify those families and persons whose incomes fall below the "basic minimum income" set by the Supplementary Welfare Allowance scheme (SWA). As was emphasised in Chapter 3, the proportion of persons falling below this level is not a good measure of poverty: it depends on the generosity of the social welfare safety net, as well as on the extent of poverty. We prefer to regard the proportion of persons falling below official minimum income standards as an indicator of the social welfare system's performance in providing its own minimum income target. These persons are either not eligible even for the safety net scheme, or, if they are eligible (either for the safety net scheme or some other scheme with higher benefits) are not receiving their entitlement, for various reasons. Once the persons and families falling below the official minimum income standard have been identified, we can classify them in this way to see the nature of the gaps in the safety net.

We pay particular attention to the non-take-up problem, defined in the broadest sense as benefits not getting through to persons who are entitled to them. This is an issue of considerable interest, not only from the point of view of measuring the system's present performance: the non-take-up of means-tested benefits is often cited as a reason why greater selectivity or targeting of benefits cannot be achieved through means testing. As well as exploring the role of non-take-up in explaining why people fall below the SWA safety net, we examine in detail the take-up problems associated with the Family Income Supplement (FIS) scheme.

It must be stressed that the analysis in the present chapter cannot be used to assess the adequacy of the minimum income target set by the Supplementary Welfare Allowance scheme: it is aimed instead at evaluating the system's performance in terms of its own minimum income objective.

#### *10.2 SWA as an Official Minimum Income Standard*

We treat the Supplementary Welfare Allowance rate as the safety net income which the Social Welfare system tries to guarantee. Its stated purposes at the time of its introduction included guaranteeing a "standard basic minimum income", and the provision of a "residual and support role within the overall

income maintenance structure".<sup>34</sup> It is the lowest scale of payments in the social welfare system, identical with the short-term rural Unemployment Assistance rate. The level of the basic payment was £33.00 per week for a single person for the early part of the survey period, and £34.00 per week from July 1987 on. The corresponding figures for a married couple are £56.95 and £58.70. Additional payments are made for children under 18.

A supplement may be payable under the SWA scheme for housing costs. This addition is discretionary, but there are administrative guidelines laid down at national level. The Commission on Social Welfare noted wide variation in the application of the guidelines on rent or mortgage interest supplements. In order to avoid the complications arising from such variation, we concentrate in this chapter on entitlement to SWA, *excluding* this supplement for housing costs. However, we also provide an indication of the possible importance of the housing cost additions. The rule for housing additions used in this sensitivity analysis is that rent or mortgage interest repayments in excess of £1.50 per week qualify for housing supplements, but not the capital repayment element of a mortgage.<sup>35</sup> While supplements in excess of £5 per week had to be referred to the Department of Social Welfare for approval this did not constitute an upper limit, so no upper limit was placed on the amount of the supplement in the sensitivity analysis.

Regular supplements may also be payable for special heating or dietary needs: these are not taken into account here, because generally a successful claim for such supplements would require medical evidence. This means that the basic SWA income standard applied here can be regarded as a minimum entitlement, exclusive of any additions which may be payable for either housing or special needs.

Irregular supplements may also be paid for what are termed "exceptional needs", such as a large electricity bill, clothing or furniture. Such supplements are not included in the SWA standard applied here, nor are receipts under this heading classified as current income. Information on receipt of such payments during the 12 months preceding the date of interview has, however, been collected in the survey, and will be analysed later.

### 10.3 *Identifying Families with Incomes below the Supplementary Welfare Allowance Level*

In order to identify families with incomes below the SWA level, it is necessary to establish each family's "entitlements" under the scheme. We calculate these notional entitlements purely on the basis of the family's income, by applying

<sup>34</sup> Mr Frank Cluskey, Parliamentary Secretary to the Minister for Social Welfare, Dail Debates, 24 June 1975, as quoted in the Commission on Social Welfare's Report.

<sup>35</sup> This means that the recipient's income net of allowable housing costs is maintained at the SWA rate less £1.50; this £1.50 figure was raised to £3.00 late in 1987.

the SWA means test; some families would qualify on the basis of the means test, but would not actually qualify for SWA because they fall into an ineligible category (e.g., working full time). The question of whether families below SWA income standards are *actually* entitled to SWA, or to other social welfare payments, is dealt with later.

Differences in dates of interview are taken into account to avoid the problem of persons apparently receiving more or less than their SWA entitlements simply because of the timing of their interview. This means that the SWA standard applied to a single adult household interviewed before July 1987 is £33.00, whereas for the same type of household interviewed after July 1987 it is £34.00. If the higher figure were applied to all households in the sample, families actually receiving the exact SWA entitlement could be classified as below the official income standard because of the date of interview. If, on the other hand, the lower figure were applied, families receiving less than their SWA entitlement would be classified as above the official income standard.

SWA is paid not at the level of the household, but at the level of what will be termed a "benefit unit". A benefit unit for SWA purposes is defined by the rules of the scheme as a single person or married couple, together with children under the age of 18. A household may be made up of one or more benefit units, e.g., if a household is made up of a married couple with three children, all aged under 18, this would be a one-benefit unit household, but if all the children were aged 18 or over, there would be four benefit units in the household. People who are not related by spousal or parent-child ties belong to different benefit units. To summarise this terminology, benefit units are simply groupings of people within households: they do not depend on whether or not a social welfare benefit is actually being received, but refer also to potential recipients. Two-thirds of households in the sample contain just one benefit unit, but 15 per cent contain three or more benefit units. Clearly then, the benefit unit is close to the tax unit concept used earlier, but with a slightly different concept of what constitutes a dependent child. The implications of this difference are dealt with below.

Benefit units are treated separately in establishing their entitlement to SWA, with one major exception: young single adults living with their parents are subject to the "benefit and privilege" rules. The stated intention is to value the board and lodging they receive, but in effect, it constitutes a one-sided income sharing rule between parents and children. These "benefit and privilege" rules have been applied in what follows, i.e., net parental income, after disregards for the parents' expenses, is treated as if it is shared between the non-earning children, for the purpose of establishing their means.

The treatment of children aged 18 or over, who are in full-time education, requires special mention. They cannot be counted as part of the parental benefit

unit, but are specifically excluded from the SWA scheme. Thus, the implicit policy stance is that the income support for students is not to be provided through the social welfare system<sup>36</sup>; instead, it is expected that support be provided by parents, or where their means are insufficient, by a means-tested grant. Two approaches are taken in the present analysis. The simplest is to exclude these benefit units from the analysis. This is not, however, an entirely satisfactory procedure since it excludes students who have total incomes from grants, employment and parental support which fall below the SWA standard. While it may not be an objective of the social welfare system to provide support to such students, it is of some interest to know how many fall into this category. Therefore an alternative procedure, which treats students as separate benefit units, with income as recorded in the survey from grants and part-time jobs, and an assumed income from their parents in line with the benefit and privilege assessment.

In order to simulate the actual operation of the SWA means test, and find the most accurate answer to the question of how many people fall below the SWA income standard, we have conducted the basic analysis at benefit unit level. For reasons noted in Chapter 5 the figures on the percentage of persons below the income standard are of more significance than those for the proportions of benefit units.

#### 10.4 *The Extent of Gaps in the Safety Net*

The proportions of benefit units and persons with incomes below the SWA income standards are shown in Table 10.1.

Table 10.1: *Percentage of Benefit Units and Persons with Incomes below the Supplementary Welfare Allowance Standard*

	<i>% of Benefit Units with Incomes below SWA</i>	<i>% of Persons included in these Benefit Units</i>
A. Excluding Benefit Units in full-time education	9.2	8.0
B. As A, but with additional allowance for rent or mortgage interest	11.0	11.0

It is clear from this analysis that a significant proportion of benefit units and persons have means which fall below the SWA income standards: 670 benefit units were found to be in this position, representing 8 per cent of the sample.

<sup>36</sup> Students may be entitled to unemployment assistance if they seek vacation work but are unable to find it.

excluding benefit units in full-time education. This does not automatically imply that they are entitled to income support, or that they would be universally regarded as poor. These questions are investigated in later sections, which examine the reasons why benefit units may fall below this safety net income. A sensitivity analysis has shown that if an allowance is made for all rent or mortgage interest in excess of £1.50 per week, the proportion of persons below the income standard rises to 11 per cent. Returning to the basic SWA income standard, if full-time students are included in the analysis, the proportion of persons falling below the standard rises to just under 10 per cent; this indicates that a substantially higher proportion of students than of the general population falls below the standard.

While previous work on poverty in Ireland has used poverty lines based on official income support schemes, the approach adopted here differs significantly in its effort to identify precisely those households whose incomes fall below the minimum income support scheme. This was not done to the same extent by earlier studies, so direct comparisons of the present results with earlier work should not be made. Instead one should view the present results as a snapshot of the effectiveness of the social welfare system in 1987, in terms of its ability to provide the basic minimum income standard set by the SWA scheme.

The difficulties in making comparisons with earlier work can be highlighted by consideration of the previous study which is perhaps closest to our approach viz. Roche's (1984) analysis of the 1973 Household Budget Survey, which used short-term rural Unemployment Assistance rates as the basis for a poverty line. Roche's implementation used the Unemployment Assistance rates which prevailed after the substantial 1973 increase in rates, despite the fact that some of the sample was interviewed before that date; he also used a close approximation to the equivalence scale implicit in the UA scheme to adjust incomes and compare them with the payment for a married couple, rather than calculating the precise entitlements for each household and comparing them with actual income. While differences of the latter type may change the income standards applied by only a few pence, the fact that there are many families on or about these income levels means that the proportion of families below the income standard can be quite sensitive to the rounding errors introduced by these decisions. Roche's analysis of the 1980 Household Budget Survey data uses an uprating of the 1973 Unemployment Assistance scale, so it is less comparable. Furthermore, even if exactly comparable data and analysis were available, it is important to note that some of the major differences would be due to changes in the generosity of the social welfare system's safety net scheme.

#### 10.5 *The Nature of the Gaps in the Safety Net: Non-coverage and Non-take-up*

It is clearly important for policy purposes to know whether those who fall

below SWA income standards are simply not covered by the Social Welfare system, or are not receiving benefits to which they are entitled. This analysis must be done at benefit unit level, since this is the level at which eligibility is decided. In order to classify benefit units as eligible for SWA or other means-tested schemes, or not, one must use information on respondents' labour force status, hours worked, marital status, and number of dependent children (if any). For example, a woman who declares herself as "engaged in home duties" would not appear to qualify for Unemployment Assistance, but information on her marital status and the number of dependent children might show that she would qualify for a Widow's Non-Contributory Pension, or an Unmarried Mother's Allowance. While the income criterion applied in identifying these low income families is that of the SWA scheme, we are interested in whether they are eligible for *any* social welfare payment; if, for example, a family is ineligible for Supplementary Welfare Allowance, but eligible for Family Income Supplement, it is treated here as eligible for income support.

A classification of those who fall below the SWA income standards, according to their eligibility for income support, is provided in the Table 10.2. In some cases, there is an element of doubt as to how to classify a benefit unit. For example, the survey estimates annual farm income on the basis of the most recent

Table 10.2 *Benefit Units Below Basic SWA Income Level*

	<i>% of all Benefit Units</i>
	<i>Per cent</i>
All Benefit Units below Basic SWA income standard	11.8
of which:	
<i>Not eligible for any social welfare payment</i>	
Full-time education	3.1
Others not eligible for any social welfare assistance:	0.9
<i>Mixed category</i>	
Farmers	2.2
<i>Eligible for some social welfare payment</i>	
Did not claim	3.1
Waiting for decision on some social welfare payment or applied but refused	0.4
Some SW payment currently received, but less than apparent entitlement	
Farmers	0.6
Others	1.6



calendar year (1986), but a means test might take into account a longer-term view of farm income, if this diverged markedly from the income for the most recent calendar year. For the moment, therefore, we report farmers and farm relatives assisting who did not receive a social welfare payment as a separate category, only some of whom are eligible for income support from the social welfare support. Farmers who did receive a social welfare payment are assumed to have been established as eligible for such support.

