national anti-poverty strategy

MONITORING

Poverty *Trends*

Tim Callan, Richard Layte, Brian Nolan, Dorothy Watson, Christopher T. Whelan, James Williams & Bertrand Maître

Data from the 1997 **Living in Ireland** Survey conducted by
The Economic and Social Research Institute

ESRI

The Department of Social, Community and Family Affairs

Combat Poverty Agency
working for the prevention
and elimination of poverty

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Poverty
Trends

Data from the 1997 Living in Ireland Survey

Research commissioned by the Department of Social, Community and Family Affairs and the Combat Poverty Agency and undertaken by the ESRI

June 1999

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Executive Summary

The Purpose of the Study

The National Anti-Poverty Strategy set out a number of goals to be achieved over the decade to 2007. Chief among these explicit objectives was the global poverty reduction target. This target is framed in terms of a measure of poverty incorporating both low income and deprivation in terms of what are widely regarded as basic necessities, developed at the ESRI. When the Strategy was initiated, the extent of poverty taken as the baseline for the target was taken from the 1994 Living in Ireland Survey. The present study for the NAPS Inter-Departmental Policy Committee seeks to provide an updated picture of trends in poverty since 1994, using results from the 1997 round of the Living in Ireland Survey.

The Data

The Living in Ireland survey is the Irish element of the European Community Household Panel, and is carried out by the ESRI. Panel surveys follow a large random sample of households through time, so the original 1994 sample has been sought out for re-interview in each year since then. The sample for 1997 analysed in this report comprises the fourth wave of the panel. While a number of households have dropped out of the sample over that period, poor households have not been more likely to do so than others.

Poverty Rates with Relative Income Poverty Lines

The percentage of persons or households below income poverty lines calculated as proportions of average income was generally higher in 1997 than in 1994. About one in five persons fell below half average income in 1997. Poverty measures also taking into account how far the incomes of the poor fall below the poverty line rose sharply between 1994 and 1997, having declined between 1987 and 1994. The numbers below a "fixed" poverty line, set at 60 per cent of average income in 1987 and up-rated in line with prices rather than average incomes since then, declined sharply between 1994 and 1997.

Who Falls Below Relative Income Poverty Lines?

Between 1994 and 1997 the risk of being below half average income rose rapidly for single person households, notably where the head is aged 65 or over, and fell for some types of households with children. The risk of relative income poverty remained very high for households headed by an unemployed person, but the numbers in that situation declined as the unemployment rate fell sharply. The risk of relative income poverty fell for children at both the 50% and 60% lines while that for adults increased, so there was a significant narrowing in the gap between their poverty risks.

Poverty Using Income and Non-monetary Indicators

The 1997 Living in Ireland Survey reveals significant reductions in levels of deprivation since 1994. The percentage both experiencing basic deprivation and below the 60% relative income poverty line has fallen from 15% to 10% between 1994 and 1997 - having fallen only marginally, from 16% to 15%, between 1987 and 1994. The percentage below the 50% relative income line and experiencing basic deprivation has also fallen, though less sharply, from about 9% to 7%. Since the global poverty target adopted in the NAPS has been framed in terms of these measures of poverty, these results are of central importance

Does an unchanged set of basic deprivation indicators continue to adequately capture what is regarded as generalised deprivation as living standards rise? Views about what items are necessities were sought in the 1997 survey, as in 1987 (though not 1994). Expectations in fact adjusted rapidly to the increase in numbers possessing various items, with central heating, a telephone, a car, a colour TV and presents for friends and families once a year coming to be perceived as necessities by a majority between 1987 and 1997. However, the way the deprivation indicators clustered together was remarkably similar in 1987 and 1997, suggesting that in the combined income and deprivation poverty measure we should restrict ourselves to the original basic deprivation items.

Households which would come to be included among the poor by broadening the basic deprivation index are little different from the non-poor in terms of level of (self-assessed) economic strain, psychological distress and fatalism. The households counted as poor by the original basic deprivation and income poverty criteria, on the other hand, have distinctively high levels of economic strain, psychological distress and fatalism. This provides some reassurance that the original set of basic items is more successful in capturing generalised deprivation than an expanded set would be at this point.

