MONITORING POVERTY TRENDS IN IRELAND:

RESULTS FROM THE 2000

LIVING IN IRELAND SURVEY

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ACKNOWLEDGEMENTS

CONTENTS

EXECUTIVE SUMMARY

Introduction

This study is the latest in a series monitoring the evolution of poverty, based on data gathered by The Economic and Social Research Institute in the Living in Ireland Surveys since 1994. These have among other things allowed progress towards achieving the targets set out in the National Anti Poverty Strategy since 1997 to be assessed. The present study provides an updated picture using results from the 2000 round of the Living in Ireland survey. The aim is to assess how the overall extent of poverty and the profile of those in poverty has changed, and examine how best to monitor poverty in the future as living standards and patterns change.

The Data

The numbers interviewed in the 2000 Living in Ireland survey were enhanced substantially, to compensate for attrition in the panel survey since it commenced in 1994. Individual interviews were conducted with 8,056 respondents. A complex weighting procedure was adopted to ensure that the sample analysed is representative of the population.

Relative Income Poverty in 2000

Relative income poverty lines do not on their own provide a satisfactory measure of exclusion due to lack of resources, but do nonetheless produce important key indicators of medium to long-term background trends. The numbers falling below relative income poverty lines were most often higher in 2000 than in 1997 or 1994. The income gap for those falling below these thresholds also increased. By contrast, the percentage of persons falling below income lines indexed only to prices (rather than average income) since 1994 or 1997 fell sharply, reflecting the pronounced real income growth throughout the distribution between then and 2000. This contrast points to the fundamental factors at work over this highly unusual period: unemployment fell very sharply and substantial real income growth was seen throughout the distribution, including social welfare payments, but these lagged behind income from work and property so social welfare recipients were more likely to fall below thresholds linked to average income.

The Profile of Those Below Relative Income Poverty Lines in 2000

The study shows an increasing probability of falling below key relative income thresholds for single person households, those affected by illness or disability, and for those who are aged 65 or over – many of whom rely on social welfare support. Those in households where the reference person is unemployed still face a relatively high risk of falling below the income thresholds but continue to decline as a proportion of all those below the lines. Women face a higher risk of falling below those lines than men, but this gap was marked among the elderly.

Poverty Measures Incorporating Non-Monetary Deprivation Indicators

The study shows a marked decline in deprivation levels across different household types, whether categorised by household composition or by labour force status of the household reference person. As a result "consistent" poverty, that is the numbers both below relative income poverty lines and experiencing "basic" deprivation, also declined sharply. By 2000, only 6 per cent of persons were below 70 per cent of median income and experiencing basic deprivation, compared with 11 per cent in 1997 and 15 per cent in 1994.

Those living in households comprising one adult with children continue to face a particularly high risk of consistent poverty, followed by those in families with two adults and four or more children. The percentage of adults in households below 70 per cent of median income and experiencing basic deprivation was seen to have fallen from 9 per cent in 1997 to about 4 per cent, while the percentage of children in such households fell from 15 per cent to 8 per cent. Women aged 65 or over faced a significantly higher risk of consistent poverty than men of that age.

Reassessing the Consistent Poverty Measure

Up to 2000, the set of eight basic deprivation items included in the measure of "consistent poverty" were unchanged, so it was important to assess whether they were still capturing what would be widely seen as generalised deprivation. Factor analysis suggested that the structuring of deprivation items into the different dimensions has remained remarkably stable over time. Combining low income with the original set of basic deprivation indicators did still appear to identify a set of households experiencing generalised deprivation as a result of prolonged constraints in terms of command over resources, and distinguished from those experiencing other types of deprivation. However, on its own this does not tell the whole story – like purely relative income measures – nor does it necessarily remain the most appropriate set of indicators looking forward.

Monitoring Poverty Looking Forward

Finally, it is argued that it would now be appropriate to expand the range of monitoring tools to include alternative poverty measures incorporating income and deprivation. Levels of deprivation for some of the items included in the original basic set were so low by 2000 that further progress will be difficult to capture empirically. This represents a remarkable and

very welcome achievement in a short space of time, but poverty is invariably reconstituted in terms of new and emerging social needs in a context of higher societal living standards and expectations. An alternative set of basic deprivation indicators and measure of consistent poverty is presented, which would be more likely to capture key trends over the next number of years. This has implications for the approach adopted in monitoring the National Anti-Poverty Strategy. Monitoring over the period to 2007 should take a broader focus than the consistent poverty measure as constructed to date, with attention also paid to both relative income and to consistent poverty with the amended set of indicators identified here.

1. INTRODUCTION

1.1 Focus of the Study

Based on data gathered in the Living in Ireland Surveys since 1994, the ESRI has carried out a number of studies (Callan *et al.,* 1996, 1999; Layte *et al.,* 2001) monitoring the evolution of poverty. These have among other things allowed progress towards achieving the targets set out in the National Anti-Poverty Strategy (NAPS) since 1997 to be assessed. The present study provides an updated picture using results from the 2000 round of the Living in Ireland survey. These data are used to assess how the overall extent of poverty and the profile of those in poverty has changed *vis-à-vis* for example the picture presented for 1998 in Layte *et al.* (2001). This is particularly valuable in the light of the fact that the numbers interviewed in the 2000 survey were enhanced substantially, to compensate for attrition in the panel survey since it commenced in 1994.

The study is structured as follows. Chapter 2 describes the 2000 Living in Ireland Survey, including the way in which the size of the sample was increased in that year. Chapter 3 focuses on overall trends in numbers falling below income poverty lines, derived in a variety of ways. Chapter 4 looks at the profile of risk and incidence when those income poverty thresholds are employed. Chapter 5 turns to non-monetary deprivation indicators, which in combination with income help to identify those experiencing generalised deprivation due to lack of resources. Trends in the numbers both falling below relative income lines and experiencing basic deprivation – in what has come to be termed "consistent poverty" – and the types of households affected are examined. Chapters 6 and 7 then focus on the consistent poverty measure and the set of indicators incorporated in it. Chapter 6 considers whether the measure, with the original set of items, continues to perform satisfactorily. Chapter 7 looks forward from 2000, and sets out an alternative set of indicators which are likely to prove more satisfactory in capturing key changes in monitoring the National Anti Poverty Strategy up to 2007.

In order to set the stage for the results presented in the study, we first discuss in this introductory chapter the general issues which have to be addressed in seeking to monitor and understand how poverty is evolving.

1.2 Measuring Poverty

One of the most valuable functions of Ireland's National Anti-Poverty Strategy has been to articulate an explicit official definition of poverty:

> *People are living in poverty if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living which is regarded as acceptable by Irish society*

*generally. As a result of inadequate income and resources people may
be excluded and marginalised from participating in activities which are
considered the norm for other people in society.* (NAPS, 1997 p. 3).

This is similar to Townsend's influential formulation in his seminal 1970s book on poverty in Britain, and to the definition adopted at European Community level by the Council of Ministers in the mid-1980s. But how is it to be implemented empirically?

The approach most commonly used to measure poverty in industrialised countries is to define a poverty line in terms of income, and regard those with incomes below that line as poor. Many different ways of establishing an income cut-off have been proposed, including by reference to budget standards, food expenditure or its ratio to total expenditure, official income standards, and views in the population. None of these avoid a significant element of judgement (for a review see Callan and Nolan, 1991).

The relative income poverty line approach is the most widely used approach to implementing income measures, both in academic studies and in European Union discourse, (e.g. Eurostat, 2000), as well as in official publications in some member states (e.g. the regular UK *Households Below Average Incomes* publication). It involves deriving poverty line incomes as fixed proportions of mean or median incomes, with thresholds such as 40 per cent, 50 per cent, 60 per cent or 70 per cent of median or mean income being used. Data from the European Community Household Panel Survey show that using such relative income poverty lines, Ireland in the mid-1990s had poverty rates lower than Greece or Portugal, quite similar to the UK, but higher than most of the other EU member states. This method of measuring poverty in itself leaves entirely open the percentage cut-off to be applied, and a variety of thresholds are used in conventional applications.

Relying on relative income alone also faces more fundamental problems. As pointed out some years ago by Ringen (1988), analysis of direct measures of deprivation suggests that low income is not in fact a reliable measure of exclusion arising from lack of resources. The same conclusion was supported by our analysis of a range of indicators for Irish households using data as far back as 1987, which showed the extent to which deprivation scores varied across households at similar income levels. Deprivation scores for those below relative income poverty lines were higher than for other households on average, but significant numbers of the income-poor had relatively low deprivation scores. Regression analysis of the determinants of deprivation showed that, while current income does play a role, other indicators of longer-term resources and needs were also important in explaining deprivation scores (Nolan and Whelan, 1996).

How are we to understand this finding and its implications? While current disposable cash income is a key element in the resources available to a household, it is by no means the only one. Savings accumulated in the past add to the capacity to consume now, and servicing accumulated debt reduces it. Since consumption cannot always be fully smoothed over time and households take time to adjust to income "shocks", shorter-term income is still important but needs to be set in the context of the way income has evolved over time. Similarly, the level of past investment in consumer durables influences the extent to which resources must be devoted to expenditure on such durables now. The most substantial

investment made by many households is in owner-occupied housing, and the flow of services from this investment – the imputed rent – should in principle be counted among available resources but very often is not. Non-cash income – in the form of goods and services provided directly by the State, notably health care, education and housing – may also comprise a major resource for households.

Turning to needs, these also differ across households. Most obviously, differences in household size and composition affect the living standards a particular level of income will support. It is customary to seek to take this into account by dividing household income by the number of "equivalent adults" in the household, but the equivalence scales employed may or may not satisfactorily achieve this objective. Households may also vary in a variety of other ways that affect the demands on their income, such as the ages of the adults and children and their health status. Capturing the implications of chronic disability for needs is particularly difficult. Work-related expenses such as transport and childcare may also affect the net income actually available to support living standards and avoidance of deprivation. Finally, geographical variation in prices may mean that the purchasing power of a given income varies across households depending on their location.

Focusing on measurement, we cannot of course be confident that income itself has been measured comprehensively and accurately at a point in time. Household surveys – on which poverty research generally relies – face (intentional or unintentional) misreporting of income. They also find it particularly difficult to adequately capture income from self-employment, from home production, from capital, and from the imputed rent attributable to homeowners. One would be particularly concerned about the reliability of very low incomes observed in surveys, but other incomes may also be mismeasured to an unknown extent.

These conceptual and measurement considerations mean that it may well be hazardous to draw strong conclusions about whether a household is poor – defined as inability to reach an acceptable standard of living due to lack of resources – from current income alone. This provides the essential rationale for seeking to measure levels of deprivation directly, and seeing whether these measures can assist in improving the measurement and understanding of poverty. Townsend (1979) and Mack and Lansley (1985) pioneered the use of non-monetary indicators of deprivation in this context, and other studies in that vein include Townsend and Gordon (1989), Frayman et al. (1991) and Gordon et al. (1995) with British data, Mayer and Jencks (1989) with US data, Muffels and Vrien (1991) using Dutch data, and Hallerod (1995) with data for Sweden. These studies used non-monetary indicators either to directly identify the poor, or to derive an income threshold for that purpose.[1]

Callan, Nolan and Whelan (1993) and Nolan and Whelan (1996), by contrast, used Irish data to implement Ringen's (1987) proposal that information on both income and deprivation be used to identify

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[1] See also the discussion in Andreβ (1998).

households excluded from society due to lack of resources.[2] Direct survey information was available for a range of items and activities on whether households regarded each as a necessity, whether they did or did not have the item/participate in the activity, and if not whether this was because they could not afford or did not want it. The aim was to select those that would best serve, together with income, as indicators of generalised exclusion. The precise way in which this was done, and the difficult issues which have to be faced in seeking to ensure that the set of items employed continue to capture what is widely seen and felt as generalised deprivation and exclusion, are discussed in depth in Chapters 5, 6 and 7 of this study.

Before doing so, however, Chapters 3 and 4 present – as in our previous studies – a detailed picture of trends in numbers falling below relative income thresholds, and of the types of household and individual most affected. Although not enough on its own to capture trends in poverty, this is essential to understanding how the relative position of different groups in Irish society has been changing and why, with major implications for the prospects for promoting an inclusive society in the future. Measures of poverty relying simply on income face the limitations outlined above: those based on *relative* income alone have to be interpreted with even greater care when economic growth is very rapid, as it was in Ireland in the period we are examining here, from 1994 to 2000. Such rapid growth in incomes may for a time run ahead of rising expectations about what is "adequate", so that average income is unsatisfactory as the benchmark or frame of reference for "ordinary living standards".[3] While employing both relative income lines and ones held fixed in real terms over time can give a more rounded picture, income lines will still find it difficult to fully reflect changes in the extent and nature of exclusion arising from inadequate resources. We discuss in this study how incorporating non-monetary indicators, allows a more comprehensive picture to be presented of the evolution of poverty in Ireland in recent years, and by adapting the indicators over time can also be used to capture key trends looking forward.

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[2] Note that if one's conception of poverty is concerned with the *right to a minimum level of resources*, on the other hand, as Atkinson (1987) points out, the fact that people with the same level of resources may have different standards of living is irrelevant.

[3] Relative income poverty lines will also miss the serious implications of periods when average incomes and real incomes for the poor actually fall – which can happen, even in rich countries. In such circumstances, expectations will still reflect for some considerable time the higher living standards to which people have become accustomed, and even if their relative position has not deteriorated those on low incomes will undoubtedly feel poorer.

2. THE 2000 WAVE OF THE LIVING IN IRELAND SURVEY

2.1 Introduction

This chapter begins with a summary description of the Living in Ireland Survey, which has been carried out annually since 1994. It describes the way the survey has been carried out and its structure, and the content in broad terms. It then sets out the way participants have been followed from year to year for re-interview, since the longitudinal element is central to the survey. The 2000 survey, on which the present study primarily relies, is then discussed with particular emphasis on the supplementation of the sample carried out in that year.

2.2 The Living in Ireland Surveys

The Living in Ireland Surveys form the Irish component of the European Community Household Panel (ECHP): an EU-wide project, coordinated by Eurostat, to conduct harmonised longitudinal surveys dealing with household income and the labour situation in member states. The aim of the ECHP is to produce a fully harmonised dataset providing information on the social situation, financial circumstances and living standards of a panel of households to be followed over several years. The fact that the same set of households is interviewed each year means that it is possible to study changes in the characteristics and circumstances of particular households or individuals over time. The ECHP provides harmonised cross-sectional surveys for each year in which the survey is conducted, as well as longitudinal data which permits dynamic analysis of changes over time.

The first wave of the ECHP was conducted in 1994, and the same individuals and households were followed each year. The wave conducted in 2000, therefore, was the seventh wave of the survey. Twelve countries participated in 1994, with Austria and Finland joining in 1995 and 1996, respectively.

In 2000, the Irish sample of individuals and households followed from Wave 1 was supplemented by the addition of 1,500 new households to the total. This was done in order to increase the overall sample size, which had declined due to attrition since 1994. A larger sample size ensures that the precision of estimates of key figures, such as the poverty rate and average equivalised household income, remained at a high level. It also allows a greater disaggregation of the data so that the situation of policy-relevant sub-groups, such as the unemployed or older adults, can be examined.

The ECHP involves a household questionnaire which is completed by the "reference person" or person responsible for the accommodation, and an individual questionnaire which is completed by each adult (age 16 or over) in the household. The main items of information collected on the household questionnaire are shown in the top part of Table 2.1.

Table 2.1: Topics Covered in the Household and Individual Questionnaires of the Living in Ireland Surveys

Household Questionnaire Topics

Household size and composition
Housing and physical environment
Housing tenure
Rent and mortgage payments
Standard of living (things the household can afford to have or to do)
Debts and arrears
Sources of household income
Non-cash and secondary benefits

Individual Questionnaire Topics

Current activity status (self-defined)
Detailed information on the current job, for those working 15 or more hours per week in a job or business
More limited information on work for those working less than 15 hours per week
Some information on previous job, for those not currently working 15+ hours per week
Job search activity, for those seeking work
Other daily activities, such as caring responsibilities, social and political participation
Recent involvement in education and training
Activity in each month since the beginning of the previous calendar year
Detailed information on income in the previous calendar year from employment, self-employment, personal and occupational pensions, social welfare, education and training-related allowances and grants, property (interests, dividends, rental income), and other sources
Health status, health service usage, and health care coverage
General outlook on life

The individual questionnaires in 1994 were administered to each member born in 1977 or earlier. This "cut-off" year was updated in each wave of the survey, so that it was 1983 by 2000. The main items of information collected on the individual questionnaire are shown in the lower part of Table 2.1.

Eurostat has sought harmonisation of content, structure and interpretation of the questionnaires across participating member states. The Living in Ireland Surveys are built around this core harmonised questionnaire, but with additional modules of questions to meet national data needs. For instance, the Irish questionnaire collects full details on current income, as well as on previous-year annualised income, as specified in the core Eurostat set of items.

The questionnaires were administered in a face-to-face interview by the ESRI's team of interviewers. On average, the household questionnaire took 12 minutes to complete, while the individual questionnaires take 30-35 minutes to complete. The average number of individual interviews per household in 1994 was 2.4.

In farm households, a farm questionnaire was also completed to collect information on the acreage farmed, and the profile of the farm in terms of crops grown, other land use, livestock held, and labour input. This information, together with data on the soil type, was used in conjunction with Teagasc's National Farm Survey to estimate the income flow (family

farm income) of farm households. This approach was necessary because the nature of farm income – being a combination of market profit or loss, grants and subsidies – makes it difficult for respondents to provide the figure directly.

The core ECHP questionnaire has remained substantially the same since 1994. Modifications of the Irish questionnaire have been kept to a minimum, but with some modules added to meet national needs, such as a module on pensions in 1995 and in 2000, and on intra-household distribution of resources in 1999.

The sample of households was originally selected for the 1994 wave of the survey. The objective of the sample design was to obtain a representative sample of private households in Ireland. Those living in institutions such as hospitals, nursing homes, convents, monasteries and prisons, are excluded from the target population, in line with the harmonised guidelines set down by Eurostat and standard practice adopted in surveys of this kind (such as the Household Budget Survey conducted by the Central Statistics Office). Among those effectively excluded from the target population are a number of small groups which face a relatively high risk of poverty – such as the homeless and travellers not living in private households. To do justice to the particular circumstances of groups such as these would require a different research methodology.

The sampling frame used in Ireland was the Register of Electors. This provides a listing of all adults aged 18 and over who are registered to vote in the Dáil, Local Government or European Parliament elections. This means that the target sample selected using the ESRI's RANSAM procedure was a sample of *persons*, not of *households*. Since the probability of selection is greater for households with a larger number of registered voters, this means that the resulting sample will tend to over-represent larger households. This was taken into account in reweighting the sample for analysis.

The total number of households successfully interviewed in 1994 was 4,048, representing 57 per cent of the valid sample. This response rate is as one would expect in an intensive and demanding survey of this nature, and is comparable to the response rates achieved in the Household Budget Surveys.

A total of 14,585 persons were members of the completed households. Of these, 10,418 were eligible for personal interview (i.e. born in 1997 or earlier), and 9,904 eligible respondents completed the full individual questionnaire (964 on a proxy basis). Summary details were collected on the household questionnaire on the 514 eligible individuals for whom no individual interview was obtained.