Those who are not eligible for SWA or other means-tested income support fall into two main groups, specifically excluded by the SWA scheme. The first of these is persons in full-time education, who are entitled to draw Unemployment Assistance during vacations, but not to any other income support from the social welfare system. If this group is excluded from consideration, just under 9 per cent of all benefit units are below the SWA income standard. The other major group excluded by the SWA scheme is persons working full-time. Since the FIS scheme provides income support to full-time employees with dependent children, the sub-group of full-time workers effectively excluded from the social welfare system's income maintenance comprises full-time employees without children and the self-employed. This category is a small but significant one, accounting for 0.9 per cent of all benefit units.

The ambiguous status of the large group of farm families who have not applied for or received Smallholders' Unemployment Assistance has already been outlined. The size of this group reflects the fact that information on farm incomes was collected for 1986, the low point for farm incomes in recent years.

Depending on the proportion of this large group of farm families which is eligible for income support, between a half and two-thirds of those below SWA are apparently entitled to at least the SWA income, but not receiving enough benefit to reach it, i.e., they may receive no benefit, or only a part of their apparent entitlement. A sizable proportion of these did not claim any benefit: an investigation of this non-take-up of entitlements is the subject of later sections in this chapter. A majority of these benefits units appeared to be young unemployed persons, often residing with their parents. While the benefit and privilege rules could have led to very small entitlements for such benefit units, the estimated entitlements not taken up were found to be quite large, and often equal to the full maximum amount of Unemployment Assistance.

A small proportion of benefit units were found to be waiting for a decision on a claim, or to have had a claim turned down: these elements would not appear to be major contributory factors to the proportions of persons falling below the official income standards. Prolonged waiting periods could clearly be problematic, even though successful claims would be paid with retrospectation; but the evidence in Callan *et al.* (1988) did not suggest widespread dissatisfaction on this aspect of service delivery.

The remaining 2.2 per cent of benefit units which are receiving some social welfare payment, but less than their apparent entitlement, provide something of a puzzle. At this stage of our analysis, we must note some reasons why entitlements calculated from the survey data may diverge from actual entitlements. One reason why a person might appear not to be taking up a benefit to which they were entitled would be if the questionnaire responses reveal less income than would an actual means test: the relative incentives in the different enquiries suggest that this should be rare. It could arise, however, due to the fact that the means test calculates capital income on a notional basis (attributing an annual income of 5 per cent of the first £400 and 10 per cent of the balance), whereas at the moment, we utilise the answers to a question on actual investment income. We will be able to reduce, if not eliminate, this possible source of discrepancies when the full information from the survey is analysed.

Differences between the ESRI and the Department of Social Welfare's methods of calculating farm incomes (or the information on which each assessment is based) could lead to some families being misclassified in this analysis: some would appear to have an entitlement, but would not actually have one, while others would appear not to have an entitlement, yet be in receipt of Smallholders' Assistance. There is no *a priori* evidence to suggest that the ESRI method systematically underestimates farm incomes, or was based on information tending to understate farm income, relative to the Department's "factual assessment" method. It is important to note, however, that even if the ESRI method and the Departmental method were on average very close to each other, random error could lead to some upward bias in the number of farm families receiving less than their apparent entitlement. This point can best be understood by reference to two examples, in which we assume, for illustrative purposes, that the figure arrived at by the Department is the true figure, and the ESRI method equals the true figure plus a random error. We assume in the case of both examples that the family is brought up precisely to the SWA income standard by the Smallholder's Assistance. In the first example, the random error is positive, so that the ESRI method arrives at a measured income above the SWA standard. In the second case, the ESRI method arrives at an income below the SWA standard. These examples illustrate the possibility that even if the ESRI method is an unbiased estimator of the Departmental assessment, it may lead to an upward biased estimate of the number of farm families below the SWA income standard. A similar argument regarding the impact of random measurement error may also apply to non-farm incomes. Further detailed investigation of the causes of the divergence between estimated entitlement and payments received will be required.

As emphasised earlier, the fact that families are falling below the safety net income standard does not imply that the problem lies with the safety net scheme

itself. A classification of benefit units below the SWA standard, based on the highest benefit for which they appear to be eligible is given in Table 10.3. While the problem would appear to be concentrated in the area of Supplementary Welfare Allowance and Unemployment Assistance, further investigation of the apparent take-up problems in Old Age Non-contributory Pensions, Disabled Persons Maintenance Allowance and Family Income Supplement seem to be advisable. The latter scheme is investigated in more detail in Section 10.8.

Table 10.3: *Benefit Units below Basic SWA Income Level Classified by Highest Benefit for which Apparently Eligible*

	<i>% of All Benefit Units below SWA</i>
	<i>Per cent</i>
Not eligible	33
Farm families, possibly eligible	24
Unemployment Assistance	14
Supplementary Welfare	8
Family Income Supplement	2
Disabled Persons' Maintenance Allowance	3
Old Age Non-contributory Pension	10
Other	6
	100

#### 10.6 *Income Levels of Benefit Units Below SWA Income Standard*

Not all benefit units below the SWA income standard would be regarded as poor. For instance, a small number of self-employed persons, and a larger number of farmers, recorded negative incomes. Some of these may indeed be very poor, and have had to survive by borrowing or drawing on assets. Others may run quite large businesses, which have simply had a poor year. Such benefit units would tend to be concentrated in the not eligible or ambiguous eligibility categories, together with some very poor persons. Table 10.4 shows that the income levels of families below the SWA standard vary from negative, to zero, to levels close to the SWA standard itself (all incomes have been adjusted using the SWA implicit equivalence scale so that they can be compared with the SWA payment for a single adult). Those on zero incomes may well be receiving support from other household members. The levels and sources of income of these benefit units, and the households to which they belong, will be subjected to detailed analysis in later reports.

Table 10.4: *Income Levels of Benefit Units Below SWA Standard*

<i>Category</i>	<i>% of All Benefit Units Below SWA Income Standard</i>		
	<i>Not Eligible</i>	<i>Farmer</i>	<i>Eligible For Some SW</i>
	<i>Per cent</i>		
<i>Income Level</i>			
Negative Income	1	5	1
Zero Income	14	5	16
< £5	3	2	4
£5 < £15	6	4	3
£15 < £25	5	3	4
£25 < £34	5	6	13

*Note:* Incomes adjusted to Equivalent per Single Adult, Using Equivalence Scale as per SWA scheme.

### 10.7 *Non-take-up: Causes and Implications*

The phenomenon of benefits not getting through to those entitled is often referred to as the non-take-up problem, in its broadest sense. The evidence above of significant numbers of people receiving less than their apparent entitlements suggests that this phenomenon is a significant one, even allowing for the caveats necessary at this stage of the analysis. There are many possible reasons for non-take-up, and their implications differ markedly.

One set of reasons would mean that there is a problem, but one that affects only those people who do not receive the benefits to which they are entitled. Some of these reasons would indicate failures of publicity, e.g., if potential claimants are not aware of the existence of the scheme, or do not realise that they are eligible for it. Other reasons would indicate problems in administration, e.g., cases where applications should have been successful but failed due to administrative error, or local variation in the application of national guidelines. Some examples of the latter are given by the Commission on Social Welfare, which states that some Community Welfare Officers would give assistance with mortgage repayments, while others would not; and that some may have been deterred by the £5 limit from applying for and awarding higher rent supplements.

There are other reasons for non-take-up which suggest that it has important implications not only for the non-take-up group itself, but also for households which do receive benefits. Non-take-up may be caused by the fact that for some people the value of the benefit forgone is outweighed by the costs of claiming the benefit. These costs would include any stigma felt to be attached to the particular benefit, as well as the time, effort and financial costs involved in getting

the benefit. Such costs may reduce the true value of the assistance given, even where the benefit is received.

Atkinson (1984) stresses this point, that even where potential claimants decide not to take up a benefit, there may be cause for concern because this indicates the existence of significant costs affecting actual as well as potential claimants. But he also recognises that concern would be diminished in cases where the amounts of unclaimed benefit involved are small, or the duration of the entitlement is very short (so that very small costs would be enough to deter such potential claimants). Some element of "frictional" non-claiming would be expected, so that 100 per cent take-up rates are not to be expected. The possibility of take-up varying with size of entitlement suggests consideration of the aggregate amount of unclaimed benefit as a measure of the seriousness of the problem, in addition to the take-up rates based on numbers of claimants divided by numbers eligible.<sup>37</sup>

The non-take-up of means-tested benefits is often cited as a reason why means-testing is not as effective in targeting aid to the poor as might be thought. The importance of this argument is clearly dependent on the size of the non-take-up problem, and the reasons for it. Evidence from the UK has shown take-up rates of around 70 to 80 per cent for Supplementary Benefit and 50 per cent to 60 per cent for the Family Income Supplement scheme; and while take-up rates are strongly related to the amount of benefit to which the potential claimant is entitled, the aggregate amounts of unclaimed benefit are also substantial. Thus, the problem is regarded as an important one there.

There has, until now, been a dearth of systematic evidence on the extent or nature of the non-take-up problem in Ireland. The Dublin Welfare Rights Group's analysis of the queries received during its Welfare Rights information week revealed some of the reasons for non-take-up in particular cases, but did not have the appropriate database to provide a representative picture of the extent or causes of non-take-up. The preliminary figures from the ESRI survey which suggest that around half of those falling below SWA incomes are not receiving all the benefits to which they are entitled are a definite indication that the problem is significant in terms of size, and worth further investigation.

In order to look at the non-take-up problem for SWA itself, one needs to confine one's attention to those who are only entitled to SWA, and not to some higher payment. Using the preliminary classification of the highest benefit to which benefit units are entitled, we can get an approximate idea of the take-up rate for persons who are only entitled to SWA, i.e., the number of persons currently entitled and currently receiving, divided by the total number of persons currently entitled. This would appear to be somewhat below 50 per cent. As regards the

<sup>37</sup>There is a parallel here with the "head count" and "poverty gap ratio" measures of poverty.

amounts of benefit not taken up, we find that the average apparent unpaid entitlement of those who are eligible for benefit is around £20 to £30 per week: this indicates that non-take-up is not simply a matter of small amounts which potential claimants do not consider it worthwhile to claim.

#### 10.8 *Non-take-up of Family Income Supplements*

The Family Income Supplement Scheme (FIS) was introduced with effect from late 1984 in order to assist families with children supported by a low paid employee. The scheme was particularly designed to assist families whose take-home pay would otherwise not have been much higher than their entitlements under social welfare schemes, for instance, when unemployed. The amount of entitlement to FIS is half the difference between the family's gross pay and a fixed amount for a family of that size. Entitlement is established on the basis of gross pay for a particular period, and then lasts for a full year, irrespective of changes in circumstances such as increased pay. As a result there is a difference between those who could potentially receive FIS at a particular time (which would depend on whether they could have qualified at any time in the previous 52 weeks), and those whose claims would currently succeed. As Atkinson (1984) points out, this leads to two distinct concepts of take-up:

- (1) those currently receiving, as a proportion of all those who could have qualified in the previous 52 weeks
- (2) those currently receiving, whose claims would still succeed if re-evaluated at present, as a proportion of all those whose claims would succeed at date of interview.

For practical reasons, we follow Atkinson's procedure of concentrating on the latter concept. We calculated the gross incomes for FIS purposes of families which met the other qualifying conditions for FIS (at least one parent engaged in full-time employment, and receiving child benefit for at least one child). Income from capital was disregarded, following the FIS rules. We then estimated the total number of families whose claim would succeed at date of interview, at about 20,500, with a total entitlement of £216,000 per week. Our data indicated that around 2,600 of these families were actually receiving a total of £30,000 per week. This yields an estimate of 13 per cent of families eligible for payments under the scheme actually receiving their entitlements. In money terms, this means that 14 per cent of the potential aggregate was claimed.