Going beyond the basic items, other forms of deprivation fell for the shrinking group falling below the 60% line and experiencing basic deprivation between 1987 and 1997. However, they fell much more rapidly for non-poor households, so the disparity between poor and non-poor households in those terms increased dramatically.

Results from a Microsimulation Approach

These results from the 1997 Living in Ireland Survey were supplemented with some projections from the base of the 1994 data using the tax/benefit simulation model SWITCH. This allowed us to look out to 2001, to see what the implications of following current policies might be for the extent of relative income poverty. (While incomes can be projected forward using this approach, non-monetary deprivation indicators cannot.) The results suggest that following current tax/welfare policies, the percentage falling below 40% or 50% relative income poverty lines would rise over the 1994-2001 period, while the proportion below 60% of average income would be roughly constant. This highlights the crucial role, as far as relative income poverty rates are concerned, of the way social welfare income support rates change relative to other incomes in society.

The Poverty Target

The fact that Ireland now has an official poverty target represents a major step forward. Arriving at a poverty target which commands widespread acceptance is not easy. To remain relevant a poverty target should be re-based regularly, perhaps every five years or so, rather than cast in stone. As far as the combined income and deprivation poverty measure is concerned, its 1997 (rather than 1994) level could be taken as the baseline for NAPS purposes, and a target reduction for the period to 2002 rather than for the ten years to 2007 specified. More fundamentally, it may be worth broadening the scope of the poverty target to encompass the distinct elements underpinning it, namely real income levels, non-monetary deprivation indicators, and relative incomes.

Chapter 1
Introduction

The National Anti-Poverty Strategy, published in 1997, set out a number of goals to be achieved over the decade to 2007, together with the broad policy directions which would be required to work towards these goals, based on an understanding of the extent and nature of poverty and social exclusion in Ireland. Chief among these explicit objectives was the global poverty reduction target:

> Over the period, 1997-2007, the National Anti-Poverty Strategy will aim at considerably reducing the numbers of those who are "consistently poor" from 9 to 15% to less than 5 to 10%, as measured by the ESRI.

The wide range of research on poverty and related topics produced from the 1994 (and before that the 1987) ESRI household surveys, using income poverty lines as well as the combination of low income and deprivation, has made a major contribution to the understanding of poverty underpinning the strategy. The global poverty reduction target is framed in terms of a measure of poverty incorporating both low income and manifest deprivation in terms of what are widely regarded as basic necessities, developed at the ESRI (see for example Callan, Nolan and Whelan 1993, Nolan and Whelan 1996). The actual extent of poverty on this basis as the Strategy was initiated, the initial level as set out in the Strategy's description of its global target above, was based on ESRI research carried out using the 1994 Living in Ireland Survey (Callan *et al* 1996). The research programme at the ESRI supported by the Department of Social, Community and Family Affairs and the Combat Poverty Agency has continued to analyse in depth the nature and causes of low income and deprivation in the 1994 Living in Ireland Survey (see for example Nolan, Whelan and Williams 1998, Nolan and Watson 1999, Callan and Nolan 1999, Nolan and Whelan 1999).

In order to be able to monitor the Strategy's success in meeting its overall poverty reduction target, and to understand how poverty is evolving through time, it is however essential to have up-to-date measures of poverty on a consistent basis. The present study for the NAPS Inter-Departmental Policy Committee seeks to provide an updated picture of trends in poverty since 1994, using results from the 1997 round of the Living in Ireland Survey. In

addition, a microsimulation projection approach (on the 1994 base) is used to see the likely impact of major changes in policy and the macroeconomic environment up to 2001. This should be an important contribution to on-going consideration of the anti-poverty strategy.

The Living in Ireland survey is the Irish element of the European Community Household Panel (ECHP) which is being funded and co-ordinated by the European Statistical Office (Eurostat) in most of the EU member states. The aim of panel surveys is to follow a large random sample of households through time, so the original 1994 sample has been sought out for re-interview in each year since then. The sample for 1997 analysed in this report comprises the fourth wave of the ECHP in Ireland. Additional information has been incorporated into the Irish surveys over and above that required by Eurostat, particularly with respect to income currently being received by each respondent, in order to make possible inter alia the measurement of poverty in Ireland across time in a consistent and satisfactory manner. The primary aim of this study is to use 1997 data to analyse how the overall extent of poverty and the profile of those in poverty has changed or remains the same as that presented for 1994 in Callan *et al* (1996). We complement this with some forward projections from the base of the 1994 data using the tax/benefit simulation model SWITCH.