**2.3
The
Longitudinal
Survey**

The sample from the Wave 1 (1994) Living in Ireland survey was followed in subsequent years and re-interviewed. The follow-up rules for the survey meant that new households might be included in each wave where a sample person from Wave 1 moved to another household. All individuals in the Wave 1 sample were to be followed in Wave 2 and household and individual interviews were to be conducted, as long as the

person still lived in a private or collective[4] household within the EU. Table 2.2 summarises the wave-on-wave response rates, from Wave 1 to Wave 7.

Table 2.2: Number of Completed Households Each Wave, Number Sample Persons in Completed Households and Number Interviewed, Living in Ireland Surveys 1994-2000

	1994	1995	1996	1997	1998	1999	2000 Cont.	2000 New	Total 2000
Households									
Completed Households	4,048	3,584	3,174	2,945	2,729	2,378	1,952	1,515	3,467
Non-Response	3,038	794	624	390	394	464	414	1,146	1,560
Total Households	7,086	4,378	3,798	3,335	3,123	2,842	2,366[5]	2,661[6]	5,027
Household Response Rate	57%	82%	84%	88%	87%	84%	83%	57%	69%
Non-Sample	166	98	125	119	94	83	77	159	236
Individuals									
N. in Completed Households:	14,585	12,576	10,889	9,952	9,000	7,721	6,276	5,174	11,450
… followed from first wave	*N/A.*	*12,117*	*10,241*	*9,154*	*8,139*	*6,908*	*5,530*	*0*	*5,530*
… new since first wave	*N/A.*	*459*	*648*	*798*	*861*	*813*	*746*	*5,174*	*5,,920*
Eligible for Individual Interview (*)	10,418	9,048	7,902	7,255	6,620	5,719	4,745	3,952	8,697
Interviewed	9,904	8,531	7,488	6,868	6,324	5,451	4,529	3,527	8,056
% Individual Interviews Completed	95%	94%	95%	95%	96%	95%	95%	89%	93%

Note: * In completed Households.

The total number of households eligible for inclusion in Wave 2 was 4,378, which included newly-generated households.[7] In the second wave, 3,584 household interviews were completed, 794 did not respond, and 98 were non-sample households.[8] The household response rate (when non-sample households are excluded) was 82 per cent. The 3,584 completed households contained 12,576 persons (12,117 from wave 1 and 459 new individuals), of whom 9,048 were eligible for individual interview (born in 1978 or earlier) and 8,531, or 94 per cent, were actually interviewed.

The household response rate in Wave 3 was 84 per cent. Interviews were conducted in 3,174 households containing 10,889 individuals. Of

[4] Collective households are private households containing five or more unrelated persons with a looser budget-sharing relationship than in the standard private household. The main examples are boarding or lodging houses and army barracks. They do not include institutions such as hospitals, nursing homes, convents or prisons. If an individual moved to a collective household, they were treated as a one-person "sub-household".

[5] In Wave 7 a further 290 households could not be issued to interviewers because of the difficulties outlined in the text.

[6] This figure shows the number of households where contact was made by interviewers.

[7] These include (a) households generated when someone from a Wave 1 household moves out to set up a new household or (b) pre-existing households that a mover from a wave 1 household had joined by 1995.

[8] Non-sample households are those where all members are deceased, moved to an institution or outside the EU, or households not containing a "sample person" – someone who was in one of the original households in wave 1.

these, 7,902 were eligible for individual interview (born in 1979 or earlier) and 95 per cent, 7,488, were successfully interviewed.

It was feared that many households would be lost from the survey in the fourth wave, because respondents had initially been told that the panel duration was to be three years, as was Eurostat's plan in 1994. In an attempt to maintain and even increase response rates, respondent incentives were introduced (to the value of £5 per household and £1 per individual) in 1997. These incentives were maintained for the remainder of the panel.

In Wave 4 (1997), the household response rate increased to 88 per cent, resulting in a completed sample of 2,945 households, containing 9,952 individuals. Ninety-five per cent of the eligible individual sample (born in 1980 or earlier) were interviewed, giving a completed individual sample of 6,868 persons.

The household response rate in Wave 5 was 87 per cent, with household interviews completed in 2,729 households and 6,324 individual interviews completed (96 per cent of eligible individuals).

In Wave 6 (1999) 5,451 individual interviews (95 per cent of those eligible) were completed in 2,378 households, representing an 84 per cent response rate.

2.4 Sample Supplement-ation in the 2000 Survey

As shown in Table 2.2, even with a relatively high year-on-year response rate, there was a substantial loss of respondents over time. Of the original sample individuals who were still "in scope" in 1999 (13,964),[9] only 49 per cent (6,908) were in completed Wave 6 households, with another 813 individuals having joined the sample households at some point in the intervening years. By 2000, 5,530 of the 13,861 individuals still in scope (40 per cent) were in completed households.

The main reason for household non-response was refusal (ranging from 9 per cent of the eligible sample in Wave 2 to 5 per cent in Wave 5). Among the newly-generated households, difficulties in obtaining forwarding addresses for those who moved also contributed to the non-response rate.

Attrition of this magnitude is of concern for two reasons:
- To the extent that attrition is not random, it may result in a loss of representativeness in the resulting sample
- The reduction in the number of completed surveys leads to a loss of precision in the estimates derived from it.

Detailed checks on the pattern of attrition between waves of the survey are discussed in the next section. In brief, these analyses suggested that the main loss was related to difficulties in tracing households that had changed address: primarily households consisting of young single adults. There was no evidence of a disproportionate loss of households from the upper or

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[9] Of the original 14,585 individuals, 339 had died and a further 282 had moved to an institution or outside the EU by 1999. A total of 400 had died by 2000, and 324 had moved to an institution or outside the EU. This left 13,861 individuals still "in scope" by 2000.

lower ends of the income distribution of the kind that would tend to bias estimates of average household incomes or poverty measures.

However, the reduced sample size still needed to be addressed. This was done by supplementing the sample in Wave 7. The new sample was selected using the same procedure as for the first wave of the survey in 1994, using the ESRI's RANSAM programme, based on the electoral register. The household response rate reached 57 per cent for the 2,661 new sample households contacted by interviewers. This is the same as the rate achieved in Wave 1 and is in line with the typical response rate in other surveys of a demanding nature, such as the Household Budget Survey.

A new sample of just over 1,500 completed households was added to the sample continuing from previous waves of the survey. Of the households followed from the previous year (the "continuing sample"), 2,443 were issued to interviewers and interviews were completed in 1,952 of these (83 per cent) and with 4,745 individuals (95 per cent of those eligible). The improved economic situation in 2000 made it more difficult to establish contact with, and secure participation of, the households followed from earlier waves, since a higher proportion of the household members were working outside the home. This increased the number of call-backs required to make the initial contact and, since respondents had less free time, made refusals more likely. In addition, it created a challenge in that several of the experienced interviewers moved to alternative employment. A total of 290 households that had completed the Wave 6 interview could not be issued to interviewers because of these difficulties.

The sample supplementation exercise, together with the follow-up of continuing households, resulted in a completed sample in 2000 of 11,450 individuals in 3,467 households. Individual interviews were conducted with 8,056 respondents, representing 93 per cent of those eligible (born in 1983 or earlier).

2.5
The Impact of
Sample Attrition

Given the relatively high sample attrition rate, it was important to carefully check for any biases that may be introduced if attrition is related to characteristics of households, such as size, location, economic status and income. These checks were conducted in the course of devising sample weights for the data in Waves 2 to 7, using information on the households and individuals from the previous wave's interviews. Table 2.3 provides a summary of these results for Wave 7. (More detail is shown in the Appendix at the end of the study, in Tables A.1 and A.2.) The tables show the Wave 1 (1994) characteristics of all individuals in completed Wave 1 households, and of the subset of these that were still in completed households in Wave 7. The data are unweighted, and individuals who were out of scope by Wave 7 are not included. The figures in the tables do not, therefore, reflect the population distribution of these characteristics. Note, too, that the figures include only the Wave 7 individuals that were followed from 1994: the new sample added in Wave 7 is not included and neither are the individuals who joined sample households in the intervening waves.

The impact of attrition on the sample distribution, as opposed to its impact on sample size, can be seen by comparing columns B and D. We can see, for instance, that individuals in households with 2 adults

constituted 47 per cent of the Wave 1 sample. However, individuals who had been in 2-adult households in Wave 1 represented 52 per cent of the completed Wave 7 sample. This mainly reflects the loss of young adults from larger households, as they moved out of home: the sample percentage of individuals who were in 3-adult, 4-adult and larger households in Wave 1 had all declined as a result of attrition. This is consistent with the increasing rate of new household formation and the decline in average household size in the 1990s: the panel spanned a period where young adults were moving out and setting up new households at a relatively high rate, creating particular challenges in terms of follow-up and contact.

The main concern is with the extent to which the structure of the sample in terms of the distribution of these characteristics might have been affected by attrition. Column E gives some perspective on the magnitude of the impact of attrition on the sample structure. It shows the average weight that would need to be applied to each cell in the table to compensate for attrition. In other words, it shows the weight that would need to be applied to the completed wave 7 sample in order to restore the sample distribution that pertained at Wave 1.[10] A weight of 1 indicates that no adjustment is needed; a weight greater than 1 indicates that the cell would need to be weighted upwards, because individuals of this type were disproportionately lost from the sample. A weight less than one indicates that the corresponding cells would need to be weighted downwards, because individuals of this type had a greater propensity to be retained in the sample.

The figures are encouraging, particularly as Table 2.3 shows the characteristics where attrition has the most impact. The majority of the adjustments fall in the +/- 10 per cent range (from .9 to 1.1). The exceptions are primarily those associated with a propensity to change of address: living in a household with a large number of adults (requiring a weight of 1.2), residence in privately-rented accommodation (1.5), an actual change of address in the intervening years (1.3), being a young adult (1.5) or a student (1.2 for males and 1.4 for females).

Those living in other urban areas (the county boroughs outside of Dublin) were also disproportionately lost through attrition (requiring an attrition weight of 1.2), as were women who worked outside the home in 1994 and men who were unemployed in 1994. The adjustment for attrition here is relatively small, however, being in the +/- 20 per cent range.

There is no evidence of serious attrition among those living in poor households or in households towards the bottom of the income distribution. If anything, these households, along with individuals receiving social welfare payments associated with old age, disability or widowhood, local authority residents, and older adults were less likely to be lost through attrition than other households (see Appendix Tables A.1 and A.2). Other analyses (not shown here) revealed only slight variations in attrition by the

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[10] These weights are illustrative only. The actual weight applied takes account of the population distribution of these characteristics as well as attrition. Since larger households were over-represented in the Wave 1 sample – because of the design of the sample – the actual weight applied to larger households was lower.

socio-economic group of the household reference person, overall household size, presence of persons age 65 or over, and more detailed breakdowns by age group, marital status and economic status.

Table 2.3: Characteristics of All Individuals in the Wave 1 Sample and of the Subset of These in Completed Wave 7 Households (unweighted, excluding those out of scope by Wave 7)

	All Individuals in Wave 1		Individuals in Wave 7		Weight
	A	B	C	D	E
	(N cases)	(%)	(N cases)	(% cases)	(B/D)
	13,910	100%	5,530	100%	1.0
Number adults in household					
One Adult	698	5%	292	5%	1.0
2-Adult	6,494	47%	2,886	52%	0.9
3-Adult Household	2,733	20%	992	18%	1.1
4-Adult Household	2,333	17%	830	15%	1.1
5-Adult or over	1,652	12%	530	10%	1.2
Location					
Dublin	3,284	24%	1,347	24%	1.0
Other Urban	4,007	29%	1,337	24%	1.2
Rural	6,619	48%	2,846	51%	0.9
Housing Tenure					
Renter – private landlord	430	3%	117	2%	1.5
Whether changed address since W1					
Changed address	2,541	18%	787	14%	1.3
Equivalised H'hold Income Decile (Scale A)					
Bottom Decile	1,562	11%	695	13%	0.9
Top Decile	1,180	8%	439	8%	1.1
Poverty (50% mean, scale A)					
Not poor	11,639	84%	4,523	82%	1.0
Poor	2,271	16%	1,007	18%	0.9
Age, Sex, Marital Status					
Females Age 16-24	1,153	8%	297	5%	1.5
Males Age 16-24	1,274	9%	343	6%	1.5
Females Under 30, single	1,484	11%	396	7%	1.5
Males Under 30, single	1,728	12%	491	9%	1.4
Sex and Labour Force Status					
Females at work (ILO)	1,859	13%	632	11%	1.2
Females in education	584	4%	163	3%	1.4
Males at work (ILO)	3,312	24%	1,239	22%	1.1
Males Unemployed (ILO)	465	3%	158	3%	1.2
Males In education	605	4%	205	4%	1.2

Overall then, although the attrition rate is relatively high, it has only a minor impact on the sample distribution of individual and household characteristics. Although, as we have noted, there is an association between non-response and changing address (which particularly affects young,

single householders) the overall impact on the sample structure is slight. Nevertheless, as described in the next section, attrition was taken into account in re-weighting the sample for analysis.

2.6 Sample Weights for the 2000 Data

The purpose of sample weighting is to compensate for any biases in the distribution of characteristics in the completed survey sample compared to the population of interest, whether such biases occur because of sampling error, from the nature of the sampling frame used, differential response rates or attrition.

Whatever the source of the discrepancy between the sample and population distributions, we would like to adjust the distributional characteristics of the sample in terms of factors such as age, sex, economic status and so on to match that of the population. In a cross-sectional survey, or in the first wave of a panel survey, the only way to check the distributional characteristics of the sample is to compare sample characteristics to external population figures from sources such as the Census, the Labour Force Survey, official statistics on number of social welfare recipients from the Department of Social Welfare, and so on. In waves following the first wave of a panel survey, we can also compare the characteristics of the individuals and households successfully followed to those of the individuals and households in a previous wave of the survey. In constructing the weights for the Living in Ireland Survey in Waves 2 and subsequently, both of these methods were used.

The household weights were developed in a number of steps, which are described more fully in the Appendix.

- The first step involved adjusting the continuing sample for attrition.
- The second step was to adjust the new sample for the known tendency of RANSAM samples to over-represent larger households.
- The final step was to combine the continuing sample and the new sample and adjust against external controls.

The external sources of information used were the Quarterly National Household Survey, the Department of Social Community and Family Affairs statistics on social welfare recipiency levels, and figures from Teagasc on the total number of farms by farm size. The result of the weighting procedure was to ensure as close as possible a match between the sample and the population in terms of the distribution of the characteristics shown in Table 2.4.

Table 2.4: External Population Characteristics Used in the Construction of Household Weights

Household characteristics:

Household size (total size, number over 18 and number over 65)
Location (Dublin, other county borough, rural)
Number of persons at work (0, 1 and 2 or more)
Head Age (under 25, age 25 and over)
Number of farms in each of six size categories

Individual characteristics
Number of males and females by 10 age categories
Number of males and females age 15+ by 11 age/marital status categories
Number of recipients of 12 major social welfare payments
Number of males and females by 7 economic status categories (at work (ILO), unemployed (ILO), unemployed (not ILO), student, home duties, retired, other)
Number of males and females age 20-64 by level of education (4 categories)

Apart from incorporating weights to control for attrition from previous waves, and the availability of new technology for constructing weights, the logic and general strategy in developing the weights for Waves 2 to 7 was very similar to that used in Wave 1. As shown in the Appendix (Tables A.3 to A.5), the resulting match between the weighted sample characteristics and the population characteristics for the 2000 data was highly satisfactory, confirming that the weights are effective in adjusting the achieved sample to population characteristics.

2.7 Conclusion

This chapter has described the data from the Living in Ireland Surveys, and from the 2000 survey in particular, on which the report relies. It has noted that, as a panel survey, the Living in Ireland Surveys have been subject to attrition which has tended to reduce the sample size over time, although the impact on sample structure has been modest. The sample was supplemented in 2000 with the addition of 1,500 new households, bringing the total sample to 3,467 households. Individual interviews were conducted with 8,056 respondents born in 1983 or earlier in these households. The weighting procedure adopted to ensure that the sample is representative of the population was also discussed, with a more detailed description set out in the Appendix.

3. RELATIVE INCOME POVERTY IN 2000

3.1 Introduction

We now draw on the data from the 2000 Living in Ireland survey to look at how low income and poverty was evolving as the economic boom continued. We have emphasised in previous work the importance of acknowledging uncertainty about how best to measure poverty: no one method or set of results can provide all the answers. Income poverty lines offer one perspective, and use of a range of income lines allows us to track changes in both relative incomes and incomes in real terms. However, as we have argued at length in previous studies, income lines on their own can miss an important part of the picture and mislead both as to which types of households are most seriously affected by poverty and about trends over time. We therefore emphasise in this study, as in previous work, the need to complement them with information from non-monetary indicators of living patterns and deprivation, so that a more rounded and comprehensive – if necessarily more complex – picture can be seen.

For this reason, in Chapter 5 below we examine trends in deprivation levels as revealed by non-monetary indicators in some detail, as well as changes in the "consistent" poverty measure produced by combining those indicators with relative income lines, the measure adopted by the National Anti-Poverty Strategy in 1997 in framing its original global poverty reduction target. In order to understand those findings, however, it is necessary to look first at what has been happening in terms of household income. For this reason the present chapter presents an overview of trends in income poverty up to 2000, and Chapter 4 focuses on the types of household falling below income poverty lines.

3.2 Relative Income Poverty Lines

We follow conventional practice in adopting the household as the income-sharing unit throughout this study, treating all members of a particular household as having the same standard of living. (The situation of individuals within households is the subject of a forthcoming study for the Combat Poverty Agency by Cantillon, Gannon and Nolan). A particular household income level will then entail a different standard of living, depending on the number and ages of the people in the household. Again following conventional practice, *equivalence scales* are used to adjust household income for the differences in "needs" associated with differing size and composition.

A detailed description of the particular scales we have employed in previous work is given in Callan *et al.* (1996, Chapter 4). The first adult in a household is given the value 1, and our Scale A then gives each additional

adult a value of 0.66 and each child a value of 0.33 in calculating the total number of "equivalent adults" in the household. Scale B gives each additional adult a value 0.6 and each child 0.4. Scale C gives each additional adult a value of 0.7 and each child 0.5. In each case, equivalent or equivalised household income is then calculated by dividing total net household income by the number of equivalent adults in that household. These scales have the advantage of covering quite a broad range, and in order to produce comparable results we use the same ones here, and continue to define children for this purpose as those aged under 14 years of age.

In constructing relative income poverty lines, a number of other choices have to be made as we have discussed in depth elsewhere, notably in Callan *et al.* (1996) Chapter 4. One is whether the mean or the median income is to be used in deriving those lines. The mean can be seen as preferable in being easily understood, and from a conceptual point of view the incomes of the rich may indeed be seen as relevant in thinking about inclusion and exclusion. It may however be sensitive to a small number of very high incomes, unlike the median (the mid-point in the distribution). Here we examine overall trends with both mean and median income-based poverty lines to examine the possible sensitivity of the results to this choice. In order to test the sensitivity of conclusions to the precise location of the poverty line we also continue to use three separate cut-offs – 40, 50 and 60 per cent of mean income, and 50, 60 and 70 per cent of median income.

The income concept employed throughout is disposable household income (income of all household members from all sources, after income tax and PRSI contributions are deducted). Mean disposable income per week simply averaged over all households in the 2000 Living in Ireland Survey, without equivalisation, was £481. This represents an increase of almost 22 per cent on the mean in the 1998 ESRI survey. Adjusting for household size and composition by equivalising household income using the alternative equivalence scales described earlier produces the figures for average equivalent household income set out in Table 3.1. Mean equivalent disposable household income rose by almost 21 per cent between 1998 and 2000, and by about 75 per cent between 1994 and 2000.