There is a discrepancy between the survey-based estimate of the number of families currently receiving FIS (irrespective of whether or not their claim would succeed at date of interview), and the actual number currently receiving. The survey-based estimate is 3,210 families currently receiving FIS, as against 4,947

Table 10.5: *Estimated Take-Up Rates for Family Income Supplement*

	<i>Number</i>	<i>Aggregate Amount (£ per week)</i>
<i>1. Lower Bound Estimate</i>		
A. Survey based estimate of families currently receiving FIS, whose claim would succeed at date of interview	2,588	30,000
B. Survey based estimate of all families whose claim would succeed at date of interview	20,535	216,000
Take-up rate (= A/B)	13%	14%
<i>2. Upper Bound Estimate</i>		
A. Estimate of families currently receiving FIS, whose claim would succeed at date of interview: combined Survey evidence and Statistical Information on Social Welfare Services, 1987	4,460	86,000
B. Survey based estimate of all families whose claim would succeed at date of interview	20,535	216,000
Take-up rate (= A/B)	22%	40%

cases actually in payment at the end of 1986, and 5,532 at the end of 1987. (Statistical Information on Social Welfare Services, 1987). If the reason for this is that the survey under-represents both recipients and non-recipients of FIS in equal proportion, the estimate of the take-up rate may still be quite accurate. An upper-bound estimate of the take-up rate can be constructed by assuming that the survey under-represents the recipients of FIS, but does not under-represent potential recipients at all. Thus, if one uses the administrative information on the numbers currently receiving FIS, and the amounts received by them, in combination with the survey-based information on the pool of potential claimants, one arrives at an upper bound estimate of the take-up rate as 22 per cent of eligible families, or 40 per cent of the money amount potentially payable to them. It should be noted that while the survey-based estimate of the numbers receiving FIS is based on a rather small number of cases (a total of 8 cases in payment having been recorded by the survey), the estimate of the numbers who could potentially claim FIS is based on the much higher number of 61 cases eligible for a payment. Blackwell's (1989) comprehensive study of the FIS scheme arrived at an estimate of the potential FIS client pool of around

20,000 families using data sources independent of the survey; this is very close to the survey-based estimate of families currently eligible.

Even the upper-bound rates of take-up imply large numbers of families forgoing significant payments to which they are entitled: an average of £8 per week, for 16,000 families. While the rate of take-up might be expected to be lowest for small entitlements, this is not a major factor: between 18 and 30 per cent of those entitled to a payment of over £5 per week do not receive FIS. These figures compare unfavourably with the estimates for the UK, which themselves have given cause for concern about the effectiveness of the scheme's outreach. Blackwell (1989) points out that the UK rates of take-up were improved by making receipt of FIS a "passport" to certain non-cash benefits; but that this had the undesired side-effect of worsening the "poverty trap" for those in work. The UK rates of take-up would, however, seem to indicate considerable scope for improvement in the Irish case.

One of the reasons for low take-up listed earlier is that potential claimants may not be aware of the scheme. In the case of FIS, respondents who said they had not applied for payments under the scheme were asked if they knew of the scheme. The majority of those who were not taking up an entitlement to FIS said that they did not know of the scheme. This suggests that getting the relevant information to these low income families would be a necessary condition to increase take-up. There were, however, a substantial proportion of families which did know of the existence of the scheme, but did not claim. Some of these may not have thought that they would not have qualified for a payment; but UK evidence, such as Davies and Ritchie (1988), suggests that information campaigns are not a complete answer to the problem of non-take-up of FIS. Blackwell (1989) discusses a range of complementary measures designed to improve take-up, some of which have already been implemented.

Further investigation of the data already collected, together with information from the follow-up survey, will also be carried out to identify factors other than knowledge of the existence of the FIS scheme which influence its take-up. It will give some indication, for instance, of the degree of turnover in the eligible client pool. The FIS scheme may be taken as an extreme example in two senses. First, it is widely thought to be the scheme with the lowest rate of take-up of benefit. But secondly, it is clearly the scheme with the least stringent means test: there is no capital income test, and once qualified, it does not penalise income increases until 12 months from date of qualification. On these grounds one would expect any reaction to the FIS means test to be milder than that towards the more intensive means test for Unemployment Assistance.

### 10.9 *Conclusions*

In this chapter we have examined the performance of the Social Welfare system



in providing a safety net income at the level of the Supplementary Welfare Allowance. Preliminary indications are that the social welfare system is failing to provide this minimal income to a significant proportion of the population. We have identified certain groups which do not appear to be covered by the safety net scheme, or any other social welfare scheme: some of these may be deliberately excluded from the social welfare income support services (such as students or self-employed persons with fluctuating incomes), whereas others may be excluded unintentionally (such as perhaps, single persons and couples without children who are in low paid jobs).

The majority of families which fall below the SWA income standard do so not because they are ineligible for income support, but because, for whatever reason, they do not receive the support to which they are entitled. The implications for policy purposes were seen to depend critically on the relative importance of the different causes underlying this phenomenon. If the problem is mainly one of lack of information, solutions which address this directly could be sought. If, on the other hand, the problem is also related to the time, effort and perceived stigma attached to receiving certain means-tested benefits, other measures would be necessary. Non-take-up of very small amounts of benefit might cause least concern, but preliminary analysis suggests that this is not a major part of the phenomenon. Further analysis of the data collected will clearly be necessary to establish the amounts of unclaimed benefit for schemes other than the Family Income Supplement, and the relative importance of different reasons for the significant non-take-up rate for different schemes, in order to establish the implications for policy.

As regards Family Income Supplement itself, the rate of take-up is estimated as between 13 and 22 per cent of families eligible for payments under the scheme, and between 14 and 40 per cent of the amounts of money payable under the scheme. The level of take-up of FIS in the UK was estimated at between 50 and 60 per cent of eligible families. While the UK rates themselves gave cause for concern, and led to the recent restructuring of FIS into Family Credit, they appear to indicate some scope for improvement. The majority of those not taking up this benefit said they were not aware of its existence. Further analysis will help to identify the influences on take-up rates for those who were aware of the scheme.

## Chapter 11

### *POVERTY REDUCTION EFFECTIVENESS AND EFFICIENCY OF THE SOCIAL WELFARE SYSTEM*

#### *11.1 Introduction*

In the previous chapter we examined the effectiveness of the social welfare system in providing the income implicitly regarded by the system itself as a minimum. We now turn to an evaluation of the system's performance based on the external criteria provided by some of the independently derived poverty lines discussed in Chapter 2 and applied in Chapters 5 and 7. How effective is the social welfare system in reducing poverty as independently defined? And how much of total social welfare expenditure goes towards achieving this reduction? These are the questions addressed in this chapter.

The social welfare system has, of course, other objectives besides poverty reduction. The Commission on Social Welfare (1986) noted that "the trend has been for less emphasis to be placed on the original, historical objective of poverty relief and increasing emphasis on income distribution and income replacement". A full analysis of the effectiveness and efficiency of the system would require an exact specification of the system's multiple objectives, their relative importance, and the nature of any trade-offs between them. However, the reduction or elimination of poverty would be widely regarded as the single most important objective of the system; in this chapter we concentrate on an assessment of the social welfare system in terms of this objective.

The chapter provides, therefore, a *partial* evaluation of the social welfare system in the sense that it neglects objectives other than poverty reduction; nevertheless, this helps to identify some particular problems and policy options worthy of further investigation. The wider distributive effects of social welfare expenditures are briefly dealt with. A fuller and more comprehensive evaluation of the system's performance, and of policy options, will be made possible by the use of a model of the income tax and social welfare system's effects on households, as outlined in Callan and Nolan (1987).

The remainder of this chapter is structured as follows. Section 11.2 deals with the concepts of poverty reduction effectiveness and poverty reduction efficiency, as developed by Beckerman (1979a, b). Section 11.3 applies these concepts to derive some broad measures of the system's effectiveness and efficiency in reducing poverty as independently defined. Section 11.4 discusses some implications of

the results, and compares different methods of targeting income support (contingency based payments, means-testing and taxation). In doing so, it looks at the broader distributive effects of social welfare expenditures. The indirect costs associated with incentive effects of the social security system and its financing are then discussed in Section 11.5. The final section draws together the conclusions from the preceding analysis.

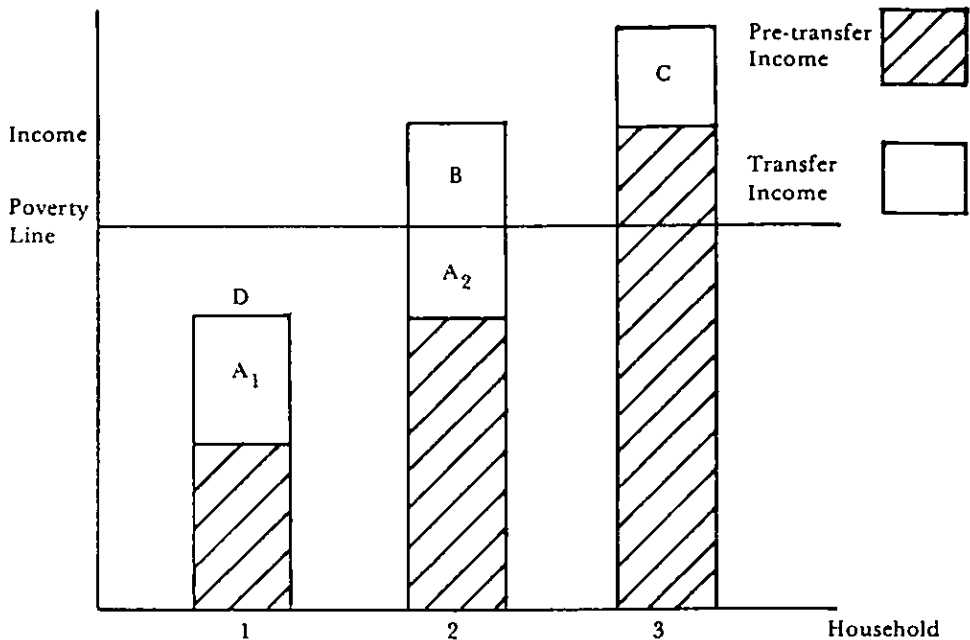
### 11.2 *Concepts of Poverty Reduction Effectiveness and Poverty Reduction Efficiency*

In this analysis, we use the concepts and measures developed by Beckerman (1979a), and widely used since then in the evaluation of social security systems. The Beckerman measures of poverty reduction effectiveness and efficiency are based on two building blocks; the first is the concept of pre-transfer income, and the second is the poverty gap.

*Pre-transfer income* is defined as actual net income less actual social security transfers received. It provides a simple first approximation to income in the absence of social security payments. There are two main drawbacks to this measure. First, it ignores the fact that net pre-transfer income would also be affected by consequent reductions in tax liability. Second, it ignores behavioural responses to the existence of social security transfers and the taxes needed to finance them. The drawbacks of this are obvious, but the difficulties involved in estimating a counterfactual based on the absence of all social security are equally apparent. Given these difficulties, and the limited relevance of the zero social security counterfactual, it seems preferable to invest our efforts into estimating counterfactuals for more realistic policy changes, allowing for the effects of the income tax system, and for possible behavioural responses. In the interim, however, the Beckerman concepts can be used to provide a preliminary picture of the system's performance which allows some comparisons across countries and at different levels of the poverty line; such comparisons may be less sensitive than the exact levels of effectiveness and efficiency to the two qualifications mentioned.