An outline of the layout and content of the study may be useful at this stage. In the next chapter we describe the 1997 survey and the data available from it, together with a brief description of the 1994 survey. In Chapter 3 we then apply income poverty lines to the 1997 data on household incomes to see how the proportions below a range of income poverty lines have evolved since 1994. As in previous work, alternative aggregate poverty measures are also presented which take into account the depth of poverty shortfalls as well as numbers below the income lines. As well as purely relative lines, the numbers under income thresholds held constant in real terms since 1987 are also examined. Chapter 4 looks at the profile of households below income poverty lines. In Chapter 5 we then focus on non-monetary deprivation indicators, which in combination with income help to identify those experiencing generalised deprivation due to lack of resources. The extent to which the households in the 1997 sample lack the various items or activities measured in the survey is discussed and compared with 1987 and 1994. The proportion of households both falling below relative income lines and experiencing what we have termed basic deprivation is then measured and compared with these earlier years. Chapter 6 presents results from the microsimulation approach. Chapter 7 considers the implications of the trends described in previous sections for the formulation of the NAPS global poverty target. Finally, in Chapter 8 we summarise

how the study enhances our understanding of how poverty has been evolving in Ireland, and thus contributes to the on-going development of anti-poverty policy in the context of the NAPS.

Chapter 2

The Living in Ireland Survey Data

2.1 Introduction

This chapter first provides a brief description of the 1994 Living in Ireland Survey, and then describes in more detail the 1997 survey and the data available from it, on which this study primarily relies.

2.2 The 1994 Living in Ireland Survey

The 1994 Living in Ireland Survey and the data it produced was described in detail in Callan *et al* (1996, Chapter 3), so it is necessary to repeat here only the broadest outline of the way the Living in Ireland surveys are carried out, before moving on to the 1997 survey. The aim of the European Community Household Panel (ECHP) is to produce a fully harmonised dataset containing information on the economic, financial and other circumstances of a longitudinal panel of households throughout the Union: the same set of households is interviewed in each year. This allows one to study changes in the characteristics and circumstance of particular households or household members over time, in contrast with annually repeated cross-sections of the population in which a new sample of households would be selected each year for interview. The repeated cross-sectional approach provides information on net changes in a host of areas including income distribution, poverty, etc., but does not allow one to examine the extent to which the circumstances of individual households change over time nor the processes and mechanisms underlying that change. Here however we will in effect be employing the 1997 wave of the Living in Ireland as a cross-section, in the sense that we will not attempt to measure changes in the circumstances of specific households or individuals. That requires the linking of the responses for each individual across the waves of the survey, and represents a further stage in the research beyond the scope of this study.

Eurostat has sought harmonisation of the questionnaires employed in each country in terms of their structure, content and interpretation. The Living in Ireland Survey (which represents the Irish component of Eurostat's panel project) was built around these drafts, but contains various additional modules and sets of questions. Eurostat's main concern was with disposable income (i.e., gross income minus compulsory deductions for tax and Social Insurance contributions) *in the calendar year before the interview*. However, details on both

current income receipts from these sources and receipts in the previous calendar year were collected in the Irish version of the questionnaire, allowing both current and annual income to be measured.

The objective of the sample design is to obtain a representative sample of private households in Ireland. Those living in institutions - mostly long-term hospital patients and those in prison - are excluded from the target population, in line with the harmonised guidelines set down by Eurostat and standard practice adopted in surveys of this nature (such as the Household Budget Survey conducted by the Irish Central Statistics Office). Those effectively excluded from the target population also include people who are homeless and Travellers not living in permanent households, small groups which face a relatively high risk of poverty but require very particular research methodologies.