Constructing relative income poverty lines based on mean equivalent income averaged over households in 2000, the 50 per cent line for a single person household will then vary between about £107 and £115, depending on the equivalence scale used. The corresponding line for a couple with two children ranges from £249 to £268, again depending the equivalence scale employed. For a single adult, a line set at 40 per cent of mean equivalised household income will be in the range £86-£92, while the 60 per cent relative income line for that household lies in the range £129-139 per week.

Table 3.1: Average Weekly Household Equivalent Income, Living in Ireland Surveys 1994, 1997, 1998 and 2000

Equivalence Scale	Income Per Adult Equivalent Averaged Over Households			
	1994	1997	1998	2000
		£ per week		
A (1/0.66/0.33)	129.39	164.75	187.23	226.45
B (1/0.6/0.4)	131.33	167.54	190.93	231.03
C (1/0.7/0.5)	121.96	155.84	177.23	214.54

Table 3.2 shows the percentage of households below these relative income poverty lines in 1994, 1997, 1998 and 2000.[11] In 2000, we see that about 12 per cent of households fall below the 40 per cent line, 26 per cent are below the 50 per cent line, and 33 per cent are below the 60 per cent income line. Since 1998, the percentage of households below the 40 per cent and 50 per cent relative income lines have risen by 1 to 2 percentage points. With the 60 per cent line, there has been broad stability.

Table 3.2: Percentage of Households Below Mean Relative Income Poverty Lines, Living in Ireland Surveys 1994, 1997, 1998 and 2000

Equivalence scale/	Percentage of Households Below Line			
Poverty line	**1994**	**1997**	**1998**	**2000**
Scale A (1/0.66/0.33):				
40% relative income line	4.9	6.3	10.5	11.8
50% relative income line	18.6	22.4	24.6	25.8
60% relative income line	34.2	34.3	33.4	32.9
Scale B (1/0.6/0.4):				
40% relative income line	5.2	7.1	11.0	12.2
50% relative income line	19.4	22.0	25.0	25.8
60% relative income line	34.1	34.0	33.0	33.4
Scale C (1/0.7/0.5):				
40% relative income line	7.0	7.0	10.0	11.7
50% relative income line	16.5	19.8	24.2	25.6
60% relative income line	32.9	34.2	33.5	34.0

[11] Note that due to on-going revisions to data and weights the figures for 1997 differ from those published in Callan *et al.* (1999); there have also been slight changes to the 1994 figures presented there and in earlier publications.

While the position of households is relevant, our central underlying concern is about individuals affected by poverty. Focusing on individuals also has implications for the way the relative income lines are derived: rather than averaging equivalent income over households, while concentrating on persons one can attribute the equivalised income of the household to each member, and then average income over individuals.[12] In Table 3.3, we see the effect of applying this approach for 2000. As found in Layte *et al.* (2000) with 1998 data, averaging equivalent income across individuals produces a slightly lower mean equivalent income (£225.96 per week in 2000) and thus slightly lower relative income lines and poverty rates. The trend remains the same as before, with higher poverty rates in 2000 than in 1998 at the 40 and 50 per cent line and little change with the 60 per cent line.

Table 3.3: Percentage of Persons Below Mean Relative Income Poverty Lines, Living in Ireland Surveys 1994, 1997, 1998 and 2000

Equivalence scale/	Percentage of Persons Below Line			
Poverty line*	1994	1997	1998	2000
Scale A (1/0.66/0.33):				
40% relative income line	5.2	6.3	9.1	9.9
50% relative income line	17.4	18.1	19.9	20.9
60% relative income line	30.4	30.1	28.6	28.3
Scale B (1/0.6/0.4):				
40% relative income line	5.4	7.9	9.4	10.4
50% relative income line	18.9	18.6	19.5	20.9
60% relative income line	30.1	30.7	28.8	28.4
Scale C (1/0.7/0.5):				
40% relative income line	6.8	8.1	8.8	10.0
50% relative income line	18.8	18.2	19.5	20.8
60% relative income line	29.4	30.7	29.1	29.8

*Based on Income Averaged Across Individuals.

3.4 Median-Based Relative Income Poverty Lines

As mentioned earlier, mean income in a sample may be quite sensitive to a small number of very high incomes reported at the top of the distribution. This can affect the way relative income lines based on the mean fluctuate over time. However, the median – the midpoint of the distribution – is not affected by outliers in the same way. As in Layte *et al.* (2001), it is therefore also useful to examine poverty lines derived as proportions of median incomes. Because income distributions are skewed and the median invariably lies below the mean, we construct poverty lines as 50, 60 and 70 per cent of the median among individuals (equivalising and attributing the equivalised income of the household to each member). These results are shown in Table 3.4.

We see that there is now a more marked increase, of 2-3 percentage points, with the lower two median-based lines between 1998 and 2000, while even the highest of these lines shows some increase. This brings out that the precise trend shown by relative income lines can be somewhat sensitive to exactly how these lines are derived.

Table 3.4: Percentage of Persons Below Median Relative Income Poverty Lines (Based on Income Averaged Across Individuals), Living in Ireland Surveys 1994, 1997, 1998 and 2000

[12] This is the practice followed in for example the UK's official *Households Below Average Income* publication, and now also by Eurostat.

| Equivalence scale/ | Percentage of Persons Below Line | | | |
Poverty line	1994	1997	1998	2000
Scale A (1/0.66/0.33):				
50% median income line	6.0	8.6	10.4	13.8
60% median income line	15.6	18.2	20.0	22.1
70% median income line	26.7	29.0	27.4	28.2
Scale B (1/0.6/0.4):				
50% median income line	6.3	9.6	11.5	14.0
60% median income line	17.1	18.9	21.0	21.9
70% median income line	26.9	28.8	27.9	28.4
Scale C (1/0.7/0.5):				
50% median income line	7.0	8.9	11.0	12.8
60% median income line	17.0	17.7	19.9	21.7
70% median income line	25.4	27.8	28.1	29.6

As discussed at length in our previous studies (for example Callan *et al.* 1996), the "head count" of households or persons falling below a given poverty line can usefully be supplemented with more sophisticated summary poverty measures based on income poverty lines, which take into account the depth of income poverty and the distribution of income among the poor. As in previous studies we again employ two widely used summary measures based on the "poverty gap" – the gap between the poverty line and the incomes of those below the line, drawing on Foster *et al.* (1984). The first is the per capita income gap, which in effect combines information on the proportion of the sample falling below the poverty line and the average depth of their poverty. The second measure is sensitive not only to the depth of poverty but also to its distribution, in effect giving most weight to those whose income gaps are greatest, i.e., those with the lowest incomes.

Results for the per capita income gap measure with the 50 per cent, 60 per cent and 70 per cent median-based lines (and equivalence scale A) are shown in Table 3.5. For each poverty line, this aggregate poverty measure rose between 1998 and 2000.

Table 3.5: Per Person Income Gaps Using Median Based Poverty Lines, 1994, 1997, 1998 and 2000 Living in Ireland Surveys

	1994	1997	1998	2000
50 per cent line	0.0090	0.0146	0.0184	0.0252
60 per cent line	0.0238	0.0347	0.0406	0.0507
70 per cent line	0.0510	0.0644	0.0688	0.0790

Equivalence Scale A.

The corresponding results for the "distribution-sensitive" measure are shown in Table 3.6. We see that this aggregate poverty gap measure is also consistently higher in 2000 than in 1998, and much higher than in 1994.

Table 3.6: Distribution-sensitive Weighted Poverty Gap Measure Using Median Based Poverty Lines, 1994, 1997, 1998 and 2000 Living in Ireland Surveys

	1994	1997	1998	2000
50 per cent line	0.0027	0.0049	0.0063	0.0083
60 per cent line	0.0067	0.0108	0.0132	0.0173
70 per cent line	0.0147	0.0120	0.0242	0.0300

Equivalence Scale A.

The fact that income poverty gaps *vis-à-vis* relative income thresholds have been rising consistently and substantially over the period from 1994 to 2000 is an important finding, indicating that those falling below relative

income thresholds are falling further and further behind the middle of the income distribution.

3.5 Income Poverty Lines Held Constant in Real Terms

Over any prolonged period when general living standards are changing, perceptions and expectations as to what is acceptable will also change, and this provides the essential rationale for the relative conception of poverty incorporated in the NAPS. However, as we have argued in previous work, it is also important to know what has been happening to real incomes, that is incomes adjusted for inflation. At a minimum, one would certainly want to be able to distinguish between a situation where the incomes of the poor are rising in real terms but lagging behind the average, and one where real incomes of the poor are falling while the average is stable. Thus, while we have consistently argued that a poverty standard which is fixed in real income terms will lose relevance over any sustained period of growth, in Callan *et al.* (1996, 1999) we also looked at how household incomes evolved *vis-à-vis* such a fixed real standard over a relatively short time period.

Table 3.7 now shows the percentage of persons falling below lines set at 40 per cent, 50 per cent and 60 per cent of the mean in 1994, and adjusted over time since then only in line with the increase in prices. We see that whereas about 17 per cent were below half average income in 1994, by 2000 only about 3 per cent were still below that income in real terms. With the 60 per cent line the decline was from about 30 per cent to 9 per cent. This reflects the scale of real income growth throughout the distribution seen over this remarkable period, discussed in the next section.

Table 3.7: Proportions of Persons Below 1994 Relative Income Standards, 1994, 1997, 1998 and 2000 Living in Ireland Surveys

Real Income Standard	Percentage of Persons Below Line			
	1994	1997	1998	2000
40 per cent line	5.2	2.3	1.2	1.1
50 per cent line	17.4	7.8	5.6	3.0
60 per cent line	30.4	17.3	12.1	8.6

Equivalence Scale A.

The National Anti-Poverty Strategy was launched in 1997, and so there is some interest in trends with relative income thresholds derived for 1997 rather than 1994 and indexed to prices from that point on. The percentage below the 50 per cent of mean threshold on that basis would have fallen from 18 per cent in 1997 to 10 per cent by 2000, while the corresponding fall with the 60 per cent threshold is from 30 per cent to 19 per cent.

The scale of the increase in real incomes over the longer period back to the late 1980s is also worth illustrating. If one derives relative income thresholds from the 1987 ESRI household survey and indexes them to prices since that date, less than 2 per cent of persons in 2000 would be below 50 per cent of the 1987 mean income up-rated by prices. Even with the higher, 60 per cent line the figure would be no more than 3 per cent. Given that about one in five and one in three were below these thresholds in 1987, the pace of real income growth is indeed dramatic.

**3.6
Key Underlying
Factors**

Between 1998 and 2000, very much the same set of factors continued to operate as in the 1994-1998 period examined in our previous studies monitoring trends in poverty. With remarkably rapid GNP growth, we have seen that average household income in our surveys rose between 1998 and 2000 by over 20 per cent in nominal terms. This represented very substantial real income growth, and unemployment also continued to fall, all contributing to improved living standards. Social welfare rates also continued to increase in real terms. Between 1998 and 2000, some key social welfare rates rose by 10 per cent (UB/DB), although those for the elderly rose a good deal more rapidly and Child Benefit also increased (though much of the latter took effect only from September 2000). However, this means that in general social welfare payments continued to lag behind average income. As a result, those relying primarily on social welfare for their income were more likely to fall below income poverty lines linked to average income, offsetting the impact of increasing numbers in employment.

3.7 Conclusions

Summarising the main findings of this chapter, we have seen that data from the 2000 Living in Ireland Survey show that the numbers falling below relative income poverty lines were most often higher than in 1998 or 1994. Focusing on median-based poverty lines showed similar patterns but produced slightly higher increases than lines derived as proportions of mean income. Distribution-sensitive summary poverty measures increased consistently from 1994 to 2000 with all the relative income lines. By contrast, the percentage of persons falling below "real income" lines indexed to prices since 1994 fell sharply, reflecting the pronounced real income growth throughout the distribution between then and 2000. This contrast points to the fundamental factors at work over this highly unusual period: unemployment fell very sharply and substantial real income growth was seen throughout the distribution, including social welfare payments, but these lagged behind so social welfare recipients were more likely to fall below thresholds linked to average income. The implications for the types of household falling below these thresholds, and then for living standards and deprivation levels, are addressed in subsequent chapters.

4. THE PROFILE OF THOSE BELOW INCOME POVERTY LINES IN 2000

4.1 Introduction

To understand the implications of the results presented in the previous chapter, we also need to know what has been happening in terms of the types of households falling below relative income poverty lines. This chapter presents the results from such an analysis, focusing on household composition, labour force status, age and gender. We compare the profile of risk and incidence – the percentage of a particular group falling below an income threshold and their importance among those below that threshold – for 2000 with those for 1994, 1997, and 1998.

As we have seen, relative income thresholds may be based on proportions of the mean or the median; since generally similar patterns of risk and incidence are shown in either case, we present the results for median-based lines.[13] In addition, in looking at risk and incidence the focus may be on households or on individuals (categorised by *inter alia* the type of household in which they live), so avoid a profusion of figures, we present results focusing on persons.[14] (Again, some results for households are presented in Appendix 2). Since a broadly similar pattern of risk and incidence is also shown by the three alternative equivalence scales described in the previous chapter, the scale attributing a value of 0.66 to each additional adult and 0.33 to each child (Scale A) is employed throughout the results presented here.

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[13] Corresponding results using mean-based lines are available from the authors on request.

[14] The choice is whether to weight each household equally, or to weight by the number of persons it contains: in a person-based analysis a household with five members will be counted five times.

4.2
Risk, Incidence and Household Composition

In looking at who falls below income poverty lines derived as proportions of median equivalised income, we focus first on the types of household in which they live, in terms of numbers of adults and children. For the purpose of this categorization individuals are defined as children if they are aged under 18 years (rather than 14).[15]

Table 4.1 presents the risk of falling below 60 per cent of the median in 1994, 1997, 1998 and 2000 for persons by household composition type. We see that those in one and two-adult households face the highest risk, together with those in households comprising a couple with four or more children or a single adult with children. In terms of change over the 1994-2000 period, the most striking feature is the very sharp increase in risk for one-adult households – much of which took place between 1994 and 1997. The risk for 2-adult households also increased, though by much less, and this has occurred more recently. These increases in risk are related to the fact that significant numbers of single-adult households in particular are elderly and relying on social welfare pensions, which – though treated generously relative to other social welfare schemes – as we saw in the previous chapter lagged behind the very rapid rate of increase in average household income.

Table 4.1: Percentage of Persons Below 60 Per Cent of Median Income by Household Composition Type, Living in Ireland Surveys, 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
1 adult	7.3	35.7	50.4	48.6
2 adults	6.8	9.4	16.6	26.5
3 or more adults	2.6	7.9	5.6	8.9
2 adults, 1 child	12.5	16.8	14.6	15.3
2 adults, 2 children	12.6	11.5	11.9	17.8
2 adults, 3 children	21.8	20.4	21.0	19.9
2 adults, 4 or more children	44.0	38.9	30.7	45.8
1 adult with children	36.3	45.3	44.4	46.7
3 or more adults with children	13.6	19.3	22.1	13.7
All	15.6	18.2	20.0	22.1

Looking now in Table 4.2 at the breakdown of persons falling below 60 per cent of the median, we see that the 1-adult household type is less important in incidence terms than its high risk might suggest, simply because by definition it contains fewer persons than other types. About 40 per cent of all persons below 60 per cent of the median are still in households comprising adults only, though. In terms of trends over time, there has been a marked increase in the importance of the household types without children among those below the income threshold.

Table 4.2: Breakdown of Persons Below 60 Per Cent of Median Income by Household Composition Type, Living in Ireland Surveys, 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
1 adult	3.3	14.6	18.3	16.4
2 adults	5.5	7.4	11.9	17.9
3 or more adults	2.1	6.5	4.7	7.1

[15] This marks a change from our earlier studies where a cut-off of 14 years was used. An increasing number are staying on at school until aged 17 or 18, and most of those aged under 18 are now likely to be dependents. Note that for equivalence scale purposes, on the other hand, they are likely to consume equivalent amounts to adults and so continue to be assigned the full adult weight if aged 14 or over.

2 adults, 1 child	4.6	7.0	5.6	5.2
2 adults, 2 children	9.4	8.7	7.6	10.9
2 adults, 3 children	16.4	12.2	11.1	7.7
2 adults, 4 or more children	26.8	12.1	9.6	14.6
1 adult with children	10.2	8.4	8.5	8.1
3 or more adults with children	21.8	23.1	22.6	12.2
All	100	100	100	100

Tables 4.3 and 4.4 show the pattern of risk and incidence in terms of persons falling below 50 per cent of the median. We see that one-adult households, without and with children, now face the highest risk, with a marked increase over time for single adult only households. Looking at composition, we see again that in 2000 only two-fifths of the persons below 50 per cent of the median live in adult only households, despite their high   risk.

Table 4.3: Percentage of Persons Below 50 per cent of Median Income by Household Composition Type, Living in Ireland Surveys, 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
1 adult	1.7	3.6	21.1	34.8
2 adults	2.8	3.7	6.0	12.7
3 or more adults	1.2	3.3	1.5	4.4
2 adults, 1 child	3.5	5.8	13.3	11.6
2 adults, 2 children	3.9	6.5	7.8	11.5
2 adults, 3 children	6.5	13.9	10.5	14.1
2 adults, 4 or more children	18.3	27.5	22.8	25.1
1 adult with children	8.4	24.0	42.3	39.7
3 or more adults with children	7.6	9.4	7.7	8.0
All	6.0	8.6	10.4	13.8

Table 4.4: Breakdown of Persons Below 50 Per Cent of Median Income by Household Composition Type, Living in Ireland Surveys, 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
1 adult	2.0	3.2	14.7	18.8
2 adults	5.8	6.2	8.2	13.7
3 or more adults	2.5	5.7	2.4	5.6
2 adults, 1 child	3.3	5.1	9.9	6.3
2 adults, 2 children	7.4	10.5	9.6	11.3
2 adults, 3 children	12.6	17.7	10.6	8.8
2 adults, 4 or more children	28.8	18.1	13.8	12.8
1 adult with children	6.1	9.5	15.6	11.1
3 or more adults with children	31.3	24.0	15.2	11.4
All	100.0	100.0	100.0	100.0

Tables 4.5 and 4.6 show the pattern of risk and incidence for persons when the poverty line is 70 per cent of the median. Both the pattern of risk and the composition of those below the line are similar to that seen with 60 per cent of the median.