Given the concept of pre-transfer income, households or families can be classified into three types, illustrated in Figure 11.1. Type 1, has income below the poverty line even after transfers; type 2 has a pre-transfer income below the poverty line, but a post-transfer income above the line; and type 3 has a pre-transfer income above the line.

The *poverty gap* for a family in poverty is the difference between its income and the poverty line. The aggregate poverty gap is simply the sum of these gaps for all households below the poverty line. (This is not to be confused with the "per capita income gap", used in Nolan and Callan, (1989a) which also shows the relation between the two measures). The aggregate poverty gap provides a measure of poverty which has certain advantages over the more familiar head

Figure 11.1: *Classification of Households for Analysis of the Effectiveness and Efficiency of Transfers*

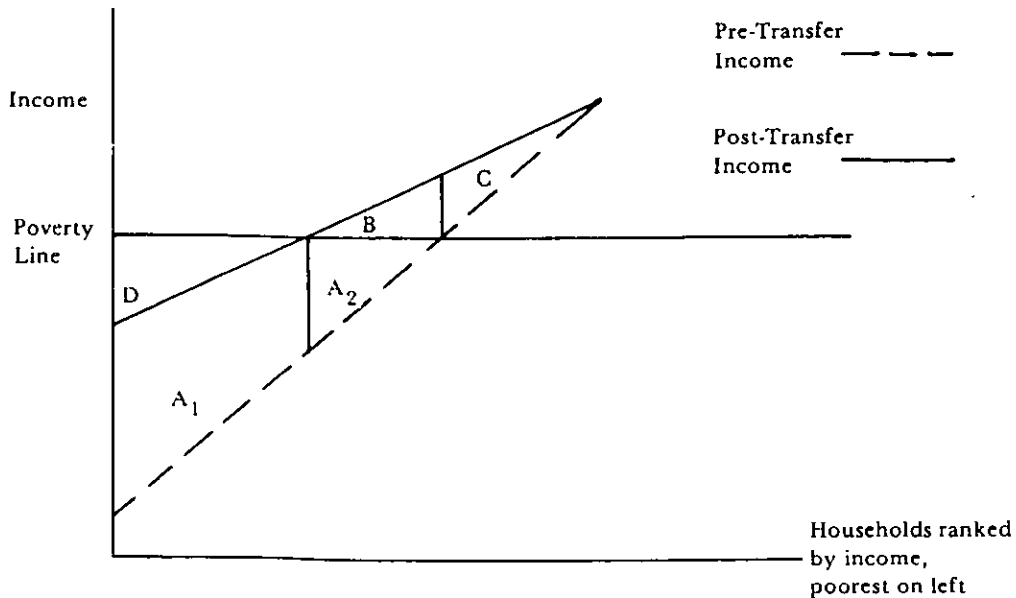
Note: Adapted from Dilnot, Kay and Morris, 1984.

count (the proportion of families or persons in poverty), in that it takes account of how far below the poverty line families are falling. It is also particularly suitable for the analysis of the social security system, because it provides a measure of poverty in money terms, which can be related to social welfare spending.

The Beckerman measure of effectiveness is the percentage of the pre-transfer poverty gap which is eliminated after social security transfers are added: i.e., the ratio between total payments of type  $A_1$  and  $A_2$  on Figure 11.1, and the total pre-transfer poverty gap (which is equal to the sum of post-transfer poverty gaps,  $D$ , plus the total of payments of type  $A_1$  and  $A_2$ ). An alternative way of illustrating the concept is shown in Figure 11.2 where again it is represented by  $(A_1 + A_2)/(A_1 + A_2 + D)$ .

The Beckerman measure of efficiency is the percentage of total social security spending which goes towards the elimination of the poverty gap: in Figure 11.1, this is the ratio of the total of payments of types  $A_1$  and  $A_2$  to the total of all payments, including  $B$  and  $C$ . Again this can be illustrated in Figure 11.2 as  $(A_1 + A_2)/(A_1 + A_2 + B + C)$ . Implicitly this measure of efficiency takes the elimination of poverty at the particular poverty line chosen as the only goal of the social welfare system: it is in this sense that the amounts spent on raising

Figure 11.2: Poverty Reduction Effectiveness and Efficiency



Note: Stylised representation of the income distribution and income transfer system, adapted from Beckerman, 1979a.

$$\text{Poverty Reduction Effectiveness} = (A_1 + A_2) / (A_1 + A_2 + D)$$

$$\text{Poverty Reduction Efficiency} = (A_1 + A_2) / (A_1 + A_2 + B + C)$$

incomes above that level are “inefficient” or “wasted”, either as “spillover” payments to those initially below the poverty line (payments of type B) or payments to those initially above the poverty line (payments of type C).

One can interpret these measures in several ways. Taken at their simplest, they are based on a view that poverty is not a matter of degree: at a certain income level, a person is in poverty, while at a slightly higher level he or she is not poor. Even if one accepted this view, one must allow that there is uncertainty and disagreement about where to draw the line: this alone would suggest that the analysis should be done for a range of levels of the poverty line. Our preliminary analysis of the standard of living indicators for households at different income levels in Chapter 6 also seems to suggest that poverty is not such a cut-and-dried phenomenon: there may well be degrees of poverty. This again supports examination of the efficiency and effectiveness measures at different poverty lines.

### 11.3 Application of the Measures to the Irish Data

The basic results on the “effectiveness” and “poverty reduction efficiency” of

the social welfare system are given in Table 11.1. The analysis presented here is based on a "tax unit" basis, i.e., a single person or married couple together with dependent children. The only difference from the benefit unit is that children aged 18 or over who are in full-time education are now counted as members of the parental tax unit (so a dependent child is one which would have counted for purposes of the child tax allowance before its abolition in the 1986 Budget). We have also conducted similar analyses at household level, and will refer to these results later; the tax unit basis is, however, much closer to that on which the social welfare system itself operates.

Table 11.1: *Poverty Reduction Effectiveness and Poverty Reduction Efficiency at Different Income Standards*  
*Equivalence Scale: 1 for the Head of Tax Unit, 0.66 for other adults, 0.33 for each child*

<i>Proportion of Mean Equivalent Income</i>	<i>40 Per cent</i>	<i>50 Per cent</i>	<i>60 Per cent</i>
Percentage of Tax Units Below Standard	12	22	31
Poverty Reduction Effectiveness (Percentage of pre-transfer poverty gap eliminated)	79	76	70
Poverty Reduction Efficiency (Percentage of social security which goes towards reducing poverty gap)	54	67	77

The results in the table are based on the equivalence scale of 1 for the head of the tax unit, 0.66 for other adults, and 0.33 for children, approximately implied by the payment structures of social welfare schemes. The use of other values could give rise to findings of inefficiency and ineffectiveness which would be wholly due to differences in equivalence scales. The results were, however, very similar when the equivalence scale was changed to 1 for the head of tax unit, 0.7 for other adults and 0.5 for children.

A strong pattern emerges from these results: a rise in poverty reduction efficiency, coupled with a fall in poverty reduction effectiveness as the level of the poverty line rises. The fall in effectiveness reflects the fact that several important schemes provided rates of payment at or just above the lowest of these poverty lines; as the poverty line is raised, these schemes tend to become less and less effective. The rise in efficiency also reflects the differentiated payment structure of the Irish social welfare system: payment rates vary not only between contributory and non-contributory schemes, but also between the elderly, widows and the unemployed, for example.<sup>38</sup> If one considers tax units which depend

<sup>38</sup>The term differentiated payments is reserved to refer to differences based on these characteristics; it does not refer to the practice of making additions for adult dependants and dependent children.

on a single social welfare payment for their income, it is clear that a poverty line set at the system's lowest rate of payment is likely to find a high poverty reduction effectiveness but rather low poverty reduction efficiency, while a poverty line set at the highest rate of payment must find more efficiency but less effectiveness.<sup>39</sup>

The results presented in Table 11.1 strongly reflect this general tendency. This can be demonstrated using the following classification of the sources of inefficiency.

1. Social welfare payments going to persons who have pre-transfer income above the poverty line. This is labelled "vertically inefficient expenditure" by Beckerman (1979a).
2. Social welfare payments which are themselves above the poverty line will involve an inefficiency even if the recipients have zero pre-transfer income. We will refer to that part of the inefficiency which arises solely from the excess of social welfare payments over the poverty line as the "excess payment effect".
3. We will refer to the remaining sources of inefficiency as "pure spillover".<sup>40</sup> This includes cases where the recipient has other income below the poverty line, and a social welfare payment less than the poverty line, but the two together exceed the poverty line; it also includes the full amount of pre-transfer income for cases where the social security payment itself is above the poverty line.

The distinction between what we have termed the "excess payment effect" and "pure spillover" is an important one. Means-testing of payments can reduce the other sources of inefficiency, but "excess payment effects" arise even when the payments go to persons with no other income. For those tax units which have social security payments in excess of the poverty line, we have calculated this excess as a measure of the excess payment effect.<sup>41</sup> Table 11.2 shows the relative importance of these different sources of "poverty reduction inefficiency"

<sup>39</sup> If the system was 100 per cent effective and efficient at some poverty line, then analysis of effectiveness and efficiency at alternative poverty lines above and below this target poverty line would show a different pattern. Effectiveness would be 100 per cent up to the target poverty line, and decline thereafter; efficiency would rise while effectiveness was constant, and then stay constant at 100 per cent while efficiency was falling. Instead of this we observe rising efficiency while effectiveness is falling.

<sup>40</sup> Beckerman (1979a) uses the term "spillover" to refer to the sum of what we have termed the "excess payment effect" and "pure spillover".

<sup>41</sup> This estimate ignores complications arising from husbands and wives each receiving a social welfare payment. In the 1987 Survey, this phenomenon is likely to be numerically significant only in the case of Old Age Non-Contributory Pensions. The interpretation of the Constitution in the Murphy case on income tax treatment of married couples may imply that it is impossible to eliminate some of the "excess payment effect" in such cases.

Table 11.2: *Classification of Total Social Welfare Expenditure (£m per annum, 1987)*

*Equivalence Scale: 1 for the Head of Tax Unit, 0.66 for other adults, 0.33 for each child*

<i>Proportion of Mean Equivalent Income</i>	<i>40 Per cent</i>	<i>50 Per cent</i>	<i>60 Per cent</i>
	<i>£m</i>		
Poverty Reduction (A <sub>1</sub> + A <sub>2</sub> )	1,166	1,443	1,647
Excess Payment Effect	493	250	94
Pure Spillover	112	128	125
Vertically Inefficient (C)	378	329	282
Post-Transfer Poverty Gap	318	463	720

at the three relative poverty lines.

Most of the inefficiency in poverty reduction at the lowest poverty line is due to the fact that recipients under many schemes would be brought above that level, even if they had no other income, i.e., the "excess payment" effect. As the poverty line rises, the total of inefficient expenditure falls quite strongly, and the relative importance of other sources rises. But since the highest social welfare payment rates (Widows' and Old Age Contributory Pensions) are above the highest poverty line, part of the inefficiency remaining at this level is still due to persons with no other incomes being brought above the level of the poverty line. Vertical inefficiency is the most important source of inefficiency in poverty reduction only at the highest poverty line, at which 23 per cent of expenditure is "inefficient"; while the "pure spillover" effect is of minor importance at each poverty line.

The basic analysis does not allow for differential poverty lines for different groups (except on the basis of the number of adults and children in the tax unit or household). The social welfare system incorporates differences in payment levels which depend on several factors. Some of these are designed to approximate differences in the needs of different classes of recipient, e.g., whether persons are likely to be dependent on it on a long-term basis, such as the elderly, or just for a short period, such as some of the unemployed. Viewed simply from a poverty reduction perspective, such differentiation according to need might be justified, and would not necessarily represent an inefficiency as the simple measures presented here imply.