The sampling frame used in Ireland was the Register of Electors. This provides a listing of all adults over 18 years of age registered to vote in Dail, Local Government or European Parliament Elections. This means the target sample selected (using the ESRI's RANSAM system) was effectively a sample of *persons*, not *households*. Since for a household the probability of selection is then greater the more adults it contains, the sample will over-represent larger households, and this has to be taken into account in reweighting the sample for analysis. The organisation of the survey itself and details of the information sought from each adult in the household and with respect to the household is described for 1994 in Callan et al (1996) and was very similar in 1997. The total number of households successfully interviewed in 1994 was 4,048, representing 62.5 per cent of the valid addresses contacted. A total of 14,583 persons were members of these households, of whom 10,411 were eligible for personal interview (i.e. born in 1977 or earlier). A total of 9,905 eligible respondents successfully completed the full individual questionnaire (964 on a proxy basis). This means that 506 eligible members of these households who should have completed an individual questionnaire failed to do so. Provision was made within the household questionnaire to collect some summary details in respect of these non-respondents.

To ensure the representativeness of the data from the sample, it is reweighted to ensure that, in terms of key classificatory variables, it corresponds with the known structure of the population. This is done by comparing sample characteristics to external population figures from sources such as the Census, the Labour Force Survey, and administrative statistics on the numbers in receipt of various social welfare schemes. The main elements in the reweighting scheme adopted in 1994 are described in Appendix 1. The representativeness

of the 1994 data after reweighting has been assessed by comparison with information from independent, external sources on a variety of dimensions. The results of this validation have for the most part been highly satisfactory: areas where some further adjustment to the weights might be useful for specific purposes are discussed in the context of the microsimulation projections in Chapter 6 below.

2.3 The 1997 Wave of the Living in Ireland 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[1] household within the EU. Table 2.1 summarises the wave-on-wave response rates, from Wave 2 to Wave 4.

In Wave 1, there were 4,048 completed sample households containing 14,585 individuals. Of these, 10,418 were eligible for individual interview and 9904 (95 per cent) were interviewed individually. The total number of households eligible for inclusion in Wave 2 was 4,475, which included newly-generated households[2]. In Wave 2, 3584 households were completed, 794 did not respond, and 97 were non-sample households[3]. The household response rate (when non-sample households are excluded) was 82 per cent. The 3,584 completed households contained 12,190 sample persons, of whom 8,760 were eligible for individual interview (born in 1978 or earlier) and 8,314, or 96 per cent, were actually interviewed.

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[1] Collective households are private households containing numerous 'sub-households' and include 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 followed and interviewed, and information on their 'sub-household' was collected using the household questionnaire and the household register.

[2] 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.

[3] 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.

Table 2.1: Number of Completed Households Each Wave, Number Sample Persons in Completed Households and Number Interviewed, Living in Ireland Surveys 1994-97

	Wave 1 1994	*Wave 2 1995*		*Wave 3 1996*		*Wave 4 1997*	
Households			% Hsds		% Hsds		% Hsds
Completed Households	4048	3584	80%	3174	82%	2945	87%
Non-response (NR)	3038	794	18%	624	16%	388	11%
Non-sample	166	97	2%	77	2%	54	2%
Total Hsds	7252	4475	100%	3875	100%	3387	100%
Household response rate (excluding non-sample)			82%		84%		88%
Individuals			% Ind		% Ind		% Ind
N. in Completed Hsds	14585	12649	84%	10939	85%	10013	89%
N in NR Hsds	-------	2286	15%	1781	14%	1066	9%
N in Non-Sample Hsds	-------	117	1%	219	2%	215	2%
Total Individuals		15052	100%	12939	100%	11294	100%
Eligible for individual Interview	10418	9049		7935		8482	
Interviewed	9904	8532	94%	7517	95%	6868	95%

The household response rate in Wave 3 was 84 per cent. Interviews were conducted in 3,174 households containing 12,939 individuals. Of these, 7,935 were eligible for individual interview (born in 1979 or earlier) and 95 per cent, 7,517, were successfully interviewed. By Wave 4, the household response rate had increased to 88.7 per cent, resulting in a completed sample of 2,945 households, containing 10,013 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. Despite the improving response rates, there has clearly been a sizeable attrition between Waves 1 and 4. Of the original 14,585 sample individuals, only 63 per cent (9,208) were still in completed Wave 4 households, with another 805 individuals having joined the sample at some point in the intervening years. The main reason for household non-response was refusal (ranging from 9 per cent of the eligible sample in Wave 2 to 6 per cent in Wave 4). Among the newly-generated households, difficulties in obtaining forwarding addresses for those who moved also contributed to the non-response rate.