Table 4.5: Percentage of Persons Below 70 Per Cent of Median Income by Household Composition Type, Living in Ireland Surveys, 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
1 adult	40.0	49.5	54.8	54.1
2 adults	13.4	28.4	27.4	32.8
3 or more adults	6.4	16.9	14.7	12.1
2 adults, 1 child	18.4	21.1	18.4	20.5
2 adults, 2 children	18.6	14.8	16.1	22.7

2 adults, 3 children	30.3	28.9	25.5	23.5
2 adults, 4 or more children	54.9	55.2	41.8	57.2
1 adult with children	65.1	46.8	53.2	57.9
3 or more adults with children	26.3	32.8	30.1	22.0
All	26.7	29.0	27.4	28.2

Table 4.6: Breakdown of Persons Below 70 Per Cent of Median Income by Household Composition Type, Living in Ireland Surveys, 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
1 adult	10.6	12.8	14.6	14.3
2 adults	6.3	14.0	14.4	17.3
3 or more adults	3.0	8.8	9.0	7.5
2 adults, 1 child	3.9	5.5	5.2	5.4
2 adults, 2 children	8.1	7.0	7.5	10.9
2 adults, 3 children	13.3	10.9	9.8	7.2
2 adults, 4 or more children	19.5	10.8	9.6	14.2
1 adult with children	10.7	5.5	7.4	7.9
3 or more adults with children	24.6	24.8	22.5	15.3
All	100.0	100.0	100.0	100.0

4.3 Labour Force Status

We now look at risk and incidence for persons below median-based relative income poverty lines categorised by the labour force status of the reference person for the household in which they live. (The household reference person is defined by Eurostat for the purposes of the ECHP as the owner or tenant of the accommodation or, if a couple are jointly responsible, the older of the two.) Table 4.7 shows the pattern of risk in these terms when the poverty line is derived as 60 per cent of the median. We see that households where the reference person is unemployed, ill/disabled or in home duties have the highest risk, with about half falling below this threshold. Where the reference person is retired, risk has been rising over time though it is still below those groups. Where the reference person is employed the risk is by far the lowest – though it increased in 2000.

Table 4.7: Percentage of Persons Below 60 Per Cent of Median Income by Labour Force Status of Household Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
Employee	3.2	4.7	3.0	7.4
Self-employed	16.0	14.4	17.2	20.8
Farmer	18.6	16.7	24.6	24.3
Unemployed	51.4	57.7	58.9	50.7
Ill/disabled	29.5	52.5	54.5	54.4
Retired	8.2	13.5	19.0	33.8
Home duties	20.9	32.6	44.6	47.6
All	15.6	18.2	20.0	22.1

Table 4.8 shows the types of household in which persons below this median-based line were living. Despite their high risk, only about 10 per cent of persons below this threshold are in households with an unemployed reference person, and the same number are in households where he or she is ill or disabled. About 30 per cent are in households where the reference person engaged in home duties. Despite their very low risk, 18 per cent are in households where the reference person is an employee, a marked increase since 1998.

Table 4.8: Breakdown of Persons Below 60 Per Cent of Median Income by Labour Force Status of Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
Employee	8.3	11.7	6.9	16.7
Self-employed	10.1	8.0	8.6	8.9
Farmer	10.6	8.0	10.5	8.2
Unemployed	41.1	29.6	22.6	9.8
Ill/disabled	6.2	10.4	9.0	9.9
Retired	6.0	9.1	12.2	17.6
Home duties	17.8	23.3	30.2	28.7
All	100.0	100.0	100.0	100.0

Tables 4.9 and 4.10 show the pattern of risk and incidence for persons when the poverty line is 50 per cent of the median. Risk is now clearly highest for those in households where the reference person is unemployed or ill/disabled, and a higher proportion of all those below the line are in such households than was the case with 60 per cent of the median.

Table 4.9: Percentage of Persons Below 50 Per Cent of Median Income by Labour Force Status of Household Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
Employee	0.6	1.2	0.5	3.0
Self-employed	9.9	10.7	13.7	14.2
Farmer	10.2	6.2	6.4	17.2
Unemployed	19.1	39.8	41.8	41.7
Ill/disabled	10.1	27.5	43.6	48.3
Retired	4.0	2.1	6.1	14.1
Home duties	5.7	8.9	23.1	31.8
All	6.0	8.6	10.4	13.8

Table 4.10: Breakdown of Persons falling Below 50 Per Cent of Median Income by Labour Force Status of Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
Employee	3.8	6.6	2.2	10.9
Self-employed	16.2	13.0	12.8	9.8
Farmer	15.0	6.5	5.1	9.4
Unemployed	39.5	44.8	30.1	13.0
Ill/disabled	5.5	12.0	13.5	14.2
Retired	7.6	3.1	7.4	11.8
Home duties	12.5	14.1	28.8	30.9
All	100.0	100.0	100.0	100.0

Turning to the 70 per cent of median line, in Tables 4.11 and 4.12 we see the pattern of risk and incidence. In terms of risk, the most striking finding is the exceptionally high level – 80 per cent – for those in households headed by someone who is ill or disabled. The composition pattern is however quite similar to that seen with the 60 per cent of median line.

Table 4.11: Percentage of Persons Below 70 Per Cent of Median Income by Labour Force Status of Household Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
Employee	7.0	10.1	7.1	11.5
Self-employed	20.0	25.1	23.6	23.9
Farmer	28.9	24.8	33.2	34.6
Unemployed	70.3	68.4	68.6	57.7
Ill/disabled	60.9	67.0	65.2	80.0
Retired	17.4	31.8	30.7	42.1
Home duties	48.8	56.0	58.3	53.5
All	26.7	29.0	27.4	28.2

Table 4.12: Breakdown of Persons Below 70 Per Cent of Median Income by Labour Force Status of Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
Employee	10.7	15.6	11.9	20.3
Self-employed	7.4	8.6	8.5	8.0
Farmer	9.6	7.4	10.3	9.2
Unemployed	33.0	21.9	19.1	8.7
Ill/disabled	7.4	8.3	7.8	11.4
Retired	7.5	13.2	14.3	17.1
Home duties	24.4	25.0	28.0	25.3
All	100.0	100.0	100.0	100.0

4.4
Age and Gender

We now look at risk *vis-à-vis* median-based relative income lines when both age of household reference person and presence/absence of children are incorporated into the analysis. We see first in Table 4.13 that persons in households where the reference person is aged 65 or over face a substantially higher risk of being below 60 per cent of the median line than those where the reference person is aged under 65 and there are children in the household. Those in households headed by someone aged under 65 and where there are no children face the lowest risk.

Table 4.13: Percentage of Persons Falling Below 60 Per Cent of Median Income by Presence of Children and Age of Household Reference Person, Living in Ireland Surveys 1994,1997, 1998 and 2000

	1994	1997	1998	2000
Aged < 65 No Children	5.1	10.2	12.3	14.5
Aged <65 with Children	20.6	20.9	20.7	21.5
Aged 65+	6.5	20.3	28.4	35.9
All	15.6	18.2	20.0	22.1

No such variation across these groups is seen with the 50 per cent of median line in Table 4.14. With the 70 per cent of median line in Table

4.15, though, very much the same pattern as with the 60 per cent of median line is seen.

Table 4.14: Percentage of Persons Falling Below 50 Per Cent of Median Income by Presence of Children and Age of Household Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
Aged < 65 No Children	1.5	4.0	7.3	11.2
Aged <65 with Children	8.0	11.9	12.8	14.3
Aged 65+	3.3	2.4	6.1	15.7
All	6.0	8.6	10.4	13.8

Table 4.15: Percentage of Persons Below 70 Per Cent of Median Income by Presence of Children and Age of Household Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
Aged < 65 No Children	13.2	18.8	16.7	17.6
Aged <65 with Children	31.7	29.8	27.0	28.5
Aged 65+	21.8	41.7	43.8	43.8
All	26.7	29.0	27.4	28.2

Looking now at the risk facing individuals of different ages – rather than in terms of the age of their household reference person – Table 4.16 shows that those aged 65 or more face a much higher risk than other adults of being below 60 per cent of the median. Children face an intermediate level of risk, while adults aged 18-64 face the lowest risk. The most pronounced change between 1998 and 2000 is the continuing increase in risk for the elderly.

Table 4.16: Percentage of Persons Below 60 Per Cent Median Income Poverty Line by Age, Living in Ireland Surveys 1994,1997, 1998 and 2000

	1994	1997	1998	2000
	%	%	%	%
Adults	11.1	16.1	18.9	21.0
Aged 18-64	12.1	14.7	16.1	16.9
Aged 65 or more	5.9	24.2	33.5	43.3
Children (aged under 18)	24.5	23.5	22.9	24.9

With the other two median-based lines, once again the lowest line (Table 4.17) shows much less variation is risk by age, whereas the 70 per cent line (Table 4.18) has a very similar pattern to the 60 per cent line.

Table 4.17: Percentage of Persons Below 50 Per Cent of Median Income by Age, Living in Ireland Surveys 1994,1997, 1998 and 2000

	1994	1997	1998	2000
	%	%	%	%
Adults	4.3	6.4	8.7	12.8
Aged 18-64	4.6	7.1	9.0	11.6
Aged 65 or more	2.8	2.6	6.7	19.1
Children (aged under 18)	9.4	13.8	14.7	16.2

Table 4.18: Percentage of Persons Below 70 Per Cent of Median Income by Age, Living in Ireland Surveys 1994,1997, 1998 and 2000

	1994	1997	1998	2000

	%	%	%	%
Adults	21.8	27.6	26.4	26.7
Aged 18-64	21.3	23.8	22.2	21.9
Aged 65 or more	24.5	49.0	48.6	53.0
Children (aged under 18)	36.4	32.2	29.7	32.1

It is also of interest to look at adults below median based poverty lines categorised by both age and gender. In Table 4.19 we see that women overall face a higher risk of falling below 60 per cent of median income, but that this gap is concentrated among the elderly where it is pronounced. Tables 4.20 and 4.21 show a similar pattern with the other two median-based income lines.

Table 4.19*: Percentage Below 60 Per Cent of Median Income by Gender and Age, Adults, Living in Ireland Surveys 1994,1997, 1998 and 2000*

	1994 %		1997 %		1998 %		2000 %	
	Men	Women	Men	Women	Men	Women	Men	Women
All Adults	10.6	11.6	12.9	19.2	16.1	21.5	18.7	23.2
Aged 18-64	11.3	12.9	12.9	16.5	15.1	17.1	16.0	17.8
Aged 65 or more	6.4	5.5	13.0	33.1	22.2	42.0	35.5	49.2

Table 4.20: Percentage Below 50 Per Cent of Median Income by Gender and Age, Adults, Living in Ireland Surveys 1994,1997, 1998 and 2000

	1994 %		1997 %		1998 %		2000 %	
	Men	Women	Men	Women	Men	Women	Men	Women
All Adults	4.3	4.4	5.8	7.0	7.4	9.8	11.3	14.3
Aged 18-64	4.5	4.7	6.4	7.8	8.0	10.1	11.0	12.3
Aged 65 or more	3.0	2.7	1.8	3.2	4.0	8.8	12.8	23.9

Table 4.21: Percentage Below 70 Per Cent of Median Income by Gender and Age, Adults, Living in Ireland Surveys 1994,1997, 1998 and 2000

	1994 %		1997 %		1998 %		2000 %	
	Men	Women	Men	Women	Men	Women	Men	Women
All Adults	19.7	23.0	23.5	29.6	23.5	29.2	24.1	29.3
Aged 18-64	20.0	22.6	23.4	24.3	21.2	23.2	20.6	23.3
Aged 65 or more	17.5	29.8	39.0	56.9	37.5	57.1	46.5	58.0

4.5
Social Welfare
Receipt

Finally, we can look at the extent to which those falling below the relative income thresholds are in receipt of social welfare payments from different schemes. Table 4.22 shows that, among those below 60 per cent of median income, the proportion in households where old age pension is being received has risen significantly since 1994 and by 2000 had reached 21 per cent. The proportion in households receiving Unemployment Benefit or Assistance, on the other hand, has fallen considerably over the period, from over half in 1994 to 17 per cent by 2000. About the same number are now in receipt of payments related to illness and disability, and about 20 per cent are in receipt of widow(er)s or lone parent payments.

Table 4.22: Percentage of Persons below 60 Per Cent of Median Income in Household Receiving Social Welfare, Living in Ireland Surveys, 1994, 1997, 1998, 2000

	1994 %	1997 %	1998 %	2000 %
Old Age Pension	4.3	9.5	16.4	21.3
Unemployment	52.3	40.0	40.5	16.9

Benefit/Assistance				
Illness/Disability*	8.3	15.0	19.0	17.4
Lone Parents Allowance	7.8	12.0	11.9	10.7
Widow's Pension	2.6	9.3	11.4	7.9

*Disability Benefit/Allowance, Invalidity Pension, DPMA.

4.6
Conclusions

In this chapter we have analysed the pattern of risk and incidence when income poverty lines are calculated as proportions of median equivalised income. Among the most striking findings were increasing risk for those in single person households, in households where the reference person is ill/disabled or retired, and for those who are themselves aged 65 or over. Those in households where the reference person is unemployed still face a relatively high risk of falling below the income thresholds but continue to decline as a proportion of all those below the lines. Conversely, those in households where the reference person is an employee still face by far the lowest risk but are becoming more important among those below the thresholds (as the numbers unemployed continue to fall and the number of employees to rise from 1998 to 2000). Those aged 65 or over faced a much higher risk of falling below 60 or 70 per cent of median income than those aged 18-65, with children then facing an intermediate level of risk. Women faced a higher risk of falling below those lines than men, but this gap was marked among the elderly.

These trends in risk and profile reflect the key factors at work over the period and identified in the previous chapter. The sharp fall in unemployment is reflected in a decline in its importance among those falling below the income thresholds, although the risk facing those affected by unemployment remains high. The fact that social welfare payments, although increasing significantly in real terms, lagged behind meant that those relying on such payments for much or all of their income – notably those on old age pensions – were more likely to fall below thresholds linked to average income. This in turn affected women and adults living alone with particular force, since a substantial proportion of single-adult households comprise elderly women relying entirely on means-tested pensions. The implications for such people of increasing real incomes – while lagging behind incomes from work and property – are taken up in the following chapters.

5. POVERTY MEASURES INCORPORATING NON-MONETARY DEPRIVATION INDICATORS

5.1 Introduction

Poverty is now widely conceptualised in terms of exclusion from the life of one's society because of a lack of resources, and so involves experiencing various forms of what that particular society would regard as serious deprivation (Townsend, 1979). A definition of poverty in very much these terms has been enshrined in the National Anti-Poverty Strategy (NAPS, 1997, 1999). As we have argued in previous work, income on its own has limitations for capturing such exclusion. Thus, those below lower relative income lines in particular are often not those experiencing the highest levels of deprivation. Consequently, using income versus deprivation to identify the most disadvantaged tends to identify groups with quite different socio-demographic profiles (Callan *et al.*, 1993; Nolan and Whelan, 1996). This has been shown to be true across a wide range of European Union countries, although the relationship between current income and deprivation is strongest in the poorer Southern European countries (Whelan *et al.*, 2000; Layte *et al.*, 2001).

The Irish case is even more complex, because the very rapid growth in average incomes since 1994 poses particular problems in capturing what is generally regarded as exclusion. In such circumstances, relying on relative income lines alone could lead to particularly misleading conclusions. Direct measures of deprivation can provide a valuable and complementary source of information in measuring poverty and assessing poverty trends. A measure of poverty combining both low income and manifest deprivation was developed at the ESRI initially using the 1987 survey results. Callan, Nolan and Whelan (1993) and Nolan and Whelan (1996) used a range of deprivation indicators to produce different indices of deprivation, and identified those both below relative income poverty lines and experiencing what was termed basic deprivation as experiencing generalised deprivation due to lack of resources. This "consistent" poverty measure was subsequently the basis for the global poverty reduction target adopted in the National Anti-Poverty Strategy.

The construction of these deprivation indices is described in the first section of this chapter. We then examine the way deprivation levels have evolved between the 1994 wave of the Living in Ireland Survey and 2000. In the third section we discuss how these indicators can be combined with

low income into a "consistent" poverty measure. Finally, we look at the risk and incidence of "consistent" poverty and how it has changed between 1994 and 2000.

5.2 The Deprivation Items and Indices

The full set of 23 non-monetary indicators available from the Living in Ireland surveys are shown in Table 5.1. For all but four of these items, respondents were asked not only which items or activities they did not themselves have/avail of, but also which of these they would like to have but had to do without because of lack of money. We then take deprivation to be "enforced" when respondents attribute doing without to being unable to afford the item or activity in question. (These questions were on the household rather than individual questionnaire in the survey, and thus responses are from the person completing that questionnaire). For the last four items in the table, it is presence rather than absence that constitutes deprivation.

Table 5.1: Indicators of Style of Living and Deprivation in Living in Ireland Surveys

New not second-hand clothes*
A meal with meat, fish or chicken every second day*
A warm waterproof overcoat*
Two pairs of strong shoes*
A roast or its equivalent once a week*
A week's annual holiday away from home
To be able to save some of one's income regularly
A daily newspaper
Telephone
A hobby or leisure activity
Central heating
Presents for family and friends once a year
Car
Bath or shower
Indoor toilet
Washing machine
Refrigerator
Colour television
A dry – damp free dwelling
Had day in the last 2 weeks without a substantial meal*
Had to go without heating during the last year through lack of money*
Was not able to afford an afternoon or evening out in the previous 2 weeks
Experienced debt problems arising from ordinary living expenses or availed of charity*

* "Basic" deprivation items.

There are a number of different ways in which we could combine the items shown in Table 5.1 into overall measures of deprivation. We could for instance combine them into a single aggregate index running from 0 to 23, where 1 is added to the score for each item missing due to a lack of resources. However, this takes no account of the nature of the items or the relationships among them. Different items may relate to rather different aspects or dimensions of deprivation, and simply adding them in a single index without taking that into account may not be the most appropriate procedure. To investigate whether there were indeed different dimensions of deprivation, Callan, Nolan and Whelan (1993) and Nolan and Whelan (1996) used factor analysis to systematically examine the manner in which items cluster into distinct groups, in order to identify dimensions of deprivation. Each factor or dimension comprises those items that are more

highly correlated with each other than with the other items. This analysis identified three dimensions of deprivation:

1. basic life-style deprivation − consisting of basic items such as food and clothes;
2. secondary life-style deprivation − consisting of items such as a car, telephone and leisure activities;
3. housing deprivation − consisting of items related to housing quality and facilities.

This structuring of the dimension of deprivation has been shown to have remained unchanged between 1987 and 1994 (Callan *et al.* 1996), and again to 1997 (Callan *et al.* 1999). We look in the next chapter at whether this remains the case in 2000.

The separate indices for enforced lack of basic, housing and secondary deprivation are of substantive interest in themselves, but in seeking to identify those excluded due to a lack of resources, we have concentrated on the basic deprivation index. The items in the basic deprivation index (marked with an asterisk in Table 5.1) clearly represented socially perceived necessities in the 1987 survey: "things that every household should be able to have and that nobody should have to do without". They clustered together, they were possessed by most people, and reflect rather basic aspects of current material deprivation. This all supported the notion that they were useful as indicators of the underlying generalised deprivation one is trying to capture. Most of the items in the secondary dimension, on the other hand, were not overwhelmingly regarded as necessities. The third dimension, the housing and related durables, appear to be a product of very specific factors, and so − while providing valuable information about one important aspect of living standards − were not considered satisfactory as indicators of current generalised exclusion (Nolan and Whelan, 1996).

The pattern of scores between 1994 and 2000 on this 8-item (enforced lack) basic deprivation index is shown in Table 5.2. We see a steady decline in the mean basic deprivation score from about 0.6 in 1994 to only 0.2 in 2000. The percentage of households registering a score of one or more has fallen from 25 per cent in 1994 to only 10 per cent in 2000, while the percentage scoring two or more has fallen from 12 per cent to 4 per cent.