The differentiation of payments on lines which are not designed to relate to need, but to the "insurance principle" or "replacement function", is potentially more severely at variance with the poverty reduction objective. The higher level of payments under Contributory (Social Insurance) schemes, and the lower level



of payments under Non-Contributory (Social Assistance) schemes represents an inefficiency from a poverty reduction point of view, if the poverty line is set below the highest rate of payment. For a poverty line at or above the higher rate of payment, the differentiation is not inefficient, in terms of the Beckerman measures, but it may be regarded as inequitable. If needs vary with a claimant's past PRSI record, it could be argued that those with irregular employment patterns, who tend not to qualify for the higher benefits, have greater rather than smaller needs.

We now turn our attention to the levels of the poverty reduction effectiveness and efficiency figures and begin by comparing them with studies in other countries. In interpreting the figures presented, one must bear in mind the scale to which these percentages apply: even the highest effectiveness figure does not mean that the remaining problem is small, if, as is the case, the pre-transfer poverty gap is very large. Similarly, even the highest efficiency figure implies a large aggregate amount spent on raising household incomes above the highest poverty line.

The efficiency and effectiveness figures at the lowest of the relative poverty lines are very close to those which were found for an additional analysis based on the Supplementary Welfare Allowance level of income. This analysis can be compared with the estimates of effectiveness and efficiency at safety-net level for other countries summarised in Table 11.3. The Irish system seems on this basis to be relatively efficient, but rather ineffective. One possible explanation for such results is that the Irish safety net might be at a higher proportion of average income than elsewhere. Preliminary comparisons suggest, however, that the ratio of safety net income to mean equivalent income is *lower* in Ireland than for a number of European Community countries.<sup>42</sup> A more important factor in explaining how Ireland exhibits low effectiveness together with high efficiency is that the pre-transfer poverty population is substantially larger in Ireland.

The pattern of results is similar in the household based analysis. The level of effectiveness is somewhat higher, and of efficiency somewhat lower. The reasons for this difference are clear: social welfare schemes are primarily aimed at supporting the incomes of tax units rather than households, which means that the tax unit level of analysis is more appropriate for evaluating the system's

<sup>42</sup>In order to abstract from considerations of this type, it would be useful to compare the effectiveness and efficiency of the systems in reducing poverty at comparable national standards derived independently of the respective social security systems. Preliminary analysis of this sort has been undertaken in the EC Poverty Research Programme, of which the ESRI study forms a part. It indicates that, compared with Belgium, Luxembourg, and the Lorraine region of France, the Irish social welfare system is rather less effective in reducing poverty, but more efficient in the poverty reduction it does achieve. This confirms the tendency observed in the analysis at safety net level.

Table 11.3: *International Results on the Effectiveness and Efficiency of Social Security Systems at National Safety Net Income Levels*

<i>Country</i>	<i>Year</i>	<i>Source*</i>	<i>Effectiveness</i>	<i>Efficiency</i>
			<i>Per Cent</i>	
Australia	1973/4	ILO	74	56
Belgium	1973/4	ILO	99	8
UK	1973/4	ILO	96	49
UK	1981	DKM	91	54
USA	1984	W	74	31

\*ILO: Beckerman (1979b)

DKM: Dilnot, Kay and Morris (1984);

W: Weinberg (1987), using "all transfers".

performance in terms of its own objectives. The evidence now available on patterns of income sharing within households is very limited for any country. Some of this evidence suggests that most income sharing is within tax units rather than between them, which would also argue for a tax unit level of analysis in terms of independent criteria. The follow-up to the ESRI Survey will attempt to gather some evidence for Ireland on this topic.

#### 11.4 *Some Implications*

*How much scope is there for improving poverty reduction performance by redirecting social welfare expenditures?*

There are conflicting views on the scope for greater targeting of social welfare payments, and on the best methods of directing financial assistance to those in need. Our evidence on the overall poverty reduction efficiency of the system is obviously relevant to the first question. The proportion of social welfare payments which goes towards poverty reduction was found to be around 55 per cent at the safety net level of income. Dilnot, Kay and Morris (1984) comment on a similar level of efficiency in the UK as follows: "If our principal objective is to boost low incomes to an acceptable level, this could be done more cheaply, and/or we could afford to be considerably more generous to the poor if payments to those who do not strictly 'need' the money were curtailed" (p. 55). This comment highlights the possible role for reallocation, when almost half the social security budget does not contribute to the poverty reduction objective. But our analysis has also shown how rapidly the role for such reallocation diminished as the poverty line is raised; at the 60 per cent line, 77 per cent of social welfare

expenditure goes towards poverty reduction. On the basis of these higher lines, the scope for improving performance by greater targeting is much less.

The exact limits to the retargeting strategy can be derived from Table 11.2, if we make two major assumptions. First, that other objectives of the social security system can be neglected, and all expenditure directed towards poverty reduction. Second, that the system can be made 100 per cent effective and efficient in this role. The figures in Table 11.2 then indicate that the level of payment which could be financed would be between 50 per cent and 60 per cent of mean income per equivalent adult (perhaps around £45). That is, everyone below that income could be brought up to that level, if payments were concentrated entirely on this group, and adjusted to take account of their pre-transfer income. (This is not, therefore, an estimate of what could be financed under a basic income scheme, which fulfils neither of these conditions). Given that our results have also shown the existing safety net had considerable problems, that other objectives are politically important, and that this hypothetical scheme would involve effective marginal benefit withdrawal rates of 100 per cent below the poverty line, we can safely say that this provides an upper bound to the uniform payment level the existing social welfare budget could achieve. It also indicates the cut-off which would distinguish potential beneficiaries from such a change (e.g., those on Unemployment Assistance) from those who would lose out (e.g., Old Age Pensioners).

The other main point relevant to proposals for retargeting expenditures to maximise poverty reduction has already been discussed: from a poverty reduction point of view, differences in payment must be justified by differences in needs. Differences in payment which do not relate to differences in needs, can only be justified in terms of a trade-off between poverty reduction and other objectives.

It is sometimes argued that, in the real political context in which such decisions are made, retargeting represents a strict alternative to an increase in the social security budget; to admit that there may be a role for reallocation may, in effect, rule out any increase in the overall social welfare budget. This may well be true, but in order to find the best possible policy, it must be possible to consider changes in both the size of the budget, and changes in the allocation of a given budget. In the next section, therefore, we consider some issues relating to the allocation of a given budget.

#### *Methods of targeting — contingency or means test?*

Suppose then, that we take the size of the social welfare budget as a given. What would be the best strategy for targeting assistance to those most in need? The Commission on Social Welfare argued that "Contingency based payments are an effective means of directing social security payments to persons in need of an income without actually undertaking means tests" because "The large

majority of recipients of the present contingency based schemes do not have other incomes and their social welfare payment replaces an income loss arising, for example, from unemployment, illness or retirement" (p. 181).

We can test this argument by comparing the distribution of payments under means-tested and contributory schemes over tax units arranged in order of their pre-transfer income. The results (see Table 11.4) show that non-means-tested schemes are quite selective, even relative to means-tested payments. Fifty four per cent of contributory payments go to tax units with no other income, as against 66 per cent of means-tested payments. At the other end of the scale, 6 per cent of contributory benefits go to tax units in the top four deciles, as against 1 per cent of means-tested benefits. Corresponding analysis at household level, and on the major contributory and means-tested schemes revealed a similar pattern; nor were these results sensitive to a change in the equivalence scale.

Table 11.4: *Distribution of Social Welfare Expenditure over Tax Units Classified by Equivalent Income Decile (Pre-transfer)*

Decile	Total Social Welfare Benefits	Means-tested Benefits	Contributory Benefits	Child Benefit	Per cent				
Bottom 29 per cent*	54.8	66	54	19					
Next 1 per cent**	3.6	4	4	3					
4th decile	20.3	20	23	8					
5th decile	8.6	7	8	17					
6th decile	4.8	2	4	16					
7th decile	2.9	1	2	14					
8th decile	2.1	0	2	9					
9th decile	1.5	0	1	8					
Top 10 per cent	1.5	0	1	6					
	100.0	100	100	100					

\* i.e., those with incomes less than or equal to zero.

\*\* remainder of third decile.

This analysis does not take into account the fact that non-means-tested benefits will tend to raise recipients higher up the income scale than the corresponding means-tested payments: this can be seen from Table 11.5, which shows the distribution of payments over tax units arranged in order of *post-transfer* income. However, the figures in Table 11.5 show that the differential in the payment structure is the most important cause of this phenomenon, rather than the failure

Table 11.5: *Distribution of Social Welfare Expenditure Over Tax Units Classified by Equivalent Income Decile (Post-transfer)*

<i>Decile</i>	<i>Total Social Welfare Benefits</i>	<i>Means-tested Benefits</i>	<i>Contributory Benefits</i>	<i>Child Benefit</i>
	<i>Per cent</i>			
Bottom 10 per cent	2.9	4	1	7
2nd decile	21.1	41	10	17
3rd decile	18.1	19	19	10
4th decile	15.0	13	18	7
5th decile	16.6	12	20	10
6th decile	11.8	6	15	14
7th decile	5.1	2	6	11
8th decile	4.4	2	5	9
9th decile	2.6	0	3	8
Top 10 per cent	2.3	0	3	7
	100.0	100	100	100

to adjust the contributory benefits for incomes from other sources by means-testing.<sup>43</sup>

This evidence broadly supports the Commission on Social Welfare's contention. The contingency basis for payments has been criticised on grounds other than lack of selectivity: for example, it has been criticised on the general grounds of increasing the incentive to fall into the contingent state (sickness, unemployment). But simply means-testing the contingency based payments would do little to alter these incentives either. Furthermore, the evidence of Chapter 8 suggested that means-testing could be associated with considerable problems of take-up; further work on the extent and causes of non-take-up will help to establish the importance of this factor for the efficiency of means-testing as a targeting device.

Table 11.5 also contains evidence on the distribution of child benefit payments. It could be argued that these are aimed at "horizontal" rather than "vertical" redistribution; but to the extent that we are evaluating the system's performance in reducing poverty, it is the redistribution towards the bottom of the equivalent income distribution which is of interest in the present context. The extent of this redistribution is sensitive to the equivalence scale used. At the equivalence

<sup>43</sup>This reinforces the point made in Section 11.3 about the relative importance of the "excess payment effect" and "pure spillover".

scale approximating the present structure of payments (including the present level of child benefit), child benefit is not very selective: the poorest 30 per cent of tax units receive 34 per cent of the payments under the scheme. But it could be argued that the existing payment structure underestimates the costs of children (as might be suggested by the more generous child additions in the UK). At an equivalence scale of 1 for the head of household, 0.7 for other adults, and 0.5 for children, the proportion received by the poorest 30 per cent of tax units increases to 46 per cent. Even on this scale, however, over one-third of expenditure on child benefit goes to the top 50 per cent of tax units.

#### *Targeting by taxation*

Targeting is widely associated with means-testing; but we have seen that contingency-based payments are an alternative method of targeting. Taxation can also be viewed as a way of targeting resources, in that it can selectively withdraw universal or contingent benefits from those who need them least, so that the effective benefit is targeted on those in greatest need. Income tax already plays such a role, to the extent that long-term social welfare payments are subject to income tax. Both the Commission on Taxation and the Commission on Social Welfare recommended the taxation of short-term social welfare benefits; the Commission on Taxation favoured a non-taxable child benefit, while the Commission on Social Welfare (p. 296) reports that it did not reach agreement on this issue. Proposals to tax various elements of short-term social welfare (such as disability benefit, or child benefit) have also been made from time to time.