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 4, using information on the households

and individuals from the previous wave's interviews. Table 2.2 provides a summary of these results. The data in the tables are weighted by carrying forward the household weight from the previous wave.[4] In general, the results of the table are encouraging. 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. Any relationship between attrition and level of deprivation using non-monetary indicators would be of particular relevance in considering the NAPS global poverty target. Further checks to see if attrition was selective in those terms were also carried out, and these are discussed in the context of trends in deprivation indicators in Chapter 5.

[4] Newly-generated households, for this purpose, get same household weight as the household from which they were generated. These weights should only be used to compare the characteristics of responding and non-responding households. For weighting purposes, non-sample households are included; that is, households which had moved abroad outside the EU or where the members had died between waves are included in 'All Households'.

Table 2.2: *Previous Wave Characteristics of All Households and Responding Households in Waves 2-4*

			Wave 2			Wave 3			Wave 4		
			All Hsds	Respondent Hsds		All Hsds	Respondent Hsds		All Hsds	Respondent Hsds	
			Per cent	Per cent	Diff.	Per cent	Per cent	Diff	Per cent	Per cent	Diff
Head-Sex	Male		76%	76%	0.5%	78%	78%	0.1%	78%	79%	0.7%
(% Households)	Female		24%	24%	-0.5%	22%	22%	-0.1%	22%	21%	-0.7%
Head-Age Group	Under 25		2%	2%	-0.2%	2%	1%	-0.4%	1%	1%	-0.3%
(% Households)	25-34		16%	16%	-0.1%	18%	18%	-0.2%	19%	18%	-0.9%
	35-44		21%	22%	1.2%	22%	22%	0.3%	22%	23%	1.0%
	45-54		20%	19%	-0.7%	22%	22%	-0.5%	22%	21%	-0.3%
	55-64		16%	16%	-0.8%	14%	14%	-0.4%	15%	15%	0.4%
	65+		24%	25%	0.6%	22%	23%	1.2%	22%	22%	0.2%
Head-Marital	Married		59%	60%	0.8%	60%	61%	0.4%	60%	61%	0.9%
Status	Separated/Div.		6%	6%	-0.3%	5%	5%	0.0%	6%	5%	-0.1%
(% Households)	Widowed		14%	14%	0.3%	14%	14%	0.4%	13%	13%	0.2%
	Never Married		21%	20%	-0.7%	21%	20%	-0.8%	22%	21%	-1.0%