Table 5.2: Distribution of Scores on Eight Item Basic Deprivation Index, 1994, 1997, 1998 and 2000 Living in Ireland Surveys

	Per Cent of Households			
Score	**1994**	**1997**	**1998**	**2000**
0	74.6	84.1	87.2	90.3
1	13.2	8.9	7.2	5.9
2+	12.2	7.0	5.5	3.8
All	100	100	100	100
Mean	0.58	0.30	0.24	0.17

We can explore this decline further by looking at the proportion experiencing enforced absence of one or more items in the basic index by household composition, presented in Table 5.3. We see that deprivation

has fallen sharply between 1994 and 2000 for all family types, and for almost all a significant decline was seen between 1998 and 2000. Larger households, with 3 or more children, experienced the greatest decline in risk   from   1998.

Table 5.3: Risk of Scoring 1 or More on Basic Deprivation Index by Household Criteria Composition Type, Living in Ireland Surveys, 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
1 adult	22.1	14.1	14.7	12.5
2 adults	15.0	10.7	8.4	5.7
3 or more adults	17.0	9.9	8.7	5.0
2 adults, 1 child	21.4	13.0	9.7	10.4
2 adults, 2 children	19.6	10.4	7.3	5.2
2 adults, 3 children	30.2	21.4	20.3	11.5
2 adults, 4 or more children	41.7	35.8	28.7	18.0
1 adult with children	56.6	27.6	34.3	30.8
3 or more adults with children	31.1	22.1	12.3	8.2
All	24.0	14.9	12.8	9.5

Categorising households by age and presence of children in Table 5.4, we find again that deprivation has fallen sharply since 1994 for all the categories. Between 1998 and 2000, there was no further decline among households where the reference person is aged 65 or over, though their mean deprivation level was already relatively low.

Table 5.4: Risk of Scoring 1 or More on Basic Deprivation Index by Presence of Children and Age of Household Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
Aged < 65 No Children	19.0	13.0	12.3	7.5
Aged <65 with Children	30.8	18.8	15.6	11.7
Aged 65+	18.5	10.8	8.7	8.9
All	24.2	14.9	12.7	9.5

Finally, we examine in Table 5.5 the mean level of basic deprivation by the economic status of the household reference person. Once again we see a marked decrease in basic deprivation for all types of households from 1994. From 1998 to 2000, there is also a decline except for households with a retired reference person. That decline is particularly large for households where the reference person is unemployed, ill or disabled.

Table 5.5: Risk of Scoring 1 or More on Basic Deprivation Index by Labour Force Status of Head, Living in Ireland Surveys 1994, 1997 and 1998

	1994	1997	1998	2000
Employee	15.9	11.0	7.9	6.6
Self-employed	10.8	5.2	6.5	3.4
Farmer	16.8	6.3	7.5	6.4
Unemployed	57.8	40.6	38.1	26.0
Ill/disabled	48.4	31.4	31.0	15.5
Retired	17.8	9.5	8.3	8.7
Home duties	35.2	22.2	19.1	16.8
All	24.0	14.6	12.4	9.5

W e have seen that there have been significant reductions between 1994 and 2000 in the basic index of deprivation, which is the measure we have used to date together with low income to identify households excluded because of a lack of resources. As in earlier work (Callan *et al.*, 1996, Layte *et al.*, 2000), we now combine basic deprivation with relative income poverty lines to construct a "consistent" poverty measure, distinguishing households that both have relatively low income and are experiencing basic deprivation. The use of a range of income lines allows us to see the consequences of varying the income criterion for the numbers and types of households identified as poor, so we again employ relative income lines derived as 40, 50 and 60 per cent of mean equivalised disposable income and as 50, 60 and 70 per cent of median disposable income.

Table 5.6 shows the percentage of households in the sample deprived of one or more items on the basic index and falling under different relative income thresholds (using equivalence scale A). Using 60 per cent of mean income as the income element of the measure, Callan *et al.* (1999) showed that there were substantial falls in "consistent" poverty between 1994 and 1997, from 15 per cent to under 10 per cent, and Layte *et al.* (2000) reported a further fall to 8 per cent by 1998. In 2000 we now see that this decline has continued as that figure approaches 6 per cent. When 50 per cent of mean income is used the decline is less pronounced, from 9 per cent in 1994 to 5.1 per cent in 2000. When 40 per cent of mean income is used as the income element of the poverty measure the percentage below that line and reporting basic deprivation has been very low throughout, at about 2-3 per cent, but has not declined from that very low level.

Table 5.6: Percentage of Households Below Proportions of Mean Income and Experiencing Basic Deprivation in 1994, 1997,1998 and 2000 Living in Ireland Surveys

Proportion of mean income (Eq. Scale A)	Per Cent of Households Below Line and Experiencing Enforced Basic Deprivation			
	1994	1997	1998	2000
40 per cent of mean	2.4	3.1	3.5	2.9
50 per cent of mean	9.0	6.7	6.2	5.1
60 per cent of mean	15.1	9.7	8.2	6.2

While in previous studies we have constructed the consistent poverty measure for households and using income thresholds based on proportions of mean income, we saw in Chapter 3 that there are some arguments for focusing on persons instead. Using the 70 per cent median income threshold, we find that 5.5 per cent of persons were in such households in 2000 – slightly lower than the 6.2 per cent figure for households, implying that these households are below-average in size. In 1994, by contrast, the 15 per cent of households below 60 per cent of mean income and experiencing basic deprivation contained 17.4 per cent of all persons in the sample, and thus were slightly above average in size. As we shall see, this reflects important changes in the composition of the households affected – as the numbers involved declined sharply – over the period.

We also saw that there are arguments for deriving relative income thresholds from median rather than mean income. We therefore construct consistent poverty measures combining basic deprivation with median-based income lines, and the results for persons are shown in Table 5.7. We

see a similar decline over time to Table 5.6. With the highest line, 70 per cent of median income, by 2000 the percentage of persons below that line and experiencing basic deprivation was down to 5.5 per cent compared to 14.5 per cent in 1994.

Table 5.7: Percentage of Persons Below Proportions of Median Income and Experiencing Basic Deprivation in 1994, 1997, 1998 and 2000 Living in Ireland Surveys

Proportion of median income (Eq. Scale A)	Per Cent of Persons Below Line and Experiencing Enforced Basic Deprivation			
	1994	**1997**	**1998**	**2000**
50 per cent line	3.5	5.2	3.6	3.1
60 per cent line	8.3	7.8	6.1	4.4
70 per cent line	14.5	10.7	8.0	5.5

The non-monetary indicators included in the basic deprivation measure on which these results are based are unchanged from 1994 to 2000. Indeed, the same set was previously used in examining 1987. The notion that expectations and perceptions of needs will change over time as general living standards rise is central to a relative conception of poverty. Against the background of the very rapid increases in average incomes and living standards that have taken place over the period, one has to ask whether these indicators are still capturing what would now be regarded as generalised deprivation. This is a critical question to which we return, having first examined the pattern of risk and incidence using the unchanged set of items.

**5.4
Poverty Risk
and Incidence**

Having outlined overall trends in deprivation and in the combined income/deprivation poverty measures, we now look at the pattern of poverty risk and incidence with these measures and how that has been changing for different types of household. We look here at risk and incidence in terms of individuals rather than households, and with the income element of the consistent poverty measure based on proportions of the median rather than the mean.[16] Table 5.8 shows the percentage of individuals below 70 per cent of median income and experiencing basic deprivation, categorised by the type of household in which they live. We see declines in risk across all the categories between 1994 and 2000, but between 1998 and 2000 these are concentrating among families with children: the relative position of those in single-adult households has deteriorated. Persons living in households comprising one adult with children   face   by   far   the   highest   risk   in   2000.

Table 5.8: Percentage of Persons Below 70 Per Cent of Median Income and Experiencing Basic Deprivation by Household Type, Living in Ireland Surveys, 1994, 1997, 1998 and 2000

	1994	**1997**	**1998**	**2000**
1 adult	15.1	12.1	12.7	11.2
2 adults	4.0	6.1	3.0	3.6
3 or more adults	3.3	5.5	5.5	1.0
2 adults, 1 child	9.2	6.9	3.6	4.1
2 adults, 2 children	9.3	3.3	1.8	2.5
2 adults, 3 children	17.5	15.5	11.4	5.6

[16] Corresponding results showing the pattern of risk and incidence for persons when 60 per cent rather than 70 per cent of the median, or for households using 50 per cent and 60 per cent of the mean, is employed in the consistent poverty measure are available on request.

2 adults, 4 or more children	35.6	33.9	20.2	16.2
1 adult with children	42.8	20.7	30.5	26.2
3 or more adults with children	14.2	12.8	7.6	3.7
All	14.5	10.7	8.0	5.5

Table 5.9 then shows the breakdown of the individuals below 70 per cent of the median and experiencing basic deprivation. About one-quarter of the individuals in consistent poverty are in one or two-adult households, and about 40 per cent are in either large families or ones with only one parent.

Table 5.9: Breakdown of Persons Below 70 Per Cent of Median Income and Experiencing Basic Deprivation by Household Type, Living in Ireland Surveys, 1994, 1997, 1998 and 2000

	1994	1997	1998	2000
1 adult	7.1	8.3	11.4	14.8
2 adults	12.5	8.3	5.4	9.6
3 or more adults	12.7	7.8	11.7	3.3
2 adults, 1 child	5.7	4.9	3.5	5.6
2 adults, 2 children	11.6	4.3	2.9	6.2
2 adults, 3 children	11.7	15.9	15.1	8.7
2 adults, 4 or more children	9.5	18.5	15.9	20.5
1 adult with children	4.4	6.2	14.6	18.0
3 or more adults with children	24.9	25.8	19.5	13.2
All	100	100	100	100

We now focus on risk and incidence when the categorisation is by labour force status of the reference person. Table 5.10 shows that the risk of consistent poverty is much higher when the reference person is unemployed, ill/disabled or in home duties than when he or she is at work or retired. The risk of consistent poverty declined between 1994 and 2000, and between 1998 and 2000, for all groups.

Table 5.10: Percentage of Persons Below 70 Per Cent of Median Income and Experiencing Basic Deprivation by Labour Force Status of Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

Below 70% income line and experiencing basic deprivation	1994	1997	1998	2000
	%	%	%	%
Employee	3.2	3.6	1.4	2.7
Self-employed	4.6	3.9	3.5	1.8
Farmer	5.5	1.0	3.2	1.5
Unemployed	52.2	42.7	30.4	22.1
Ill/disabled	36.2	31.7	17.7	11.0
Retired	6.1	5.5	5.1	4.5
Home duties	28.8	19.2	20.0	14.5

However, the composition figures in Table 5.11 shows that about 35 per cent of persons in consistent poverty are in households where the reference person is engaged in home duties, while for a further 18 per cent he or she is retired. There has been a significant decrease over time in the proportion of households with an unemployed reference person.

Table 5.11: Breakdown of Persons Below 70 Per Cent of Median Income and Experiencing Basic Deprivation by Labour Force Status of Reference Person, Living in Ireland Surveys 1994, 1997, 1998 and 2000

	1994	1997	1998	2000

Employee	9.1	16.1	8.6	24.9
Self-employed	3.2	3.8	4.5	3.0
Farmer	3.3	0.8	3.7	2.0
Unemployed	45.0	39.0	31.6	17.3
Ill/disabled	8.3	9.5	7.8	7.9
Retired	4.8	6.4	9.0	9.4
Home duties	26.4	24.4	34.9	35.4

Changes in composition profile by household type also has implications for the numbers of adults and children falling below relative income lines and experiencing basic deprivation. In 1994, 14 per cent of adults and 25 per cent of children (under 18) were in households below 60 per cent of mean income and experiencing basic deprivation. By 2000, the percentage of adults had fallen to 4.5 per cent while the percentage of children was 8.3 per cent. Table 5.12 shows the corresponding figures for 1997 (when the NAPS was inaugurated) and 2000, using 70 per cent of the median rather than 60 per cent of the median as the income element of the consistent poverty measure. We see that once again by 2000 only about 8 per cent of children were in households below that threshold and experiencing basic deprivation. The figure for working-age adults was only 4 per cent, while those aged 65 or over had a rate higher than that but lower than children.

Table 5.12:   Percentage of Persons Below 70 Per Cent Median Income Poverty Line and Experiencing Basic Deprivation by Age, Living in Ireland Surveys 1994,1997, 1998 and 2000

	1997 %	2000 %
Adults	8.8	4.5
Aged 18-64	8.8	4.1
Aged 65 or more	8.4	6.6
Children (aged under 18)	15.3	8.3

Table 5.13 compares the position of men and women. We see that overall, a slightly higher proportion of women than men are in consistent poverty. However, it is among the elderly that this gap is pronounced, with over 8 per cent of women aged 65 or over below 70 per cent of median income and experiencing basic deprivation compared with 4 per cent of men of that age.

Table 5.13: Percentage Below 70 Per Cent of Median Income and Experiencing Basic Deprivation by Gender and Age, Adults, Living in Ireland Surveys 1997 and 2000

	1997 %		2000 %	
	Men	Women	Men	Women
All Adults	8.3	9.2	3.7	5.2
Aged 18-64	8.6	9.0	3.7	4.5
Aged 65 or more	6.1	10.2	4.1	8.5

Finally, we can look at the extent to which those in consistent poverty are in households in receipt of social welfare payments from different schemes. Table 5.14 shows that, among those below 70 per cent of median income and experiencing basic deprivation, the proportion in households where old age pension is being received has been rising significantly since 1994 and by 2000 had reached 13 per cent. The proportion in households

receiving Unemployment Benefit or Assistance was 60 per cent in 1994, but had fallen to 30 per cent by 2000. The proportion in receipt of payments related to illness and disability has risen substantially, however, as has the proportion in receipt of lone parent payments: about half were in households receiving one of these payments by 2000.

Table 5.14: Percentage of Persons below 70 per cent of Median Income and Experiencing Basic Deprivation in Household Receiving Social Welfare, Living in Ireland Surveys, 1994, 1997, 1998, 2000

	1994 %	1997 %	1998 %	2000 %
Old Age Pension	5.3	9.3	9.0	12.7
Unemployment Benefit/Assistance	59.6	56.0	57.2	30.3
Illness/Disability*	11.4	18.0	19.7	23.4
Lone Parents Allowance	12.9	16.7	15.8	25.4
Widow's Pension	4.3	8.1	4.8	3.9

*Disability Benefit/Allowance, Invalidity Pension, DPMA.

5.5 Conclusions

This chapter has first explored trends in the extent of basic deprivation from 1994 to 2000, using a set of eight non-monetary deprivation items on which information was obtained in the Living in Ireland Surveys. The results showed a marked decline in basic deprivation scores across different household types, whether categorised by household composition or by labour force status of the household reference person. A decline was also generally seen from 1998 to 2000, although not for households where the reference person is retired or aged 65 or over.

We then looked at trends in "consistent" poverty, that is the numbers both below relative income poverty lines and experiencing basic deprivation. We saw that the percentage of households and individuals in consistent poverty declined sharply from 1994 to 2000, and fell between 1998 and 2000, whether income lines based on the mean or median were employed (unless a very low relative income line was used). By 2000, only 6 per cent of persons were below 70 per cent of median income and experiencing basic deprivation, compared with 11 per cent in 1997 and 15 per cent in 1994.

Those living in households comprising one adult with children continue to face a particularly high risk of consistent poverty, followed by those in families with two adults and four or more children. The percentage of adults in households below 70 per cent of median income and experiencing basic deprivation was seen to have fallen from 9 per cent in 1997 to about 4 per cent, while the percentage of children in such households fell from 15 per cent to 8 per cent. Women aged 65 or over faced a significantly higher risk of consistent poverty than men of that age.

6. REASSESSING THE CONSISTENT POVERTY MEASURE

6.1 Introduction

We have seen in Chapter 5 that the "consistent" poverty measure, measured as the percentage falling below the 60 per cent relative income line and experiencing basic deprivation in terms of eight non-monetary indicators, had by 2000 fallen to less than half the level recorded in 1994. In the recent Review of the National Anti-Poverty Strategy (2002) under the Programme for Prosperity and Fairness, the government has set revised targets for the period to 2007, including one for poverty reduction framed in terms of this measure. We have argued in previous publications that measuring poverty and setting poverty targets are different exercises, and that poverty targets framed purely in terms of this "consistent poverty" measure are inadequate. These are issues to which we return in the next chapter. However, it is also important to distinguish and address two key questions which arise with respect to the consistent poverty measure – as a measure rather than a target.

The first question, as flagged in Chapter 5, is whether the specific set of indicators used to define basic deprivation up to 2000 continued to capture what was regarded as generalised deprivation as living standards rose up to that point: was it still a satisfactory measure in 2000? This is the issue we address in this chapter. The second issue is whether, looking forward from 2000, an expanded set of items would provide a more satisfactory basis for poverty monitoring in the future: this we consider in Chapter 7.

6.2 Reassessing the Measure

In an earlier NAPS monitoring report (Callan *et al.* 1999) we investigated in some depth the possibility that the basic deprivation measure needed to be adapted and the set of items employed expanded. It was shown that expectations had indeed adjusted rapidly between 1987 and 1997 to the increasing levels of possession of certain items. Five items in particular become available to a substantial majority of households, and also came to be perceived as necessities by comparable numbers – central heating, a telephone, a car, a colour TV and being able to buy "presents for friends and families once a year". However, factor analysis showed a striking consistency over time in the relationships between deprivation indicators, with distinct basic, secondary and housing dimensions.

We also looked in that analysis and subsequently in Layte *et al.* (2001) at the households who would come to be included among the poor if the

basic deprivation index was indeed broadened to include those items. In terms of level of (self-assessed) economic strain, psychological distress and fatalism, they were found to be little different from the households who would still not be counted as poor. The households categorised as poor by the original basic deprivation and income poverty criteria, on the other hand, had distinctively high levels of economic strain, psychological distress and fatalism. This provided some reassurance that the original set of basic items was more successful in capturing generalised deprivation than an expanded set would be at that point. Layte *et al.* (2001) concluded that the evidence suggested that the original set of basic items was more successful in capturing generalised deprivation than an expanded set, and that in terms of criteria of reliability and construct validity, the consistent poverty measure performs remarkably well over time.

This issue has particular salience for policy since the government chose to frame the NAPS global poverty target in terms of the combined income and basic deprivation measure. In the next section we look once again at analysis of the inter-relationships among the items via factor analysis. In Section 6.4, we then look at the households which could be potentially counted as "consistently poor" if the set of items was now broadened.

6.3 Factor Analysis of 2000 Data

We first present in Table 6.1 the results of exploratory factor analysis of the full set of items available in the 1994 and 2000 Living in Ireland Surveys. When we compare the factor loadings for 1994 and 2000, in general we observe a pattern of remarkable similarity. In both cases the basic, secondary and housing dimensions emerge clearly. In the case of basic deprivation seven of the original items continue to load highest on the basic dimension, the exception being the debt item. In the case of the secondary dimension, seven of the eight original items continue to have their highest loading on this dimension in 2000, the exception being a telephone which now loads highest on the housing dimension. Turning to the housing dimension, we find that five of the six original items still load highest on this factor in 2000, the exception being a refrigerator which now loads highest on the basic dimension.

We should note that on average the items have lower loadings in 2000 than was the case in 1994 – in other words, they cluster together a little less tightly than before. However, in the case of both the basic and secondary indices they still display a satisfactory level of reliability, with alpha coefficients of 0.67 and 0.70 respectively.

In considering these results, it is important to stress that, as we explore in more detail below, these changes come very much within the bounds of sampling error. A mechanical response to the descriptive results would see us exclude the debt item from the basic deprivation scale, and consequently the consistent poverty measure, and add the items relating to a refrigerator and presents. However, in the absence of any theoretical grounds for doing so we are particularly reluctant to exclude the debt item. Furthermore, its exclusion would not increase the reliability of the measure as reflected in the alpha coefficient. As far as the refrigerator is concerned, the numbers reporting enforced absence are so low that that including it in the basic index would have little effect on overall levels of deprivation or the rate of consistent poverty. In the absence of any substantive grounds

for making such an adjustment we have continued to treat this item as forming part of the housing index.