Targeting through the tax system is not subject to the non-take-up objection to means-testing. The exact extent of administrative difficulties and the accuracy of perceptions of differential coverage of incomes from employment, self-employment, farming and investment incomes does, however, have to be established and taken into account. Recent work by Dilnot, Stark and Webb (1987) has illustrated that the effects on incentives can be considerable. In Callan and Nolan (1988a) the distributional and incentive effects of using the tax system to target child benefit in Ireland were examined. While that analysis was a preliminary one, it indicated that an increase in child benefit, financed by making the benefit taxable, could effect a significant shift of resources from families paying tax at the higher and top rates of tax, towards non-taxpaying families. Such a reform would differ in three main respects from that mooted in the 1989 Budget. First, it would not create any new kinks in the effective marginal tax rate schedule;<sup>44</sup> second, it would increase rather than reduce the amount of money received by a mother not in the paid labour force; and third, it would raise

<sup>44</sup>This is not to say that there would be no effects on marginal tax rates: it was estimated that some 1.5 per cent of tax units would face a higher marginal tax rate.

substantially more revenue than the "means-testing" proposal at the high income limits mentioned in clarifications of the Budget statement. A more comprehensive analysis of policy options in this area would, however, be desirable, and is a priority for future research.

### *11.5 Incentive Effects as Indirect Costs of Poverty Reduction*

The existence of social security payments, and the taxes needed to finance them, have an impact on the structure of economic incentives. The basic analysis presented above has not taken into account the effects of these changed incentives on behaviour. How should such effects be taken into account in evaluating the performance of the system?

One framework for taking these incentive effects into account is to regard them as additional costs of poverty reduction. At this stage it may be useful to classify such costs under two headings, each of which will require further empirical investigation. The first set of effects would be those affecting entry to or duration of unemployment. These would be related to the balance between incomes in and out of work, often summarised by replacement rates.

How important is this cost? This depends on the actual distribution of replacement rates, and on the strength of the behavioural response to them. Evidence on the first of these factors will soon be available from the ESRI survey. UK evidence has suggested that the hypothetical calculations often used do not represent adequately the great variation between different groups in the population. Nolan (1987) has shown that this may also be the case for Ireland, contrary to the widespread view based on O'Mahony (1983). The implications for incentives of the evidence already presented on non-take-up of Family Income Supplement should also be noted. Prior to the introduction of FIS, employees with large families had been found to face the highest replacement ratios (Buckley, 1985). FIS was intended to reduce the replacement ratio not by cutting benefits, but by raising the net income of employees with large families. But the performance of FIS in reaching its target population (at least in terms of information, and arguably also in terms of payments) must be improved if the intended improvement in incentives is to be achieved.<sup>45</sup>

Evidence on the responsiveness of behaviour to the incentives summarised by replacement rates will also be derived from the ESRI Survey, but will require rather more time for analysis. The UK evidence on this topic is summarised by Atkinson and Micklewright (1985) as "mixed", but with agreement among

<sup>45</sup> Blackwell (1988) has recently documented the other side of this coin: employees on FIS, may, if also affected by differential rents and other factors, face very high effective tax rates because of the progressive withdrawal of FIS. This could be described as a "tax trap": it pays to work rather than be unemployed, but after a point, increases in gross wages give no increase, or even a fall, in total net income. The low take-up of FIS limits the number of people actually facing this position.

the cross-section studies that there is no firm evidence of a quantitatively large disincentive effect". This accords with Chiplin's (1982) comment that "the general conclusion from cross-section evidence is that unemployment benefit has a significant, but quantitatively small effect on unemployment duration". More recently, increasing attention has been given to the incentive effects on the wives of unemployed men. Time-series studies have also produced mixed results, some of which would suggest rather larger effects (including Hughes and Walsh, 1983). Narendranathan, Nickell and Stern (1985) note the problems faced by time series analysis in disentangling the effect of benefits from a range of highly correlated regressors; this suggests that the inclusion of more recent evidence, when replacement rates have fallen, will provide interesting results. Narendranathan, *et al.*'s longitudinal (panel-based) study, found a smaller, but still significant, effect on unemployment duration than Nickell's (1979) earlier cross-section estimate. The question of the influence of unemployment benefits on unemployment in Ireland is best regarded as an open one, pending further research along the lines pursued in the international literature on this topic.

There is, however, another set of additional costs, which is more indirect, but may be more important: the costs arising from the financing of the social security system, both through PRSI and general taxation, including income tax. (See, for example, Honohan and Irvine, 1987). In practical terms, *any* method of raising revenue of the magnitude required (around £2,500 million) will have a broader impact on the labour market, tending to reduce labour supply, and increase the cost of labour to employers. This tends to reduce employment and output: poverty would be increased by this mechanism through *involuntary* unemployment, and income/welfare losses would also occur at higher levels of the income distribution.<sup>46</sup>

Setting up a theoretical framework which encompasses all of these factors is simple relative to the difficulties involved in its implementation. The state of the world under the status quo is summarised by listing the income/welfare enjoyed by each family; the state of the world under an alternative policy, incorporating the changes in individual behaviour and labour market consequences can be summarised in a similar way. The two alternatives can then be ranked, on the basis of a social welfare function.

Present practice is very far from this theoretical benchmark. Instead, a policy change is evaluated by examining its effects on supposedly typical households, with limited evidence on the implications for incentives. Atkinson, *et al.*, (1983) have shown the dangers of this approach in the UK. It was demonstrated that the range of hypothetical family types most commonly used in assessing

<sup>46</sup>The structure of taxation will also affect the size of this indirect cost; and it is marginal changes in the cost which are of most relevance to policy.



tax/benefit changes (i.e., those used in the DHSS Tables for this purpose) failed to capture the circumstances of most actual families in ways that would have significant implications from the point of view of taxes and benefits. The essential problem is that there is a very wide range of actual family situations in the population, in terms of variables relevant to the tax/benefit system. No manageable range of hypothetical calculations can take into account the combinations of possibilities representing substantial numbers in the population; nor could they answer many important questions regarding the impact of policy changes on those actually at the top or bottom of the income distribution. These difficulties point strongly towards the advisability of using detailed information on a large representative sample of actual households as a database for simulating the effects of policy changes.

The use of the ESRI database will allow us to move towards the theoretical benchmark, described above, in a number of steps. The first step is to simulate the cash or first-round effects of policy changes for the nationally representative sample, and document the actual effects on incentives (marginal tax rates and replacement rates, for example). This would represent a major step forward from what is currently possible. The second step is to estimate the responses of labour supply to the policy changes. The third step is to estimate the effects of the policy changes taking these behavioural responses into account. International experience has shown that the latter two steps involve considerable difficulties; attempts to incorporate estimated responses in the analysis of tax/transfer policy changes have been particularly scarce. The achievement of each of these steps will, however, represent a major advance from the previous position, towards the theoretical benchmark procedure.

### 11.6 *Conclusions*

The analysis presented here has outlined a broad picture of the role played by the social welfare system in reducing poverty. It showed that the social welfare system did play a major role in providing income support to persons whose non-social welfare income fell below various poverty lines. A significant poverty gap still remained, however. Non-take-up was one factor contributing to the finding that the poverty reduction effectiveness of the Irish system was lower than that of several other countries. The poverty reduction efficiency of the Irish system was, on the other hand, relatively high.

The pattern of the poverty reduction efficiency measures highlighted the differentiated nature of the social welfare payment structure in 1987. For example, social welfare rates for the elderly were higher than those for the unemployed, while those for contributory benefits were higher than the corresponding social assistance (means-tested) rates. Special increases for those on the lowest rates of social welfare payments in the 1988 and 1989 Budgets have reduced this

dispersion somewhat. Further streamlining of the payment structure could benefit from a more comprehensive view of the system's objectives. This would take into account income redistribution above the poverty line, and the income replacement function as well as poverty reduction. It would also take into account the nature and likely extent of incentive effects of changes in rates.

A comparison of contingency-based payments, means-testing and taxation as methods of targeting payments towards those most in need helped to point up the relative merits and defects of each. The ESRI model of the tax and transfer system is currently being developed in a way which make it possible to undertake a more detailed evaluation of alternative policy proposals, including streamlining of the payment structure and re-targeting of resources. It will allow the cash and incentive effects of policy changes to be simulated for a nationally representative sample of households. By this means, the costs and benefits of alternative policy proposals may be scrutinised in great depth before they are put into operation. It is hoped that this will help in the selection of the most effective policies, and help to avoid unintended and undesirable side-effects of policy changes.

## Chapter 12

### CONCLUSIONS

#### 12.1: *The Meaning and Measurement of Poverty*

A principal objective of this study has been to explore how poverty may best be conceptualised and measured. No simple answer to the question “How much poverty is there in Ireland?” is presented, because it is our view that any such answer is likely to obscure rather than illuminate the true nature of the problem. It is preferable to explicitly acknowledge the ambiguities and uncertainties involved — which is, however, a far cry from what Sen has referred to as the “kind of nihilism” which notes a difficulty of some sort and on that basis paints a picture of “total disaster” (1973, p. 78). In this study we have been concerned to test the robustness of our results with respect to variation in the location of the poverty line and in the way in which poverty is measured. This has enabled us to present a range of strong and robust conclusions about the characteristics of the poor, trends in the extent and make-up of poverty over time, and the effectiveness of the social welfare system in alleviating poverty.

While poverty is an ill-defined and ambiguous term, we believe that it can only be meaningfully interpreted, in a country such as Ireland, in the context of the standard of living and ordinary living patterns in that particular society. Escaping “absolute” poverty, in the sense of being above minimum subsistence levels, is not enough to avoid being in poverty in such a society — though it is clearly of overriding importance in many developing countries. The standards against which people judge adequacy will change as the level of income and patterns of living in a country change. What many people now think of as absolute necessities are by no means necessary for subsistence — rather, they reflect socially-determined needs. Attempts to define an “absolute” standard which still has relevance for a country at Ireland’s level of development are inevitably dominated by what are, in fact, socially-determined rather than absolute needs, and involve a considerable degree of arbitrariness. Quite simply, the meaning of “poverty” changes.

This poses major challenges to those attempting to measure poverty and changes in poverty over time. Having critically reviewed the approaches to measuring poverty which have been developed and implemented in the academic literature, our conclusion was that none of these offered a completely satisfactory scientific, objective method of defining a poverty line, distinguishing between

the poor and the remainder of the population. Indeed, given the legitimate differences of view which exist about what constitutes poverty, and the wide range of conceptual and empirical problems facing these methods, seeking such a method may well be a fruitless task. The present study has therefore applied a number of these approaches, in order to learn from the different perspectives provided. This also allowed us to explore the value of the approaches themselves in a comparison based on the application of the various methods to a common dataset, something which had not previously been possible on this scale.

The approach to setting a poverty line which has been common in previous studies in Ireland, and also in Britain, takes official social welfare support levels as a yardstick. This has major limitations and can lead to paradoxical policy conclusions. More generous social welfare payments may lead to higher rather than lower measured poverty, and it is difficult to disentangle what such lines reveal in comparisons over time. At a particular point in time, using such a poverty line implies that the effectiveness of the social welfare system in alleviating poverty is being measured solely against standards set by the system itself.

The poverty lines to which most emphasis has been given in the present study are *purely* relative ones — that is, they are derived simply as percentages of average income, taking differences in household size and composition into account. These poverty lines have a number of advantages. They incorporate, and make quite explicit, a direct relationship between ordinary living standards and the poverty cut-off. They can be easily calculated for different points in time and for different countries, on the same basis. They also facilitate the analysis of the sensitivity of the results to changes in the precise location of the poverty line, or in the structure of the line in terms of the relativities between households of different size/composition. They are therefore, in our view, preferable to the approaches hitherto adopted in studies of poverty in Ireland.

This does *not* mean that the purely relative approach provides all the answers, all the information we would wish to have in assessing the extent of, and trends in, poverty. It clearly incorporates a crude and rigid form of relativity — expectations and perceptions of “needs” do not necessarily move in such a manner, directly in line with average income. We believe that much of the resistance to the explicitly relative measure of poverty it incorporates is in fact due to misunderstanding and failure to recognise the implicit relativity in most other methods of measuring poverty. Measuring poverty in this way is *not* the same as measuring inequality — it would be possible to have no poverty on this basis and yet still have considerable inequality. The poor need not “always be with you”, measured in this way — as the experience of other countries illustrates. Nor does it imply that “growth doesn’t matter” (an issue we return to below).