Hsd. Size		One	21%	21%	0.2%	21%	21%	-0.2%	21%	21%	0.0%
(% Households)		2	21%	21%	0.4%	22%	23%	0.6%	23%	24%	1.0%
		3	15%	14%	-0.5%	16%	17%	0.6%	17%	16%	-1.0%
		4	16%	17%	0.3%	18%	17%	-0.5%	17%	17%	-0.1%
		5	14%	14%	0.0%	12%	12%	-0.3%	13%	13%	0.3%
		6+	13%	13%	-0.4%	11%	11%	-0.1%	10%	9%	-0.3%
N At Work		0	35%	36%	0.6%	32%	33%	1.1%	30%	32%	1.7%
(% Households)		1	36%	37%	0.6%	36%	36%	0.2%	35%	36%	0.4%
		2	21%	21%	-0.2%	27%	26%	-0.2%	29%	28%	-1.0%
		3+	8%	7%	-1.1%	6%	5%	-1.2%	6%	5%	-1.1%
Head-	Employee		39%	38%	-0.6%	43%	42%	-1.2%	43%	43%	-0.4%
Economic Status	Self-employed		9%	9%	0.1%	8%	8%	-0.2%	9%	8%	-0.8%
(% Households)	Farming		8%	8%	0.2%	9%	9%	0.4%	8%	8%	0.2%
	Educ/training		0%	0%	0.0%	0%	0%	-0.1%	0%	0%	0.0%
	Unemployed		9%	9%	0.0%	8%	8%	0.3%	8%	9%	0.3%
	Disabled		3%	3%	0.0%	3%	3%	-0.2%	3%	3%	0.3%
	Retired		18%	18%	0.5%	16%	17%	0.4%	17%	17%	0.5%
	Home Duties		14%	13%	-0.2%	13%	13%	0.6%	11%	11%	-0.1%
Urban/Rural	Dublin		30%	29%	-0.6%	31%	31%	0.1%	30%	30%	-0.8%
(% Households)	Other Urban		18%	18%	-0.5%	20%	19%	-0.8%	19%	18%	-0.9%
	Rural		52%	53%	1.1%	49%	50%	0.7%	51%	52%	1.7%
Hsd Moved?	Same Address		88%	94%	6.8%	87%	94%	6.8%	89%	95%	6.2%
(% Households)	New Address		12%	6%	-6.8%	13%	6%	-6.8%	11%	5%	-6.2%
Split/Original Hsd	Original Hsd		93%	97%	4.3%	94%	98%	3.9%	94%	98%	4.4%
(% Households)	Split Hsd		7%	3%	-4.3%	6%	2%	-3.9%	6%	2%	-4.4%
Poverty Status in W1	Not Poor		83%	82%	-0.7%	85%	84%	-0.6%	85%	85%	-0.6%
(% Households)	Poor		17%	18%	0.7%	15%	16%	0.6%	15%	15%	0.6%
N. Social Welfare	Unemployment Assistance		8%	8%	-0.4%	8%	8%	-0.2%	7%	7%	0.1%
Recipients in Hsd.	Unemployment Benefit		2%	2%	0.0%	2%	2%	0.0%	2%	2%	0.1%
(% age 15+)	OAP Contributory		4%	4%	0.2%	5%	5%	0.3%	5%	5%	0.3%
	OAP non-contr.		4%	5%	0.3%	4%	4%	0.4%	3%	4%	0.2%
	Widows Contributory Pension		2%	3%	0.1%	3%	4%	0.3%	3%	3%	0.1%
	Widows Non-Contr. Pension		1%	1%	0.0%	1%	1%	-0.2%	1%	1%	0.1%
	Lone Parents Allowance		2%	2%	-0.1%	2%	2%	0.1%	2%	2%	0.0%
	Disability Benefit		1%	1%	0.1%	2%	2%	0.0%	2%	2%	0.0%
	Invalidity Pension		1%	1%	0.1%	2%	1%	-0.1%	2%	2%	0.0%
	Disabled Persons Maintenance Allowance/Disability Allowance		1%	1%	0.0%	1%	1%	0.1%	1%	2%	0.2%