Table 6.1: Results of Exploratory Factor Analysis of Non-Monetary Deprivation Items, Living in Ireland Surveys 1994 and 2000

	Basic		Housing Services		Secondary	
Basic Dimension	**1994**	**2000**	**1994**	**2000**	**1994**	**2000**
A meal with meat, chicken or fish	0.51	0.50			0.09	0.25
A warm, waterproof overcoat	0.56	0.62	0.37	-0.04	0.24	0.07
Two pairs of strong shoes	0.64	0.67	0.11	-0.08	0.25	0.03
A roast joint of meat or its equivalent once a week	0.58	0.51	0.08	0.16	0.20	0.31
New, not second hand clothes	0.67	0.36	0.19	-0.11	0.27	0.45
Go without a substantial meal	0.68	0.41	0.04	0.18	0.03	0.19
Go without heat	0.67	0.47	-0.01	0.20	0.22	0.39
Go into debt for ordinary living expenses	0.42	0.20	0.05	0.16	0.33	0.37
Housing/Services Dimension						
Refrigerator	0.28	0.47	0.36	0.30	-0.10	-0.20
Washing Machine	0.02	0.37	0.45	0.45	0.20	-0.02
Colour TV	-0.06	0.04	0.33	0.29	0.19	0.12
Dry, damp free dwelling	0.16	0.08	0.37	0.46	0.28	0.27
Non-shared indoor toilet	0.06	0.00	0.84	0.84	-0.10	-0.08
Non-shared bath or shower	0.09	-0.03	0.86	0.83	-0.09	-0.06
Secondary Dimension						
Telephone	0.13	0.07	0.25	0.37	0.49	0.23
Car/Van	0.16	0.01	0.07	0.10	0.50	0.56
Weeks annual holiday away	0.13	0.00	0.03	0.14	0.68	0.71
Central heating	0.09	0.06	0.38	0.32	0.50	0.38
Be able to save regularly	0.16	0.04	0.10	0.13	0.61	0.65
Daily newspaper	0.27	0.07	0.07	0.00	0.44	0.48
Hobby or leisure activity	0.29	0.30	-0.06	0.06	0.53	0.47
Presents for friends or family	0.50	0.32	0.05	0.10	0.34	0.36
Able to afford afternoon or night out	0.28	0.22	-0.08	0.05	0.52	0.47

It is also important to stress that we have seen no sign of a tendency for those items included in the secondary index to shift towards having their highest loading on the basic dimension. However, a number of additional factors should be kept in mind. The set of basic items were never intended to define the standard of living of the household in either a descriptive or a normative fashion. Instead the results of the factor analysis were the starting point of a search for a measure that would allow us to identify households that are distinctive in terms of a set of characteristics that conform with our theoretical understanding of poverty. We arrive at the "consistent" poverty measure neither by reading off the results of a factor analysis nor by arbitrarily opting for an absolute standard, but rather by a process of construct validation. Fundamentally, construct validity is concerned with the extent to which a particular measure relates to other measures in a manner which is consistent with theoretical expectations – in this case, whether those identified as poor display the types of characteristics and subjective responses one would expect.

It follows that the consistent poverty measure which proved acceptable in terms of these criteria in 1987 or 1994 might fail to do so a decade later. In particular the notion that expectations and perceptions of need will change over time as general living standards rise is central to a relative conception of poverty. The non-monetary deprivation indicators thus have

to be reassessed over time in the light of improved living standards, changing perceptions about what constitutes necessities, and potential transformations in the underlying structure of deprivation (See Layte *et al.* forthcoming for a more detailed discussion).

The exploratory factor analysis results shown in Table 6.1 shows that the factor structure of the basic, secondary and housing deprivation dimensions still emerges. This may be surprising given that we have consistently argued that over time one would expect that changing notions about what was necessary would perhaps lead to items from the secondary index becoming more strongly identified with the basic index.

We have also formally tested statistically whether we are warranted in regarding the factor structures as identical in 2000 to previous years. To do this we carried out what is termed a "confirmatory" factor analysis, and the results are presented in Appendix 2. These tests suggest that at least on statistical grounds, and perhaps rather surprisingly, the deprivation dimensions are as coherent in the 2000 data as they were in 1994.

6.4 Potentially Poor Households

We now explore what would happen if the basic deprivation index were indeed broadened to include additional items in measuring poverty in 2000 (as we did in Layte *et al.*, 2001 with data for 1998). For this purpose we begin by distinguishing between three groups of households. The first we will refer to as the "poor": These comprise the households who in 2000 fell below 60 per cent of mean income and were experiencing basic deprivation with the unchanged set of eight items. The second are households fulfilling that income criterion but not the basic deprivation one, but who are suffering enforced absence of one of the five additional items we have identified i.e. central heating, a telephone, a car, a colour television and presents for family and friends at least once a year. This group we label the "potentially poor", and it constitutes an additional 5.7 per cent of households. Finally we have those households who fulfil neither criteria and whom we label the "non-poor".

We look first at the characteristics of the "potentially poor" compared with the "poor". Table 6.2 shows that in terms of household composition type, the major difference is that a higher proportion of the consistently poor are single-adult households, and a smaller proportion are two-adult households.

Table 6.2: Breakdown of "Potentially Poor" and "Consistently Poor" Households by Composition Type, Living in Ireland Survey, 2000

	Potentially Poor	Consistently Poor
1 adult	33.2	39.6
2 adults	26.4	12.9
3 or more adults	8.5	3.0
2 adults, 1 child	1.2	5.0
2 adults, 2 children	6.3	4.1
2 adults, 3 children	1.5	4.6
2 adults, 4 or more children	2.3	8.2
1 adult with children	16.4	16.0
3 or more adults with children	4.3	6.6
All	100	100

The pattern of incidence by labour force status of the household reference person is shown in Table 6.3. While generally similar, a lower proportion of the "potentially poor" have an employed reference person and a slightly higher percentage have a retired reference person.

Table 6.3: Breakdown of "Potentially Poor" and "Consistently Poor" Households by Labour Force Status of Household Reference Person, Living in Ireland Survey, 2000

	Potentially Poor	Consistently Poor
Employee	6.5	12.9
Self-employed	2.7	1.6
Farmer	7.2	3.1
Unemployed	12.1	15.3
Ill/disabled	4.5	9.5
Retired	23.8	17.6
Home duties	43.2	40.1
All	100	100

Next we compare the breakdown by age of reference person and presence of children. Table 6.4 shows a lower proportion of consistently poor households have the reference persons aged over 65, and a higher proportion have children.

Table 6.4: Breakdown of "Potentially Poor" and "Consistently Poor" Households by Age of Reference Person and Presence of Children, Living in Ireland Surveys, 2000

	Potentially Poor	Consistently Poor
Aged < 65 No Children	30.9	27.4
Aged <65 with Children	30.4	43.9
Aged 65+	38.7	28.6
All	100	100

Table 6.5 now sets out the proportions of the potentially poor, consistently poor and non-poor possessing a range of items. We see that both potentially poor and consistently poor are clearly differentiated from the non-poor in terms of certain items – such as possession of a car or a dishwasher. The consistently poor are however differentiated from the potentially poor in terms of, for example, being able to replace worn out furniture, afford a daily newspaper, or have friends over for a meal or drink.

Table 6.5: Non-Monetary Deprivation Indicators in 2000

	Consistently Poor	Potentially Poor	Non-Poor
	%	%	%
Car	32.3	26.7	82.6
Deep Freeze	30.6	27.3	68.7
Dishwasher	6.9	3.3	40.4
A weeks annual holiday away from home	12.9	20.4	70.0
To be able to save	9.9	33.6	74.4
A roast meat joint or equivalent once a week	56.9	88.2	96.4
A hobby or leisure activity	44.7	68.4	85.8
Central heating	61.4	40.9	91.3
Microwave	50.0	44.9	80.8
A daily newspaper	31.0	60.3	72.7
Able to replace worn out furniture	27.0	57.9	85.6
Have friends for drink/meal once a month	31.8	67.2	83.5

Presents for friends or family once a year	67.4	78.1	96.6
New not second hand clothes	47.6	97.0	98.4
Washing Machine	75.6	78.6	95.7
Colour Television	95.2	95.7	98.8
Video Recorder	58.8	59.1	87.1
Refrigerator	95.9	98.2	99.7
A dry damp free dwelling	72.4	84.4	96.3
Adequate heating	69.4	83.3	97.8
Bath or shower	94.5	93.3	98.4
A meal with meat chicken or fish every second day	86.2	100	99.3
Warm Waterproof Coat	88.3	100	99.1
Two pairs of strong shoes	82.8	99.3	99.3
Telephone	81.4	72.3	96.2

We now look at the variation between these three groups in terms of the subjective consequences one would expect to be associated with poverty. We look first at the way experience of economic strain and dissatisfaction varies across the groups and in order to do so we make use of two indicators. The first is a measure of the extent to which the household is "able to make ends meet". Since our interest is in the consequences of poverty we distinguish between those reporting "with great difficulty" and all others. The second item relates to satisfaction with financial situation and we distinguish those "not at all satisfied" from the remainder. Table 6.6 presents the outcomes on these variables for both the potentially and consistently poor. The first indicator shows a distinct difference between the potentially poor and consistently poor, with approximately one-third of consistently poor households, experiencing "great difficulty" in making ends meet compared with only 6 per cent in potentially poor households. Satisfaction with the financial situation of the household also shows a substantial difference, with only 17 per cent of potentially poor households expressing such dissatisfaction compared to 39 per cent of the consistently poor households. In each case, though, the potentially poor do appear to be under greater financial strain than the non-poor.

Table 6.6: Economic Strain by Poverty Status, Living in Ireland Survey, 2000

	Non-Poor	Potentially Poor	Consistently Poor
	%	%	%
Having Great Difficulty Making Ends Meet	2.2	6.5	33.1
Not Satisfied at All with Economic Situation	5.8	16.6	39.0

The next outcome to which we turn our attention is psychological distress. We use the General Health Questionnaire and ask respondents 12 questions about their present mental and emotional condition "over the last few weeks" in comparison to their normal condition. Normally a score of two is taken as a threshold and respondents with higher scores are classified as suffering from psychological distress. In Table 6.7 we show the percentage scoring above this threshold by our poverty classification. For the consistently poor we find that just over 40 per cent are found above the GHQ threshold. This percentage falls to just over 30 per cent

for the potentially poor, similar to the gap found with 1998 data and reported in Layte *et al.* (2000). The non-poor however have substantially lower proportions displaying psychological distress than either of these groups.

Table 6.7: Psychological Distress and Poverty Status, Living in Ireland 2000

	Non-Poor	Potentially Poor	Consistently Poor
	%	%	%
Per Cent Above GHQ Threshold	14.5	31.7	41.2

6.5 Conclusions

In this chapter we have asked whether, in 2000, the set of deprivation items included in our measure of "consistent poverty" were still serving their intended purpose, of capturing what would be widely seen as generalised deprivation. This involved looking again at the items currently included in the basic deprivation index, and at the households who would be counted as "consistently poor" if that index were broadened to include certain other items now widely perceived as necessities. Factor analysis first suggested that in general terms the structuring of deprivation items into the different dimensions has remained remarkably stable over time. Examining the households who would be counted as "consistently poor" if the set of deprivation items was broadened, we once again found them to be differentiated from those counted as consistently poor using the original eight items, in terms of levels of economic strain and psychological distress.

This we take as arguing for maintaining a distinction between the consistently poor and "potentially poor" for analytical purposes in looking at results for 2000. As we have emphasised in previous reports, the "potentially poor" is clearly a key group, and there may be different views about the appropriate label to apply to this group in 2000. What we can say with confidence is that combining low income with the original set of basic deprivation indicators does identify a set of households in the 2000 sample experiencing generalised deprivation as a result of prolonged constraints in terms of command over resources. On its own this does not tell the whole story, nor – as we have argued for some time – does it represent the best way to frame a poverty target in current circumstances. The issue of how best to monitor poverty in Ireland in the future is one we go on to consider in greater depth in the next chapter.

7. MONITORING POVERTY LOOKING FORWARD

7.1 Introduction

We have seen in previous chapters that the use of income and deprivation indicators in combination allows one to identify sub-groups of households who are "consistently poor" – having low incomes and high levels of deprivation – who are clearly distinctive in terms of exposure to economic strain and psychological distress. Furthermore, the socio-demographic profile of such households would reasonably be expected to be associated with poverty and deprivation – more so than that of those simply below income thresholds. Finally, unlike the income poverty lines, the consistent poverty measures showed significant reductions in poverty during Ireland's period of unprecedented economic growth since 1994.

What is crucial in this approach to poverty measurement has never been the specific set of items employed. The consistent poverty measure was never intended to be a mixture of relative income and absolute or fixed deprivation indicators, and the set of items that had proved satisfactory in 1987 might fail to do so a decade or more later. In particular the notion that expectations and perceptions of need will change over time as general living standards rise is central to a relative conception of poverty. In the previous chapter we reported on the latest of a number of attempts to reassess the set of basic deprivation items in light of the changing economic situation. We concluded that the combined income and deprivation measure, as originally constituted, continued to identify in the 2000 sample a set of households experiencing a level of generalised deprivation, a degree of economic strain and exposure to psychological distress that marks them out from the rest of the population. We did, however, identify an intermediate group who required particular attention and about whom there might be different views as to whether the label "poor" should be attached.

In this chapter, rather than addressing how the persistent poverty measure has performed in the past we seek to address the distinct and in some respects more difficult issue of how it will behave in the future and whether it will continue to constitute a satisfactory monitoring tool. Here we find that, looking forward, a measure incorporating a broader set of items is likely to serve as a more satisfactory monitoring tool. We conclude by bringing out the implications for poverty monitoring and targeting.

7.2 Deprivation Indicators and Trends

We can illustrate the issues at hand by first examining trends over time in the levels of deprivation reported for the items that now constitute the basic deprivation items. Table 7.1 shows that between 1994 and 2000 a sharp decline was observed in the level of deprivation on each of the items

in the set. In 1994 the level of deprivation ranged from 4 per cent for "not having a substantial meal" to 18 per cent for "debt problems". The remaining items were in the range 5 per cent to 9 per cent. By 2000 the figure for "a substantial meal" was 1 per cent and for debt only 6 per cent. Six out of the eight items now were lacked by less than 2 per cent of sample households. This situation poses potentially serious problems for the continued use of the consistent poverty measure incorporating these basic deprivation items in the future. Given such low proportions doing without most of the items, distinguishing real change from random variation in survey results is likely to be extremely difficult. Further reductions in the numbers reporting basic deprivation are likely to depend largely on the debt item, the only one where significant numbers were still lacking in 2000. (By its nature, this item may itself adjust to changed expectations about what constitute "ordinary living expenses").

Table 7.1: Trend in Percentage Lacking Basic Deprivation Items

Item lacked	1994	1997	2000
Meal with meat, chicken or fish	5.0	1.9	1.0
Warm waterproof overcoat	7.0	3.2	0.9
Two pairs of strong shoes	8.2	5.2	1.0
Roast once a week	8.1	4.7	1.9
New not second hand clothes	9.6	7.7	3.3
No substantial meal in past two weeks	4.2	1.7	1.0
Without heating in past year	9.2	2.4	1.8
Debt Problems	17.9	10.3	5.6

In this light it would seem essential, while continuing to collect the data required to measure consistent poverty with the original set of deprivation items, to also develop an alternative measure encompassing a revised and expanded set of basic deprivation items for future monitoring purposes.[17] In order to be able to produce a consistent measure over time, we have up until now relied on items available since the original ESRI household survey in 1987. Looking forward from 2000, however, we can also now make use of additional items not available in that survey but included in the Living in Ireland Survey, and in the European Community Household Panel Study of which it forms part, since the first wave in 1994. (The ECHP surveys in other countries did not however include a number of items contained in the Irish version.) In attempting to develop an alternative basic deprivation index, we now focus on the set of items common to all ECHP countries, which has the considerable advantage that we can then make comparisons both across time and countries.

In pursuing this approach we focus on twenty-four deprivation items, and Table 7.2 shows the results of a factor analysis of these items in the 2000 Living in Ireland Survey. This reveals a clear pattern of five distinct dimensions, as follows;

- *Basic life-style deprivation* – comprising items such as food and clothing, a holiday at least once a year, replacing worn-out furniture and the experience of arrears for scheduled payments.

[17] Note that such data will in the future be collected by the CSO for the new survey called EU-SILC, which is to replace the ECHP.

- *Secondary life-style deprivation* – comprising items that are less likely to be considered essential such as a car, a phone, a colour television, a video a microwave and a dishwasher.
- *Housing facilities* – housing services such the availability of a bath or shower, an indoor flushing toilet and running water likely to be seen as essential.
- *Housing deterioration* – the existence of problems such as a leaking roof, dampness and rotting in window frames and floors.
- *Environmental problems* – problems relating to noise, pollution, vandalism and inadequate space and light.

This analysis corresponds to that presented in Chapter 6, but now with a somewhat different set of items, and despite that these dimensions prove to be remarkably similar to those identified earlier. The identification of five dimensions here compared with three earlier essentially reflects a differentiation within the housing dimension to distinguish three somewhat different types of deprivation – relating to facilities, structural problems, and environmental or community problems. There are also some minor differences in the allocation of items to dimensions, of which the most important is that of not being able to afford "a weeks annual holiday away from home" now loads on the basic dimension.

Rather remarkably, the same analysis for all the countries included in the ECHP reveals that this set of dimensions emerges in a close to uniform fashion across all those countries (see Whelan *et al.* 2001).

The extent of uniformity across European countries extends beyond the set of dimensions identified. In most countries the difference between those below versus above 60 per cent of median income in the percentage reporting enforced absence is most pronounced for the basic set, and least pronounced for the housing-related items. This confirms once again the importance of distinguishing between items rather than simply constructing a summary deprivation index across all available items, and the salience of the items in the basic set in particular.

Table 7.2: Factor Analysis Oblique Five-Factor Solution for Living in Ireland Survey, 2000

| | Components | | | | |
	Basic	Secondary	Housing Facilities	Housing Deterioration	Environment
Replacing any worn-out furniture	0.686				
A weeks annual holiday away from home	0.578				
Buying new, not second hand clothes	0.622				
Having friends or family for a meal once a month	0.649				
Keeping home adequately warm	0.390				
Meat, chicken or fish every second day	0.475				
In arrears on rent, utilities and Hire Purchase	0.356				
Microwave Oven		0.649			

Dishwasher	0.383		
Video Recorder	0.540		
Car	0.364		
Telephone	0.631		
Colour TV	0.230		
Bath or shower		0.883	
Indoor flushing toilet		0.892	
Hot running water		0.684	
Damp home			0.816
Rot in home			0.608
Leaking roof			0.600
Noise from neighbours			0.663
Pollution			0.612
Shortage of space			0.413
Not enough light			0.479
Vandalism			0.681

To bring out the relationship between the indicators now included in the "basic" set available in the ECHP and those in our original basic set available for Ireland back to 1987, Table 7.3 shows both sets. Of the seven items appearing in the "basic" dimension in the ECHP, two were also included in the basic set we have been using from the LII – namely "having a meal with meat etc" and "being able to afford new not second-hand clothes". Two others relate to areas also covered in our original set – namely heating and debt/arrears – but with different indicators. The other three are being able to replace any worn-out furniture, have friends or family for a meal once a month, and having a weeks annual holiday away from home. The items in the original set but not in the ECHP set, on the other hand, are being able to afford two pairs of shoes, a warm waterproof overcoat, and a roast or equivalent once a week.