However, it has also been argued in this study that, certainly in the short term, changes in poverty using purely relative lines do have to be seen against

the background of the evolution of general living standards. A disimprovement in the relative position of the poor because their incomes, though rising, are lagging behind the average, is not to be equated with a similar disimprovement due to falling real incomes for the poor at a time of general stagnation. As Lampman (1971) has put it in the US context, when fighting a war on poverty one may want to monitor progress against a fixed target, in terms, for example, of the quality of housing, nutrition, etc., of the poor. Over any prolonged period, though, standards of adequacy will inevitably be redefined and any such fixed target become increasingly irrelevant to common conceptions of poverty.

Purely relative lines provide an indispensable starting point in the measurement of poverty. When they are complemented by information provided by other approaches, on, for example, the living patterns of those at low incomes and their perceptions of their own situation and needs, a rounded picture of the nature of poverty at a point in time can be built up. It is to be emphasised that the purely relative approach itself provides no justification for the selection of a single poverty line. This we see as in many ways an advantage rather than a drawback: no one line, however derived, is likely to be acceptable to everyone, and those just above any line will probably differ little from those just below it. Looking at a range of lines is therefore preferable and is the approach we adopt.

We have discussed at considerable length the conceptual issues involved in measuring poverty, because an appreciation of these issues is crucial to understanding and interpreting the results of this study. This is equally true in considering the implications of these results for policy, to which we return below, having first briefly summarised the main findings from our analysis and the evidence on which they are based.

### 12.2: *The Data*

The study has utilised the results of the large-scale national household survey on Income Distribution, Poverty and Usage of State Services carried out by the ESRI in 1987, together with the 1973 and 1980 Household Budget Surveys. The ESRI sample, drawn from the Register of Electors, consists of 3,294 households. This represents 64 per cent of the effective sample, which compares favourably with the response rates in other surveys of a similar degree of complexity and sensitivity.

The survey gathered detailed information on income from different sources, labour force participation, housing tenure and costs, indicators of style of living and deprivation, debts and arrears, savings and assets, and usage of health and education services. The survey also collected data on respondents' subjective response to their situations, and their opinions regarding poverty and related issues. Taken together, this database provides an unprecedented opportunity

to analyse the nature and extent of poverty in Ireland and the factors influencing it.

The survey results were reweighted to correct for any bias introduced by non-random non-response. This was done on the basis of four key household characteristics — the number of adults, the age and socio-economic group of the household head, and location (urban or rural). Using detailed cross-tabulations provided by the Central Statistics Office from the 1986 Labour Force Survey, the sample was reweighted to ensure that the numbers in each category in terms of these variables corresponded to those in the Labour Force Survey. After reweighting, the representativeness of the sample also appeared to be satisfactory in terms of a number of other variables which could be checked from external sources.

It is difficult to assess the reliability of the income data in such a sample survey against external sources. Differences in definition, coverage and timing inhibit comparison with sources such as the National Accounts and income tax statistics, while income which is earned in the black, unrecorded, economy is by definition difficult to measure. Evidence from studies elsewhere suggests that under-representation of incomes at the very top of the distribution may be a common problem in such surveys. The Survey responses were individually checked for consistency, etc., and income from some sources — in particular social welfare payments — could be verified against the known rates of payment. Farm incomes were estimated directly, on the basis of information provided by respondents on outputs, etc., applying margins for each activity supplied by Teagasc from the National Farm Survey. Farm income referred to 1986, which was a remarkably poor year for farm incomes.

The income concept on which the study concentrated was disposable income — gross income minus income tax and PRSI contributions — which represents the most satisfactory direct measure of command over resources. Both the household and the narrower nuclear family/tax or benefit unit were used as income recipient unit in a range of analyses.

### *12.3: The Extent of Poverty and Trends Over Time Using Purely Relative Poverty Lines*

The purely relative poverty line method was applied to the ESRI sample, with a set of thresholds defined in terms of proportions of the average income of the households in the sample. These poverty lines — and the average income on which they are based — take into account differences in needs between households of differing size and composition, using three different sets of equivalence scales.

Three purely relative poverty lines were applied — 40 per cent, 50 per cent and 60 per cent of average disposable equivalent household income. The results highlight the sensitivity of the number found below the poverty line to the exact

location of that line. Between 8 and 13 per cent of persons in the ESRI sample were below the 40 per cent line, between 20-23 per cent were below the 50 per cent line, and 31-33½ per cent were below the 60 per cent line, with the precise figure within these ranges depending on the equivalence scale used.

This substantial variation in the extent of measured poverty is produced by a relatively narrow range of income poverty lines. The 40 per cent relative line for a single person was about £32-34 per week, similar to the amount payable under the Supplementary Welfare Allowance scheme at the time of the survey. The 50 per cent line for a single adult was about £40-43 per week, similar to the flat-rate Unemployment Benefit payable. The corresponding 60 per cent line was £48-52 per week, between the rate of means-tested and non-contributory Old Age Pension payable at the time to a single person. While the gap in income terms between the three lines is wider for larger households, it still represents quite a limited range: households are heavily concentrated in this part of the income distribution.

The range of relative poverty lines was particularly useful in assessing trends over time, applying the same methodology to the 1973 and 1980 Household Budget Survey results. This showed a substantial increase between 1973 and 1980 in the percentage of persons falling below each of the relative income cut-offs (irrespective of the equivalence scale used). Between 1980 and 1987, such an increase was registered consistently for the 50 per cent and 60 per cent lines, while the trend with the 40 per cent line depended on the equivalence scale adopted.

The limitations of concentrating simply on the numbers below a poverty line as a measure of poverty were emphasised. The "headcount" measure takes no account of the depth of poverty for those below the line in question. Recently developed aggregate poverty measures which reflect not only the numbers below the line but also the extent of their income shortfalls were calculated for the ESRI sample, and for the 1973 and 1980 HBS samples. These showed a consistent increase between 1973-1980 and 1980-87 irrespective of the relative poverty line or equivalence scale used.

In comparing the 1973-80 and 1980-87 periods, it was emphasised that real incomes rose on average in the earlier period but were static or falling between 1980-87. This must have major implications for the impact of the rise in relative poverty in the 1980s on living standards. Taking the relative poverty lines in 1980, holding them fixed in real terms, and applying them to 1987 shows an increase in the numbers below these lines — which would not be the case when 1973 real lines are applied to 1980. This illustrates the importance, over such a period, of taking into account the background against which changes in relative poverty are taking place.

A detailed comparison between Ireland and Britain using purely relative poverty lines revealed that a higher proportion of the Irish population was below a range of relative lines. A necessarily much more tentative comparison with some other developed countries suggested that most of the richer EC countries, as well as Sweden and Norway, also had lower numbers below such lines. Greece and Portugal, though, and perhaps also the US, appear to have somewhat higher percentages below relative lines, though much more intensive analysis, involving harmonisation of data and methodology to the greatest extent possible, will be necessary to confirm these comparative findings.

#### 12.4: *Consensual Income Poverty Lines*

An approach to setting a poverty line which has received some attention in the academic literature of late, the consensual income poverty line approach, was also examined using data on subjective assessments of minimum income needs gathered in the ESRI survey. Two variants of this method — the CSP and SPL methods — were implemented, basing a poverty line on responses in the sample to a question about the income which each household would itself consider necessary "to make ends meet". About 31-32 per cent of households in the sample were found to be below the minimum income standards produced by these methods. However, there were very substantial differences between the two variants in terms of the structure of the standards and therefore the composition of those below them. The CSP standard in particular incorporated implausible relativities between different household composition types. The SPL standard was relatively high for a single adult household, but had very substantial economies of scale as household size increased.

The extent to which the standards produced by these methods could be meaningfully interpreted as reflecting a consensus in the society on a poverty line as it would be commonly understood was questioned. The relationship between the subjective responses about the household's own minimum needs and views on poverty is unclear. The standards are not based on a consensus or majority view in the sample as a whole, but on the views of those in some sense "near" the poverty line — neither well above nor well below it. There is no constraint on the responses in terms of willingness to pay, and there are also serious issues about the way the method is operationalised.

The information about subjective views on adequacy and the household's own situation do offer a valuable opportunity to analyse the factors influencing people's perceptions of their own situation and their expectations. Their potential in this respect will be exploited in future work.

#### 12.5: *The Risk and Incidence of Poverty*

The analysis of the composition of those below the relative poverty lines in



the ESRI sample, and a comparison with corresponding results derived from the 1973 and 1980 Household Budget Surveys, revealed substantial changes over the period since 1973. A central trend was the increase in the importance of households headed by an unemployed person among those below the relative poverty lines. Such households formed one-third of all households below half mean equivalent income in 1987, compared with only 10 per cent in 1973. The relative position of the elderly, on the other hand, improved significantly over the period.

The demographic consequences of these trends were a sharp increase in the risk of poverty for households with children, particularly for large families. The risk for 1- and 2-adult households, on the other hand, fell dramatically. At an aggregate level there was little difference in the risk of poverty facing female-headed households compared with those with a male head. This remained the case when the narrower tax unit was used as the income recipient unit instead. Female-headed households at relatively high risk were those where the head was young — under 35 years of age.

While a substantial proportion of the households below the relative poverty lines were found to be farm households, this is based on estimated farm incomes in 1986, a particularly poor year. The years 1987 and 1988 saw increases of 34 per cent and 27 per cent per annum in average family farm incomes, which must have significantly reduced the overall risk of poverty for farm households.

Over the 1973-87 period, social welfare rates increased in real terms and relative to other incomes, and the coverage of the system also broadened. This played a major role in the improvement in the position of the elderly, and also ensured that the *risk* of being in poverty for a household headed by an unemployed person actually declined. The dramatic increase in the importance of the unemployed among households below the poverty lines is thus entirely due to the increased numbers of unemployed in the population as a whole.

#### *12.6: Indicators of Style of Living and Deprivation*

A considerable range of information on the patterns of living of the respondents was gathered in the survey. This allowed a set of deprivation indicators to be developed, incorporating possessions or activities which a majority of the sample had or pursued, and felt to be necessities. These indicators of deprivation were then related to the characteristics of the individuals and households, including income and stage in the life-cycle.

The relationship between current income and style of living/deprivation, as measured by these indicators, is not a simple one. Many factors other than current income influence current possessions and activities, including the past history and future expectations of household members, life cycle stage, and differences in tastes.

From a range of 20 indicators of standard or style of living, summary indices were built up of (i) 14 items regarded as a necessity, and actually possessed, by a majority of the sample, and (ii) a narrower index of the 10 items regarded as a necessity and possessed by over three-quarters of the sample. Analysis of these indices showed a broadly similar pattern to that revealed by recent research in the UK and the US on this topic. Those at lower levels of current income did have relatively high deprivation scores on average, but there was considerable variation in the scores at any given income level. This remained the case when an attempt was made to control for differences in tastes by concentrating on those items/activities which people specifically stated they had to do without due to lack of resources. No attempt was made at this stage to derive a poverty line or subsistence standard from these data.

While current disposable income has a significant effect on current living patterns, other factors are also important. Income over a longer period, stage in the life-cycle and assets accumulated could affect the relationship between current income and deprivation score. These different aspects will be the subject of future research, which will also take into account the possibility that poverty and deprivation cannot in fact be adequately measured along a single dimension.