In Wave 2, for instance, 2.4 per cent of all households had a head who (in Wave 1) was under age 25; while the proportion for completed Wave 2 households had dropped only 0.2 percentage points to 2.2 per cent. Apart from the loss of roughly half of the households which had changed address between waves (including the newly-generated households), the impact on the sample distribution of previous-wave characteristics amounted to, at most, 1 or 2 percentage points. In particular, the differences between the completed and total sample in terms of economic status of the head, numbers at work in the household, total numbers receiving the major social welfare payments, and Wave 1 poverty status of the household were very small.

Overall then, although the attrition rate is relatively high, it has only a minor impact on the sample distribution of household characteristics. There is no evidence that households with specific characteristics related to the measurement of poverty and income distribution are being selectively lost from the sample.

In developing sample weights for a panel or longitudinal survey, as well as using external information 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 details of the rather complex weighting process this produces are given in Appendix 1. Having applied these weights, we see there that the weighting procedure results in a very close match in terms of the controls used, which include a range of characteristics from the Labour Force Survey data as well as

figures on social welfare recipiency from the Department of Social, Community and Family Affairs' published statistics.

2.4 Conclusions

This chapter has described the 1994 and in more depth the 1997 Living in Ireland survey data on which the study relies. Particular attention was devoted to the representativeness of these samples, and any possible biases which could be associated with the fact that 1997 is the fourth wave in a panel survey, following up those originally interviewed in 1994. While we return to these issues later in the study, the evidence at this point does not suggest that households with specific characteristics related to the measurement of poverty and income distribution are being selectively lost from the sample.

Chapter 3

Relative Income Poverty in 1997

3.1 Introduction

A great deal is now known about the extent of low income and deprivation and the types of household at risk of poverty in 1994, both from the study by Callan *et al* (1996) and subsequent studies also using the 1994 survey as the base (see for example Nolan, Whelan and Williams 1998, Nolan and Watson 1999, Nolan and Whelan 1999). In presenting here results from the 1997 Living in Ireland Survey, we will be focusing on how the extent of poverty changed between 1994 and 1997, if indeed it did change.

The central methodological issue to be faced in answering this question is how to choose a poverty standard which best measures changes over time. This is an issue we have addressed at length in previous work, notably Nolan and Whelan (1996) and Callan *et al* (1996). The concept of poverty we have employed is an explicitly relative one, relating to exclusion from the ordinary life of society due to lack of resources. This is entirely consistent with the definition now formally adopted in the National Anti-Poverty Strategy itself:

> 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.

We have emphasised in previous work the importance of acknowledging uncertainty and absence of robustness in poverty measurement results where this exists. The application of a range of relative income lines, allowing the sensitivity of the results to the precise location of the line to be assessed, thus has clear advantages. While adhering firmly to a relative conception of poverty, we also see the value of supplementing such results with ones based on income thresholds held constant in real terms, so different perspectives can be adopted and the complete picture seen. We have also argued in previous work that non-monetary indicators can be usefully employed in poverty measurement, to focus more firmly than income lines on those experiencing generalised deprivation due to lack of resources. We

concentrate in this chapter and the next on income poverty lines, turning to non-monetary indicators in Chapter 5.

3.2 Relative Income Poverty Lines

We follow conventional poverty measurement practice in adopting the household as the income and resources sharing unit throughout this study, treating all members of a particular household as having the same standard of living. Some analysis of the situation of individuals within households has been undertaken using ESRI survey data by Callan (1994), Rottman (1994), and Cantillon and Nolan (1998), but we do not explore these issues here. 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 income by the number of equivalent adults in the 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, but it may be highly sensitive to a small number of very high incomes, unlike the median. We use mean income as the basis for most of the results presented here, but also examine trends with median income-based poverty lines to examine the possible sensitivity of the results. Mean income per equivalent adult can then be calculated either by taking the average over households, or the average over individuals (attributing the equivalised income of the household to each individual in it). A case can be made for either approach and here we present results for both. We continue to use three cut-offs - 40, 50 and 60 per cent of mean or median income - in order to test the sensitivity of conclusions to the precise location of the poverty line.

The income concept employed throughout our analysis 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 1997 Living in Ireland Survey, without equivalisation, was £328. This represents an increase of 17 per cent on the mean in the 1994 ESRI survey, which was £280. Adjusting for household size and composition by equivalising household income using the 3 alternative equivalence scales described earlier, and averaging over households, produces the figures for average equivalent household income set out in Table 3.1. We see that mean equivalent disposable household income has risen since 1994 by about 22 per cent for each of the equivalence scales, more rapidly than mean unadjusted household income because average household size has continued to fall.

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

Equivalence scale	Income per adult equivalent averaged over households	
	1994	1997
	£ per week	
A (1/0.66/0.33)	128.94	156.96
B (1/0.6/0.4)	130.90	159.68
C (1/0.7/0.5)	121.36	148.49

A 50 per cent relative income poverty line based on equivalent income averaged over households in 1997 will then vary between about £74 and £80 for a single person household, depending on the equivalence scale used. The 40 per cent relative income line for a single adult is in the range £60-64. The 60 per cent relative income line for a single adult, on the other hand, lies in the range £89-96 per week,

3.3 Poverty Rates Using Relative Income Poverty Lines, 1994 and 1997

Table 3.2 shows the percentage of households below these relative income poverty lines in 1994 and in 1997. In 1997, we see that about 8-9 per cent of households fall below the 40 per cent line, 20-23 per cent are below the 50 per cent line, and about 36 per cent are below the 60 per cent income line. Comparing 1997 with 1994, we see that the percentage of households below each of the relative income lines, with each of the scales, has risen. The increase ranges from 2 to 4 percentage points, with the largest increase at the 50 per cent line.