Table 7.3: Basic Deprivation Items from LII and ECHP

LII Item	ECHP Item
Meal with meat, chicken or fish	Meal with meat, chicken or fish
New not second hand clothes	New not second hand clothes
Two pairs of strong shoes	
Roast once a week	
Warm waterproof overcoat	
No substantial meal in past two weeks	
Without heating in past year	Keeping home adequately warm
Experienced debt problems arising from ordinary living expenses	In arrears on rent, utilities and Hire Purchase
	Replacing any worn-out furniture
	A weeks annual holiday away from home
	Having friends or family for a meal once a month

7.3 Constructing Alternative Deprivation Indices

These results suggest that, in seeking a set of deprivation items suitable for monitoring poverty in Ireland (together with income) looking forward, the set of items identified as comprising what we have called "basic deprivation" by the factor analysis of the items in the ECHP represent serious candidates. It is, however, also important to also look closely at the behaviour of the individual items, to see the implications for the consistent poverty measure of the inclusion of a specific item. In Table 7.4 we show the trend over time in the extent of deprivation on each of the items loading on the basic deprivation identified employing the set contained in the ECHP.

Table 7.4: Trend in Percentage of Persons Lacking Alternative Basic Deprivation Items

Item lacked	1994 %	1997 %	2000 %
Meal with meat, chicken or fish	5.0	1.9	1.0
New not second hand clothes	9.6	7.7	3.0
Adequate heating	9.7	6.2	3.3
Arrears relating to mortgage payments or utility bills	19.5	11.7	6.6
Having friends or family for a meal or drink once a month	21.8	12.7	6.3
Replacing worn out furniture	33.4	20.8	13.6
A week's annual holiday away from home	45.5	35.0	25.3

We see first that there is very considerable variation across the items in the extent to which deprivation was reported in 1994. Thus for the two items included in the original deprivation index, "having a meal with meat etc" and "being able to afford new not second-hand clothes" the respective percentages were 5 per cent and 10 per cent. For the "adequate heating" item the percentage was also 10 per cent. For the other items the figures were very substantially higher. Almost one in five reported being unable "to have friends or family for a meal or drink once a month" and the same number was having problems with arrears. The figure rises to one in three for being able to "replace worn out furniture" and to almost one in two for being unable to afford "a weeks annual holiday away from home". Given the scale of reported deprivation on these four items in 1994 and the fact that there would not have been a widespread consensus that they constituted necessities, this set of items would certainly not have constituted a satisfactory alternative in constructing the "consistent poverty" measure from 1994 to date.

However, Table 7.4 shows that between 1994 and 2000 a substantial decline in deprivation was observed for each of these items. As we have already seen, for the original NAPS items reported deprivation fell respectively to 1 per cent and 3 per cent. Similarly, by 2000 the proportion without adequate heating fell to 3 per cent and that for arrears and being unable to entertain family or friends fell to 6 per cent. The figure for furniture now stood at 14 per cent and that for holidays at 25 per cent. As with the original set of basic deprivation items, the additional items included in the ECHP have been substantially affected by changing economic circumstances.

Taken together, the results of the factor analysis, the relationship of basic deprivation to income poverty in the ECHP, and the trends over

time for the original and alternative set of basic items, all suggest that with one exception the latter may constitute a satisfactory set of basic deprivation in monitoring and analysing poverty trends for some time into the future. The exception is the holiday item. With one-quarter reporting inability to afford this item, it has a deprivation rate almost twice that of any other items. As a consequence its incorporation in a consistent poverty measure would mean that the calculation of a poverty rate would be very significantly influenced by the outcome on this single item. This in itself is undesirable. In addition, the nature of the item itself is such that it might be more difficult to purge of the influence of taste factors than other items in the set. For example, there tend to be different habits as regards holidays among urban versus rural dwellers, and over the age range. We, therefore, focus here on an alternative consistent poverty which does not include the holiday item. (Corresponding results based on a revised set of items including the holiday item are available from the authors for purposes of comparison.)

Table 7.5 first reiterates that, with the proportion simply falling below 70 per cent of median income rather stable between 1994 and 2000, the percentage of persons below that income and experiencing basic deprivation with our original set of items fell from 14 per cent to 6 per cent. If we use the same income threshold but the alternative set of basic deprivation items produces somewhat higher figures but a similar trend, with a decline from 18 per cent to 10 per cent. This pattern of results suggest that, as these more extreme forms of deprivation effectively disappear, the alternative measure of basic deprivation that we have proposed could serve as an important monitoring tool in capturing the impact of social change on levels of deprivation.

Table 7.5: Trend in Percentage of Persons Meeting Income and Combined Income-Deprivation Poverty Criteria

	1994 %	1997 %	2000 %
Below 70% median income	26.7	29.0	28.2
Below 70% of median income and deprived with original basic set	14.5	10.7	5.5
Below 70% of median income and deprived with alternative basic set	18.3	15.5	10.5

**7.4
Socio-
Demographic
Profiles**

At this point we shift attention from levels to patterns of deprivation. What are the implications of the choice of deprivation items for the nature of the groups identified as being at risk? How do the profiles of groups falling below the different thresholds vary? In Table 7.6 we show for alternative measures the level of poverty risk by labour force status of the household reference person.

We see that the poverty rate for each group with the new set of deprivation items are in between those shown by the 70 per cent income threshold alone and the consistent poverty measure with the original set of basic items, but much closer to the latter. (The percentage poor with the alternative consistent poverty measure is generally about twice the original consistent poverty rate.) Thus while the risk rates differ the pattern is very similar irrespective of which of these sets of deprivation items one employs, and both measures are sharply distinguished from the income

line alone. The pattern of socio-economic differentials is thus much sharper with the alternative combined income-deprivation measures than the purely income based measure.

Table 7.6: Percentage of Persons Meeting Alternative Poverty Criteria by Labour Force Status of Household Reference Person

	Below 70% median Income	Below 70% median + original basic deprivation	Below 70% median + alternative deprivation items
Employee	11.5	2.7	4.4
Self-employed	23.9	1.8	4.3
Farmer	34.6	1.5	8.4
Unemployed	57.7	22.1	35.9
Ill/disabled	80.0	11.0	35.8
Retired	42.1	4.5	10.5
Home duties	53.5	14.5	23.4
All	28.2	5.5	10.5

Turning our attention to risk by household type, Table 7.7 again shows the alternative consistent poverty measures occupying an intermediate position between the income threshold alone and consistent poverty with the original set of basic items. Compared with that original set, the alternative deprivation set shows a smaller gap between one adult with children households and others, although that group continue to display the highest rate by some distance. On the other hand, two-adult only households do not do as well relative to other types as they did with the original set.

Table 7.7: Percentage of Persons Meeting Alternative Poverty Criteria by Household Type

	Below 70% median Income	Below 70% median + original basic deprivation	Below 70% median + alternative deprivation set
1 adult	54.1	11.2	22.6
2 adults	32.8	3.6	11.6
3 or more adults	12.1	1.0	3.4
2 adults, 1 child	20.5	4.1	9.2
2 adults, 2 children	22.7	2.5	4.1
2 adults, 3 children	23.5	5.6	9.2
2 adults, 4 or more children	57.2	16.2	27.5
1 adult with children	57.9	25.8	40.5
3 or more adults with children	22.0	3.7	5.3
All	28.2	5.5	10.5

Categorising households in terms of age/presence of children, Table 7.8 shows that both the consistent poverty measures suggest relatively modest variation across these categories. In contrast, relying on an income threshold alone suggests a sharp increase in poverty risk as one moves from households where the reference person is aged under 65 with no children to those with children, and then to those aged sixty-five or over.

Table 7.8: Percentage of Persons Meeting Alternative Poverty Criteria by Presence of Children and Age of Household Reference Person

	Below 70% median Income	Below 70% median + original basic deprivation	Below 70% median + alternative deprivation
Aged < 65 No Children	17.6	3.2	8.0

Aged <65 with Children	28.5	6.7	11.0
Aged 65+	43.8	4.9	12.7

**7.5
Validity
Assessment**

To see how well the alternative income-deprivation measure performs, we can look as before at whether those it identifies as poor appear to be exposed to a high degree of subjectively-assessed economic stain and psychological distress. We carry out this exercise first excluding the "holiday" item from the alternative set, and then including it. In Table 7.9 we distinguish four groups:

- Those consistently poor at 70 per cent of median income employing the original set of basic items.
- Those consistently poor with the same income threshold but the alternative set of deprivation items, excluding the holiday item.
- Those identified as consistently poor by the alternative set (excluding holiday) but not the original set of indicators.
- Those not identified as consistently poor when either set of indicators is employed.

For each group we report the percentage of household reference persons.

1. experiencing "great difficulty" in making ends meet,
2. experiencing "great difficulty" or "difficulty" in making ends meet,
3. "not at all satisfied with their financial situation",
4. above the General Health Questionnaire (GHQ) threshold for psychological distress.

We see from the table that one in three of those consistently poor employing the original set of basic items are experiencing great difficulty in making ends meet. This falls to one in four when the alternative set is used instead. Since there is obviously an overlap between these two groups – some are consistently poor by both – we then look separately at those who are consistently poor with the alternative but not the original set. One in seven are experiencing great difficulty in making ends meet. While this is a good deal lower that those consistently poor with the original set, it is much higher than those who are not consistently poor with either set of indicators.

If we broaden the definition of economic strain to encompass those households reporting "difficulty" as well as "great difficulty" making ends meet, we find over 60 per cent of the consistently poor with the original set report such strain, compared to 50 per cent of the consistently poor with the alternative set of items. Over one in three of those who are drawn into the consistently poor by use of the alternative set report such strain, compared with only one in ten of those who are not consistently poor with either set.

When we look at the percentage "not at all satisfied with their financial situation", there is much less variation across the groups identified as consistently poor with the original versus alternative set. However, there is still a very wide gap between them and those not identified as poor by either set. Similarly, the numbers reporting psychological distress are identical irrespective of which of the sets of deprivation indicators one employs, and these are much higher than for those not identified as poor by   either   set.

Table 7.9: Economic and Psychological Strain by Alternative Poverty Criteria

	Consistently Poor with original basic set	Consistently Poor with alternative basic set (incl. holidays)	Added to Consistently Poor	Not Consistently Poor with either set
% Great difficulty in making ends meet	33.9	24.4	13.9	2.2
% Great difficulty or difficulty in making ends meet	62.8	50.5	35.4	9.2
% Not satisfied at all with economic situation	38.1	34.1	29.1	5.6
% Above GHQ threshold	32.7	32.4	29.4	14.6

7.6 Conclusions

We saw in the previous chapter that the consistent poverty measure using a set of basic deprivation items unchanged since 1987 has performed well in terms of such criteria as the stability of the structure of deprivation, the behaviour of the indices over time in comparison with purely income based lines, and the capacity to identify distinctively disadvantaged groups. However, as a consequence of the unprecedented economic growth seen in the second half of the 1990s, the level of deprivation on some of these indicators has become very low by 2000. In this chapter we have sought to address the implications for the monitoring of poverty into the future.

It has been clear from the outset that the specific items employed in the consistent poverty measure would need to be revised at some point in light of changing expectations and perceptions as general living standards rose. In the analysis presented in this chapter we have taken advantage of the fact that since 1994 a common set of deprivation questions has been employed in the European countries covered by the ECHP. An analysis of these items showed – surprisingly – that a common set of dimensions of deprivation or grouping of items emerged across this broad range of European counties. In each case, income poverty was most closely associated with the dimension closest to the basic deprivation identified in our earlier analysis for Ireland, but in the ECHP is now captured by a somewhat different set of items.

We then employed this ECHP set of basic items, excluding one relating to holidays, to construct an alternative measure of basic deprivation and of consistent poverty for Ireland. We saw first that the trend over time since 1994 was broadly in line with our original basic deprivation index and consistent poverty measure, although the impact of economic change was sharper for the more extreme forms of deprivation incorporated in the original set. The number of persons in consistent poverty in 2000 was almost twice the corresponding figure with the original basic set. An analysis of the distribution of poverty risk by socio-demographic group showed that the alternative measure behaved very much like the original consistent poverty measure and contrasted sharply with measures based on income thresholds alone. In terms of levels of self-reported economic strain and psychological distress, the group identified as consistently poor

by the alternative measure are sharply differentiated from the rest of the sample, though less so than the original consistently poor group.

In the light of the potential difficulties with use of the original set of basic items, it would now be appropriate to expand the range of monitoring tools to include alternative poverty measures incorporating income and deprivation along the lines developed here. This clearly has implications for the approach adopted in monitoring the National Anti-Poverty Strategy. The global poverty reduction target set as part of that strategy has from the outset been framed in terms of the consistent poverty measure. The recent *Review* of the strategy set a new key target in those terms for the period up to 2007, in the following terms:

"A key target in this Strategy is to reduce the numbers who are "consistently poor" below 2 per cent and, if possible, eliminate consistent poverty, under the current definition of consistent poverty".

We have highlighted in previous publications the limitations of a targeting approach that relies entirely on the consistent poverty measure. Instead, we have argued for a broader focus, incorporating reductions in deprivation, falling consistent poverty, and over time a decline in the numbers below relative income thresholds (see for example Layte *et al.,* 2000; Nolan, 2000). One could, for example, think in terms of a set of tiered and inter-related poverty reduction targets along the following lines:

(a)   Priority is given to ensuring that those on low incomes see their real incomes rise, and their deprivation levels using a fixed set of indicators decline;

(b)   Next, relative incomes and deprivation levels using a set of deprivation indicators which changes as far as possible in line with expectations should produce a decline in the combined income/deprivation measure;

(c)   Finally, the proportion of the population falling below relative income poverty lines should be declining.

Each of these tiers can be regarded as encapsulating a necessary but not sufficient condition for a sustainable reduction in poverty.

It is worth noting in this context that the recent *Review* states that "progress in relation to the proportion of the population falling below relative income lines, particularly for a sustained period, will be monitored over the lifetime of the Strategy and in line with the indicators agreed in the EU Joint Report on Social Inclusion". As far as the consistent poverty target is concerned, however, levels of deprivation for some of the items included in the original basic set are so low by 2000 that further progress will be difficult to capture empirically. Arriving at a point where there was little or no deprivation in terms of those specific items, though a remarkable and very welcome achievement in a short space of time, could not in any case be simply taken to represent the elimination of poverty, because of the way poverty itself can be reconstituted in terms of new and emerging social needs in a context of higher societal living standards and expectations. (This does not mean that poverty can never be eliminated or indeed reduced: it does however mean that this is unlikely to be achieved by economic growth alone, even if those towards the bottom benefit from that growth.) The implication for current purposes is that poverty monitoring over the period to 2007 would more usefully take a broader focus than the consistent poverty measure as constructed to date, with

attention paid to both relative income and consistent poverty with the amended set of indicators identified here.

APPENDIX 1

IMPACT OF ATTRITION OF SAMPLE STRUCTURE

This appendix treats in more depth issues discussed in Chapter 2 above in relation to sample attrition and sample weights for the Living in Ireland Survey. Appendix Tables A1.1 and A1.2 show the Wave 1 (1994) characteristics of all individuals in completed Wave 1 households, and of the subset of these that were still in completed households in Wave 7. The data are unweighted, and individuals who were out of scope by Wave 7 are not included.

The impact of attrition on the sample distribution can be seen by comparing columns B and D and the ratio of B to D (the "weight") is shown in the final column. This weight represents the average amount by which the cases in the Wave 7 completed sample would need to be weighted to restore the sample distribution to that pertaining at Wave 1.

Appendix Table A1.1: Characteristics of All Individuals in the Wave 1 Sample and of the Subset of These in Completed Wave 7 Households (unweighted, excluding those out of scope by Wave 7)

	All Individuals in Wave 1		Individuals in Wave 7		Weight
	A	B	C	D	E
	(N cases)	(%)	(N cases)	(% cases)	(B/D)
	13,910	100	5,530	100	1.0
Number of adults in household					
One Adult	698	5	292	5	1.0
2-Adult	6,494	47	2,886	52	0.9
3-Adult	2,733	20	992	18	1.1
4-Adult	2,333	17	830	15	1.1
5-Adult or over	1,652	12	530	10	1.2
Location					
Dublin	3,284	24	1,347	24	1.0
Other Urban	4,007	29	1,337	24	1.2
Rural	6,619	48	2,846	51	0.9
Number at work in household					
No-one at work	2,519	18	1,155	21	0.9
One at work	5,096	37	2,067	37	1.0
2+ at Work	6,295	45	2,308	42	1.1
Housing Tenure					
Owner	11,990	86	4,769	86	1.0
Rent-Local authority	1,356	10	597	11	0.9
Rent-other	430	3	117	2	1.5
Other	134	1	47	1	1.1
Whether changed address since W1					
Changed address	2,541	18	787	14	1.3
Same address	11,369	82	4,743	86	1.0
Equivalised H'hold Income Decile (Scale A)					
Bottom Decile	1,562	11	695	13	0.9
2	746	5	332	6	0.9
3	994	7	464	8	0.9
4	1,211	9	468	8	1.0
5	1,494	11	573	10	1.0
6	1,897	14	719	13	1.0
7	1,730	12	655	12	1.1
8	1,709	12	677	12	1.0
9	1,387	10	508	9	1.1
Top decile	1,180	8	439	8	1.1
Poverty (50% mean, scale A)					
Not poor	11,639	84	4,523	82	1.0
Poor	2,271	16	1,007	18	0.9

Appendix Table A1.2: Characteristics of All Individuals in the Wave 1 Sample and of the Subset of These in Completed Wave 7 Households (unweighted, excluding those out of scope by Wave 7)

	All Individuals in Wave 1		Wave 1 Individuals in Wave 7		Weight
	A	B	C	D	E
	(N cases)	(%)	(N cases)	(% cases)	(B/D)
Females by Age					
15 and under	1,945	14	841	15	0.9
Age 16-24	1,153	8	297	5	1.5
Age 25-44	1,769	13	716	13	1.0
Age 45-64	1,465	11	643	12	0.9
Age 65+	608	4	274	5	0.9
Males by Age					
15 and under	1,964	14	880	16	0.9
Age 16-24	1,274	9	343	6	1.5
Age 25-44	1,785	13	695	13	1.0
Age 45-64	1,435	10	601	11	0.9
Age 65+	512	4	240	4	0.8
Females-marital status					
Under 30, single	1,484	11	396	7	1.5
Other single	290	2	104	2	1.1
Married	2,839	20	1,254	23	0.9
Widowed/divorced/separated	525	4	224	4	0.9
Males-marital status					
Under 30, single	1,728	12	491	9	1.4
Other single	518	4	206	4	1.0
Married	2,765	20	1,184	21	0.9
Widowed/divorced/separated	142	1	58	1	1.0
Females Labour Force Status					
At work (ILO)	1,859	13	632	11	1.2
Unemployed (ILO)	257	2	89	2	1.1
In education	584	4	163	3	1.4
Other	2,438	18	1,094	20	0.9
Males-Labour Force Status					
At work (ILO)	3,312	24	1,239	22	1.1
Unemployed (ILO)	465	3	158	3	1.2
In education	605	4	205	4	1.2
Other	771	6	337	6	0.9
Social Welfare recipient					
UA or UB	880	6	330	6	1.1
Old age-related payment	664	5	312	6	0.8
Widow(er) payment	249	2	115	2	0.9
Disability-related payment	337	2	155	3	0.9

Development of Sample Weights

The household weights were developed in a number of steps. The first step involved adjusting the continuing sample for attrition. The second step was to adjust the new sample for the known design effect associated with RANSAM. The final step was to combine the continuing sample and the new sample and adjust against external controls. The details of the weighting process are outlined below.