#### 12.7: *Non-Cash Benefits*

The role of free or subsidised services provided by the State — particularly in the areas of health care, education and housing — is also a priority for further analysis. At this stage, some of the complex problems which arise in assessing the implications of these non-cash benefits for the measurement of poverty were highlighted. The CSO's redistributive exercises, in tracing the flow of resources from households to the State and vice versa, allocate such non-cash benefits to beneficiaries on the basis of the cost of provision. Such attributed benefits are, however, quite different from cash income, and "final" income in the CSO exercises — disposable income plus non-cash benefits less indirect taxes — is not to be seen as simply a more comprehensive and satisfactory measure of command over resources than disposable income. To the beneficiaries, the value of the benefit received — that is the cash equivalent which would leave them indifferent between cash and the service provided — will in general be below the market price or the cost of provision of the service. The anomalies created by simply adding a cash amount equal to the cost of provision to disposable income in measuring command over resources are easily illustrated — the sick appear richer than the healthy, *ceteris paribus*.

The CSO redistributive exercises, and other studies, have shown that the beneficiaries from State-provided services in the health, education and housing areas are spread over the income distribution rather than purely concentrated at the bottom. These studies suggest that, while the relative position of those

on low incomes is improved by these services, their impact is much less than that of cash social welfare transfers.

In one particular area, namely housing, a relatively straightforward treatment allows the impact of State provision, and of the difference between those who own their houses outright and those who do not, to be examined. This can be done by looking at income net of housing costs. Relative poverty lines based on this income concept were derived for the ESRI sample, and this was seen to make little difference to the overall percentages falling below these lines – though the composition of these households could be altered.

While non-cash benefits are not to be treated as equivalent to cash income, they do have important implications for living standards, and for the adequacy of cash transfers. Their role will be analysed in detail on the basis of the information on utilisation of different services gathered in the ESRI survey, and placed in the context of the overall redistributive effects of State interventions. This will draw on, *inter alia*, the results of recent research, particularly in the US, on the ways in which non-cash benefits may be meaningfully valued – though no consensus has been reached in this research on a satisfactory way of taking these benefits into account in measuring poverty. The results of the CSO's redistributive exercise based on the 1987 Household Budget Survey, which will also take into account the impact of indirect taxes, will be an important additional source for this analysis.

#### 12.8: *Families and Persons Below Official Income Standards*

The percentage of persons falling below official minimum income standards was analysed not as a measure of poverty, but as an indicator of the social welfare system's performance in providing its own minimum income target. The means-tested Supplementary Welfare Allowance rate of support was taken as the safety net income which the system tries to guarantee. This analysis indicates that a significant proportion of people in the survey failed to reach this current income level. A substantial minority of these were not eligible for income support from the system, notably those in full-time education or the self-employed with fluctuating incomes. The majority, though, appear to be eligible but not receiving (all the) support to which they are entitled.

The implications of such non-take-up depend critically on the relative importance of the different causes underlying this phenomenon. Lack of information may be important, but so also may be the time, effort and perceived stigma attached to receiving certain means-tested benefits. Preliminary analysis suggests that the amounts involved are not in general very small. Further analysis will seek to establish the amounts of benefit not taken up and the relative importance of different factors, distinguishing between the different schemes.

The take-up of Family Income Supplement was analysed, and was estimated

at between 13 and 22 per cent of families eligible for such payments, and between 14 and 40 per cent of the amounts of money payable. This appears worse than the take-up achieved by the corresponding scheme in the UK. The majority of those who appeared to be eligible but not taking up their benefit under this scheme said they were not aware of its existence. There have been renewed publicity efforts in the past two years; careful monitoring is needed to see if the desired progress is being achieved.

#### 12.9: *The Effectiveness and Efficiency of the Social Welfare System in Reducing Poverty*

The performance of the social welfare system in reducing poverty was analysed on the basis of the set of purely relative poverty lines. The measures of effectiveness and efficiency developed by Beckerman were calculated. These showed that the social welfare system played a major role in providing income support to persons whose non-social welfare income fell below the various poverty lines, and eliminated between 70 per cent and 80 per cent of the pre-transfer poverty gap depending on the poverty line used. This was, however, lower than the poverty reduction effectiveness achieved in several other countries. On the other hand, the efficiency of the Irish system, in terms of the percentage of social welfare expenditure which goes to relieving poverty, was relatively high.

The efficiency analysis highlighted the role of the differentiated structure of social welfare payments, with the elderly receiving higher rates of support than the unemployed, for example, and those on contributory benefits higher payments than the corresponding social assistance schemes. The special increases for those on the lowest rates of social welfare payments in the 1988 and 1989 Budgets have reduced this dispersion somewhat. Clarification of the overall objectives of the system and the desired balance between them — taking into account not only poverty reduction but also income replacement and income redistribution — would facilitate further streamlining of the payment structure.

A comparison of contingency-based payments and means-tested ones as methods of targeting payments towards those most in need showed that the former are actually quite selective. Child benefit, though, has a significant proportion of expenditure going to the top half of the income distribution. The use of income taxation as a method of targeting, using the example of taxing Child Benefit, was examined: this indicated that an increase in this benefit, financed by making it taxable, could bring about a significant shift of resources from families paying tax at the higher and top rates of tax, towards non-taxpaying families. The importance of taking incentive effects into account in assessing policy options was emphasised.

#### 12.10: *Implications for Policy*

The primary objective of this study has been to establish, on the basis of a

new and specially-designed database, some key robust findings about poverty in Ireland and the way the social welfare system operates in alleviating it. These findings are intended to inform policy formulation, and should provide a significantly improved basis on which to design responses to the problem.

This is most obviously the case in the emphasis in the study on pinpointing groups which are most at risk of being in poverty, and/or form a substantial part of the low-income population. The groups involved — notably households headed by an unemployed person — will clearly be a major determinant of the appropriate policy response. The rise in measured poverty during the 1980s was shown to be closely associated with the rise in unemployment, and in particular with the increase in long-term unemployment. This was a major factor in the observed substantial rise in the risk of poverty for families with children, especially larger families.

It is worth reiterating that the risk of being in poverty for households with an unemployed head did *not* rise over the period — rather, there were simply far more of them in 1987 than in 1980. The level of social welfare payments to the unemployed, and to other groups, in general more than kept pace with other incomes between these two years. Indeed, increases in the level of social welfare old age pensions, both in real terms and relative to other incomes, over the period from the early 1970s played a major part in the substantial reduction in the risk of poverty facing the elderly.

Since 1987, the rates of social welfare payment to the long-term unemployed have been increased significantly more than other schemes and the rate of inflation. Child dependant allowances for large families have also been increased relatively rapidly (and a child addition to the tax exemption limits has been introduced). These measures, aimed at those shown in our survey to be at particularly high risk of being in poverty, should help to alleviate the position of recipients. As the analysis of the effectiveness and efficiency of the social welfare system presented here has shown, cash transfers clearly have an absolutely crucial role to play in alleviating poverty. This makes it all the more important to identify and explain the gaps in the safety net provided by the system, building on our initial analysis of this area.

Although the present study has concentrated on the role of the social welfare system, this does not reflect a belief that the best or only way to make progress in alleviating poverty is through cash transfers. Indeed, the changing composition of low-income groups over the 1970s and 1980s militates against such an approach. Increased cash transfers — together with improved and more widely available occupational pension schemes — have been effective in improving the position of the elderly. Improvements in the scope and coverage of the social welfare system over that period also helped groups such as widows, deserted wives and single parents. The low-income population is now dominated, however,

by those who are much more closely connected to the labour force — whether they are unemployed, temporarily out of work due to illness, small farmers, or low-paid and/or part-time employees.

This means that the behavioural responses of these groups, in terms of labour supply, are likely to be of greater significance than was the case with, for example, the elderly. Irish evidence on the quantitative importance of such incentive effects is quite limited, and the detailed data on individual labour supply behaviour gathered in the ESRI survey will be extremely useful in addressing this crucial issue. It is clear, though, that the scale and changing nature of the poverty problem mean that reliance on the social welfare system — certainly as it is currently structured — will not be an adequate response.

Unemployment is the single most important cause of poverty in Ireland, as our results clearly demonstrate. To the extent that unemployment can be reduced, not only is there a significant direct impact in relieving poverty but resources are also released which could be devoted to improving the situation of other groups. It is therefore the case that, even if poverty were measured exclusively on a purely relative basis, growth does indeed matter. While growth in the economy does not in itself ensure that “all boats are lifted” — and certainly not lifted to the same extent — the experience of the 1980-1987 period in Ireland illustrates all too clearly the consequences of stagnation for poverty.

Poverty cannot therefore be seen as simply a problem for the social welfare system. Rather, it is a deep-seated structural feature of the economy and society. Not only the social welfare and taxation systems, but also the education system, manpower and training policies, and industrial policy, have crucial roles to play in bringing about the structural changes required to have any major impact on poverty.

The present study represents only the first stage in a programme of research on poverty, income distribution, and the usage of State services to be carried out at the ESRI, with the objective of increasing our understanding of the nature of the problem and the causal factors at work, and contributing towards the formulation of anti-poverty policies. In conclusion, it is worth setting out the areas which are of particular priority in this programme, building on and developing the analysis presented here.

#### *12.11: Priorities for Further Research*

The database gathered in the ESRI Survey which this study utilised represents a major research resource, offering unprecedented potential for addressing a range of issues, many of which have been discussed in some detail in the course of this paper. In addition, a selective follow-up survey, re-interviewing about one-third of the original sample, has recently been completed. A number of key areas for further research on the measurement, nature and causes of poverty

using these data sets have been emphasised in the course of the study.

The present paper has focused for the most part on current disposable income in assessing the position of households. This is the essential first stage in measuring poverty, but is static: that is, it provides only a picture of households' current situation, not how they arrived there and how long they are likely to remain there. Low current income clearly has quite different implications if it is a reflection of short-term difficulties rather than a measure of command over resources on an ongoing basis. The follow-up survey will be invaluable in providing the first opportunity to study income mobility over a period of one or two years, so that movements into and out of poverty can be analysed. This will allow the core of those currently on low incomes who are likely to remain in that position over a number of years to be identified, and policy to be tailored accordingly.

The relationship between current income and patterns of living and deprivation also has a bearing on the dynamics of poverty. Some of those on low incomes experience obvious deprivation while others do not appear to do so. Among the factors which distinguish between these groups are the duration of that low income, and the position in the life-cycle of the households involved. These deprivation indicators, and their relationship with income, family size, age, and a range of other variables, will be analysed to explore what it *means* to be poor, the manner in which low current income affects different households, and why.

The impact of services provided by the State, particularly health care, education and housing, on living standards and poverty was also identified as an issue of major importance. The extensive data gathered in the 1987 survey, together with the Household Budget Survey results for the same year now becoming available, will permit an in-depth study on this topic. This will look at the utilisation patterns for these services, their redistributive impact, and their implications for the measurement of poverty and the adequacy of social welfare cash transfers. The conceptual problems involved in quantifying the value of such services to recipients will be explored, drawing on the results of recent research elsewhere.

In looking at the role of the social welfare system in alleviating poverty, a number of priority areas are suggested by the results of the present study. One is the analysis of the factors influencing non-take-up of social welfare payments and how take-up might be improved. Additional information gathered in the follow-up survey will be particularly helpful here.

This substantial programme of research focuses on the extent and nature of poverty in Ireland: its central objective is to elucidate the causal factors at work in the production and reproduction of poverty. The potential of the data gathered in the 1987 survey and the follow-up is not however confined to even this broad area. Related areas which will draw on this database include the development

of a model of the tax and benefit systems. This will permit the simulation of the effects of a variety of policy options on a representative household sample, rather than having to rely on a limited range of hypothetical household types. While this will, in the first instance, concentrate on the static or "first-round" effects of policy changes, incentive effects and behavioural responses will also be analysed, the ultimate objective being the incorporation of such responses in the model itself. This micro-analysis of the labour market behaviour of a large representative sample will be crucial to understanding the effects of the current tax and social welfare systems — not just towards the bottom but throughout the income distribution — and the likely effects of proposals for reform.



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