ADJUSTMENT FOR ATTRITION: THE ATTRITION WEIGHT

- The first step was to derive weights to control for any bias due to sample attrition at the household level between waves of the survey. The household weights from the previous wave were carried forward for the continuing sample, and then adjusted for any pattern of attrition in that wave. In constructing the Wave 7 weights, for instance, the Wave 6 household weight was carried forward to the Wave 7 sample. The characteristics of all Wave 7 households (including the newly-generated households)[18] were compared to those of all completed Wave 7 households.[19] The household characteristics examined were:
- Household size (total number of persons, number over 18 and number over 65).
- Number of persons at work.
- Urban/Rural Location (3 categories).
- Whether household moved since last wave.
- Whether household is newly generated.
- Wave 1 Poverty Status of the household.
- Number of males and females by 11 age groups.
- Number of males and females age 15 and over by 11 age/marital status categories.
- Number of males and females age 15 and over by 9 principal economic status categories.
- Number of males and females age 15 and over by 5 socio- economic groups.
- Number of males and females age 15 and over by 4 levels of education.
- Number of recipients of the 12 main social welfare benefits.

The following characteristics of the household head[20]:
- Sex.
- Age group (6 categories).

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[18] Newly-generated households are households formed when a sample person from the previous wave moves out and either sets up a new household or joins a non-sample household. Note that for re-weighting purposes we included households that would not have been eligible for inclusion in Wave 7 – either because the household members died, moved to an institution or moved outside the EU.

[19] Since no information was available on the Wave 7 characteristics of non-completed households, the Wave 6 characteristics were used. In the case of newly-generated households, the Wave 6 characteristics of the household the individual(s) moved from were used.

[20] The "household head" is the person responsible for the accommodation, or the male partner in households where the couple is jointly responsible.

- Marital status (4 categories).
- Principal economic status (8 categories).
- Socio-economic group (13 categories).

In general, as we saw above in the general discussion of attrition, the distribution of the characteristics examined was very similar for the responding and non-responding Wave 7 households. Although the sample attrition rate is higher than we would like, there is certainly no indication any selectivity in the attrition is having a notable impact on the distribution of the major correlates of household income and poverty status.

The adjustment for sample attrition involved adjusting the Wave 6 household weights so that the distribution of each of the characteristics for the responding Wave 7 households was equal to the distribution of these characteristics for the total sample (responding and non-responding households). The Gross program written by Johanna Gomulka was used. This program uses a minimum distance algorithm to adjust an initial weight so that the distribution of characteristics in a sample matches that of a set of control totals. In the present case, the initial weight was the household weight from Wave 6 and the totals for all households (responding and non-responding, with the Wave 6 weight applied) were used as the control totals.

ADJUSTING THE NEW SAMPLE FOR THE DESIGN EFFECT: THE DESIGN WEIGHT

The new sample of households added in 2000 was not subject to attrition, but an adjustment was needed for the known design effect associated with RANSAM samples. A sample selected from the Electoral Registers will provide a reasonably self-weighting sample of adults. However, households with a larger number of electors are more likely to be selected. In other words, the probability of selection for households is proportional to the number of registered voters in the household. The control for this design effect involved weighting the households by the inverse of the number of household members age 18 and over. In the case of the continuing sample, this design effect is also present since the initial sample in Wave 1 was selected using the same RANSAM procedure. However, since the attrition weight carried forward the household weight from previous waves an adjustment for the design effect is already included.

EXTERNAL CONTROLS: THE FINAL HOUSEHOLD WEIGHT

The final step in constructing the household weights for the 2000 data involved combining the continuing and new samples and adjusting the weight so as to reflect the population distribution of a number of key characteristics. The initial weight at this stage was taken as the attrition weight from the first step for the continuing sample households; and as the design weight from the second step for the new sample households.

The external population figures were taken from the fourth quarter of the 2000 Quarterly National Household Survey (QNHS), the Department of Social Community and Family Affairs (DSCFA) published statistics on

social welfare recipiency levels, and figures from Teagasc on the total number of farms in each size category. At this stage we compared the current characteristics of the completed Wave 7 sample to those of the population in private households, as shown in external sources. The external controls were as follows:

Household characteristics:

- Household size (total size, number over 18 and number over 65).
- Location (Dublin, other county borough, rural).
- Number of persons at work (0, 1 and 2 or more).
- Head Age (under 25, age 25 and over).
- Number of farms in each of six size categories.

Individual characteristics

- Number of males and females by 10 age categories.
- Number of males and females age 15+ by 11 age/marital status categories.
- Number of recipients of 12 major social welfare payments.
- Number of males and females by 7 economic status categories (at work (ILO), unemployed (ILO), Unemployed (not ILO), Student, home duties, retired, other).
- Number of males and females age 20-64 by level of education (4 categories).

The initial weight (design weight for the new sample, attrition weight for the continuing sample) was adjusted to these external population totals using the Gross programme. The weights were constrained to the range from .125 of the average weight to 8 times the average weight, in order to avoid placing too much reliance on the representativeness of a small number of observations. Nevertheless, as shown in Tables A1.3 to A1.5, the resulting match between the weighted sample characteristics and the population characteristics used as controls was highly satisfactory, indicating that extreme weights were not required to achieve this adjustment.

Apart from incorporating weights to control for attrition from previous waves, and the availability of new technology in the form of the Gross programme, the logic and general strategy in developing the weights for Waves 2 to 7 was very similar to that used in Wave 1. Carrying forward the weights from the previous waves meant that little further adjustment was needed in Waves 2-7 for the distribution of characteristics such as household size or farm size, except insofar as these were associated with attrition or the effects of including newly-generated households in the sample.

Appendix Table A1.3: Population Totals, Unweighted Sample Totals in 2000 and Weighted Sample Totals: Household Characteristics

		A	B	C	D	E	F	G	H
		Population Totals		Unweighted Sample Totals			Weighted Sample Totals		
		N	%	N	%	(D-B)	N	%	(G-B)
Total House-holds		1,287,152	100.0	1,287,152	100.0	0.0	1,287,152	100.0	0.0
Household Size	One person	284,934	22.1	202,707	15.7	-6.4	284,823	22.1	0.0
	2-person	325,738	25.3	306,288	23.8	-1.5	323,950	25.2	-0.1

	3-person	216,826	16.8	213,102	16.6	-0.3	217,010	16.9	0.0
	4-person	229,027	17.8	244,288	19.0	1.2	229,917	17.9	0.1
	5+ persons	230,627	17.9	320,767	24.9	7.0	231,452	18.0	0.1
N Over 18	One Adult	344,626	26.8	233,893	18.2	-8.6	343,920	26.7	-0.1
	2-Adult	621,100	48.3	607,378	47.2	-1.1	619,224	48.1	-0.1
	3-Adult	186,846	14.5	229,066	17.8	3.3	187,280	14.5	0.0
	4-Adult	91,998	7.1	137,737	10.7	3.6	92,633	7.2	0.0
	5-Adult	31,934	2.5	56,802	4.4	1.9	33,448	2.6	0.1
	6+adult	10,648	0.8	22,275	1.7	0.9	10,648	0.8	0.0
Location	Dublin	388,197	30.2	279,929	21.7	-8.4	387,848	30.1	0.0
	Other Urban	391,937	30.4	357,522	27.8	-2.7	392,347	30.5	0.0
	Rural	507,018	39.4	649,702	50.5	11.1	506,957	39.4	0.0
N At work	No-one at work	350,443	27.2	331,905	25.8	-1.4	349,283	27.1	-0.1
	One at work	414,254	32.2	384,252	29.9	-2.3	414,897	32.2	0.0
	2+ at Work	522,455	40.6	570,995	44.4	3.8	522,972	40.6	0.0
N. over age 65	One or more	333,475	25.9	384,623	29.9	4.0	332,890	25.9	0.0
	None	953,677	74.1	902,529	70.1	-4.0	954,263	74.1	0.0
Head Age	Under 25	68,670	5.3	17,078	1.3	-4.0	66,557	5.2	-0.2
	Over 25	1,218,482	94.7	1,270,074	98.7	4.0	1,220,595	94.8	0.2
Farm Size	1- 9 ha.	28,540	19.9	19,677	11.1	-8.8	29,248	20.2	0.3
	10-19 ha.	38,619	26.9	45,293	25.5	-1.4	38,435	26.5	-0.4
	20-29ha.	28,441	19.8	38,240	21.5	1.7	28,320	19.5	-0.3
	30-49ha.	27,842	19.4	43,066	24.2	4.8	27,077	18.7	-0.7
	50-99ha	16,266	11.3	26,359	14.8	3.5	17,302	11.9	0.6
	100+ ha.	3,992	2.8	5,198	2.9	0.1	4,593	3.2	0.4

Appendix Table A1.4: Population Totals, Unweighted Sample Totals in 2000 and Weighted Sample Totals: Individual Demographic Characteristics

		A	B	C	D	E	F	G	H
		Population Totals		Unweighted Sample Totals			Weighted Sample Totals		
		N	%	N	%	(D-B)	N	%	(G-B)
Females by Age	15 and under	433,878	11.3	466,671	11.0	-0.4	434,578	11.3	0.0
	16-19	129,493	3.4	171,893	4.0	0.7	129,886	3.4	0.0
	20-24	167,391	4.4	168,551	4.0	-0.4	166,691	4.3	0.0
	25-34	290,385	7.6	249,485	5.9	-1.7	289,362	7.5	0.0
	35-44	268,586	7.0	281,414	6.6	-0.4	269,003	7.0	0.0
	45-54	231,888	6.1	274,731	6.5	0.4	232,352	6.1	0.0
	55-59	88,695	2.3	127,342	3.0	0.7	89,092	2.3	0.0
	60-64	74,696	2.0	93,557	2.2	0.2	74,994	2.0	0.0
	65-69	65,997	1.7	85,761	2.0	0.3	66,196	1.7	0.0

		176,591	4.6	189,713	4.5	-0.1	176,521	4.6	0.0
	70+								
Males by Age	15 and under	457,300	11.9	497,486	11.7	-0.2	458,896	12.0	0.0
	16-19	136,100	3.6	182,659	4.3	0.7	136,060	3.5	0.0
	20-24	168,300	4.4	194,539	4.6	0.2	167,430	4.4	0.0
	25-34	293,700	7.7	269,162	6.3	-1.3	293,964	7.7	0.0
	35-44	261,600	6.8	264,336	6.2	-0.6	262,575	6.9	0.0
	45-54	233,800	6.1	269,533	6.3	0.2	234,021	6.1	0.0
	55-59	90,800	2.4	113,234	2.7	0.3	90,694	2.4	0.0
	60-64	74,300	1.9	103,581	2.4	0.5	74,647	1.9	0.0
	65-69	62,800	1.6	80,934	1.9	0.3	63,063	1.6	0.0
	70+	122,200	3.2	166,324	3.9	0.7	122,743	3.2	0.0
Females, Age & Marital status	Under 30, Married	48,303	1.6	41,210	1.2	-0.4	47,208	1.6	0.0
	Under 30, Single	431,528	14.4	472,240	14.0	-0.3	435,339	14.5	0.1
	30-44, Married	289,119	9.6	300,719	8.9	-0.7	289,344	9.6	0.0
	30-44, Single	85,006	2.8	72,767	2.2	-0.7	87,663	2.9	0.1
	45-64, Married	306,120	10.2	405,043	12.0	1.9	300,232	10.0	-0.2
	45-64, Single	32,302	1.1	28,216	0.8	-0.2	32,387	1.1	0.0
	Under 65, Widowed	32,302	1.1	35,641	1.1	0.0	32,927	1.1	0.0
	65+, Married	88,306	2.9	129,940	3.9	0.9	89,762	3.0	0.0
	65+, Single	30,902	1.0	21,904	0.7	-0.4	31,786	1.1	0.0
	65+, Widowed	120,508	4.0	120,659	3.6	-0.4	118,217	3.9	-0.1
	Divorced/Separated	61,604	2.1	54,204	1.6	-0.4	61,630	2.1	0.0
Males, Age and Marital Status	Under 30, Married	28,400	0.9	21,162	0.6	-0.3	27,053	0.9	0.0
	Under 30, Single	466,700	15.5	536,468	16.0	0.4	470,632	15.7	0.1
	30-44, Married	269,800	9.0	270,647	8.0	-0.9	271,145	9.0	0.0
	30-44, Single	113,500	3.8	110,264	3.3	-0.5	112,492	3.7	0.0
	45-64, Married	314,000	10.5	408,755	12.2	1.7	311,596	10.4	-0.1
	45-64, Single	56,200	1.9	54,575	1.6	-0.2	57,529	1.9	0.0
	Under 65, Widowed	11,100	0.4	9,281	0.3	-0.1	9,596	0.3	-0.1
	65+, Married	117,200	3.9	177,090	5.3	1.4	118,385	3.9	0.0
	65+, Single	36,200	1.2	38,240	1.1	-0.1	36,126	1.2	0.0
	65+, Widowed	28,200	0.9	29,329	0.9	-0.1	27,927	0.9	0.0
	Divorced/Separated	36,300	1.2	24,503	0.7	-0.5	36,843	1.2	0.0

Appendix Table A1.5: Population Totals, Unweighted Sample Totals in 2000 and Weighted Sample Totals: Individual Socio-Economic Characteristics

		A	B	C	D	E	F	G	H
		Population Totals		Unweighted Sample Totals			Weighted Sample Totals		
		N	%	N	%	(D-B)	N	%	(G-B)
Social Welfare (as Per Cent of Pop. age 15+)	Unemp. Assist	77,555	2.6	87,617	2.6	0.0	78,218	2.6	0.0
	Unemp Benefit	56,565	1.9	46,036	1.4	-0.5	56,633	1.9	0.0
	OAP-Contrib/ Retirement Pension	164,587	5.5	170,779	5.1	-0.4	166,800	5.5	0.1
	OAP-Non. Contrib.	90,652	3.0	165,210	4.9	1.9	92,958	3.1	0.1
	Pre-Retir Allow	12,521	0.4	12,994	0.4	0.0	12,577	0.4	0.0
	Widow-Contrib	100,374	3.3	49,006	1.5	-1.9	93,616	3.1	-0.2
	Widow Non-Contrib	17,376	0.6	19,677	0.6	0.0	18,146	0.6	0.0
	Lone Parent	74,119	2.5	47,150	1.4	-1.1	69,143	2.3	-0.2

	Carer's Allow	16,478	0.5	12,994	0.4	-0.2	15,127	0.5	0.0
	Disability Benefit	47,428	1.6	59,773	1.8	0.2	48,894	1.6	0.0
	Invalidity Pension	48,663	1.6	49,006	1.5	-0.2	47,675	1.6	0.0
	DPMA	54,303	1.8	27,102	0.8	-1.0	52,914	1.8	0.0
N Females by ILO/PES	At work, ILO	702,900	23.4	745,115	22.2	-1.2	702,709	23.4	0.0
	Unemployed, ILO	27,400	0.9	36,012	1.1	0.2	27,339	0.9	0.0
	Unemployed, not ILO	17,000	0.6	13,365	0.4	-0.2	16,994	0.6	0.0
	Student	158,400	5.3	191,569	5.7	0.4	159,765	5.3	0.0
	Home Duties	531,000	17.7	570,995	17.0	-0.7	533,291	17.7	0.1
	Retired	60,100	2.0	99,126	2.9	0.9	58,155	1.9	-0.1
	Other/Ill disabled	29,200	1.0	26,359	0.8	-0.2	28,242	0.9	0.0
N Males by ILO/PES	At work, ILO	1,007,400	33.5	1,133,451	33.7	0.2	1,009,822	33.6	0.1
	Unemployed, ILO	41,400	1.4	49,749	1.5	0.1	41,659	1.4	0.0
	Unemployed, not ILO	31,100	1.0	30,443	0.9	-0.1	29,384	1.0	-0.1
	Student	143,600	4.8	170,036	5.1	0.3	144,522	4.8	0.0
	Home Duties	7,100	0.2	6,683	0.2	0.0	8,357	0.3	0.0
	Retired	188,600	6.3	246,515	7.3	1.1	186,698	6.2	-0.1
	Other /Ill disabled	58,400	1.9	43,437	1.3	-0.7	58,883	2.0	0.0
Females 20-64 by education	No exams	211,738	9.4	251,342	10.4	1.0	212,611	9.5	0.0
	Lower secondary	209,600	9.3	256,911	10.7	1.3	211,111	9.4	0.1
	Upper secondary	414,855	18.5	429,546	17.8	-0.7	413,832	18.4	-0.1
	Third Level	285,448	12.7	257,282	10.7	-2.0	283,940	12.6	-0.1
Males 20-64 by education	No exams	237,937	10.6	304,803	12.7	2.0	242,241	10.8	0.2
	Lower secondary	332,019	14.8	304,060	12.6	-2.2	329,151	14.7	-0.1
	Upper secondary	306,286	13.6	350,839	14.6	0.9	302,159	13.5	-0.2
	Third Level	246,258	11.0	254,683	10.6	-0.4	249,780	11.1	0.2

APPENDIX 2

Confirmatory Factor Analysis

As discussed in Chapter 6, it was important to test statistically whether the factor structure of lifestyle/deprivation items in 2000 is unchanged from previous years. To do this we carried out what is termed a "confirmatory" factor analysis. This is very similar to the exploratory analysis presented in Chapter 6, except that instead of allowing the covariance structure to dictate the appropriate loadings of the deprivation items on the dimensions, we specify the relationships and using diagnostic tests of statistical "fit" to judge which factor structure is best. More formally we test whether our null hypothesis that the factor structures in 1994 and 2000 are different is false. We show the results from this analysis in Table A2.1, which gives model fits for oblique and orthogonal models which are forced to be equal across the years (constrained) or are allowed to vary (unconstrained). Oblique models are those where the dimensions (basic, secondary & housing) are allowed to be correlated, whereas an orthogonal model calculates the model fit without correlation. If the constrained model is as good, or a better fit than the unconstrained model then we have confirmation that the factor structure in 2000 is largely unchanged from that in 1994.

Table A2.1: Unconstrained and Constrained Oblique and Orthogonal Three-Factor Deprivation Solutions, 2000 Living in Ireland Survey

Model	X^2	Df	RMSEA	AGFI	NFI	PGFI	CFI
Orthogonal							
Unconstrained	9,878.093	460	0.055	0.861	0.711	0.737	0.720
Constrained	9,188.678	230	0.076	0.870	0.737	0.743	0.742
Oblique							
Unconstrained	7,159.987	454	0.047	0.891	0.791	0.749	0.801
Constrained	6,039.821	227	0.062	0.906	0.827	0.759	0.832

The table shows that on all the measures apart from the RMSEA (lower values are better on the RMSEA test, whereas higher values are better on the rest), the constrained model performs better than the unconstrained model, and even on the RMSEA, the constrained model would still be classed as having a "good" fit, the test value being lower than 0.1.

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