Table 3.2: *Percentage of Households Below Relative Income Poverty Lines (Based on Income Averaged Across Households), Living in Ireland Surveys 1994 and 1997*

Equivalence scale/ Poverty line	*Percentage of households below line* 1994	1997
Scale A (1/0.66/0.33):		
40% relative income line	5.0	7.6
50% relative income line	18.8	21.9
60% relative income line	34.6	36.5
Scale B (1/0.6/0.4):		
40% relative income line	5.4	8.6
50% relative income line	19.5	23.0
60% relative income line	34.4	36.4
Scale C (1/0.7/0.5):		
40% relative income line	7.1	9.1
50% relative income line	16.9	20.3
60% relative income line	33.4	36.2

We now look at the percentage of individuals who live in these households, below relative income poverty lines, still using the mean and calculating it across households in deriving the lines. Table 3.3 shows these results again for 1994 and 1997. In 1994, the percentage of persons in households below the lines was consistently higher than the percentage of households below the corresponding line, reflecting the fact that these households were larger than average. This is no longer consistently the case by 1997, except with the 40 per cent line. With the 50 and 60 per cent lines, there is little difference between the percentage of households below the line and the percentage of persons they contain: these households are about average in terms of number of persons they contain. This means in turn that while the percentage of persons below the lines rises from 1994 to 1997, with the 50 and 60 per cent line the increase is rather less than it was for households. With those lines, the scale of increase is now generally about 1 percentage point, whereas with the 40 per cent line it is 2-4 percentage points.

Table 3.3: *Percentage of Persons in Households Below Relative Income Poverty Lines (Based on Income Averaged Across Households), Living in Ireland Surveys 1994 and 1997*

Equivalence scale/ Poverty line	*Percentage of persons below line* 1994	1997
Scale A (1/0.66/0.33):		
40% relative income line	6.8	10.0
50% relative income line	20.7	21.7
60% relative income line	34.0	35.3
Scale B (1/0.6/0.4):		
40% relative income line	7.6	11.5
50% relative income line	21.6	22.6
60% relative income line	33.9	35.3
Scale C (1/0.7/0.5):		
40% relative income line	10.7	12.5
50% relative income line	22.7	23.3
60% relative income line	35.2	36.6

The results presented so far have been based on equivalent income averaged over households. As noted earlier, an alternative is to average equivalent income over individuals, attributing the income of the household to each member, as is the practice in for example the UK's official Households Below Average Income publication. It is thus of interest to assess how much difference this makes to the number of persons below relative income lines, as we did for 1994 in Callan et al (1996). This averaging produces a lower mean equivalent income and thus lower relative income poverty lines in both 1994 and 1997. Table 3.4 shows the percentage of persons below relative income lines using equivalent income averaged over individuals as the benchmark for both years. The lower poverty lines mean that in 1997, poverty rates with the 40 per cent line are about 1 percentage point lower than in Table 3.3, with the 50 per cent line they are about 2-3 percentage points lower, and with the 60 per cent line they are 3-4 percentage points lower. This difference is in some instances rather less than it was in 1994, however. As a consequence, comparing 1997 with 1994 no longer shows a consistent increase in the percentage of persons below the relative income lines. There is a pronounced increase with the 40 per cent line irrespective of the equivalence scale used. With the two higher lines, though, whether there is an increase does depend on the choice of equivalence scale - though in no case is there a marked reduction. The method of averaging in constructing relative income poverty lines based on the mean does clearly matter, and it is essential to ensure consistency in making comparisons over time.

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

Equivalence scale/ Poverty line	*Percentage of persons below line* 1994	1997
Scale A (1/0.66/0.33):		
40% relative income line	5.3	9.1
50% relative income line	18.3	19.8
60% relative income line	31.6	32.7
Scale B (1/0.6/0.4):		
40% relative income line	5.7	10.3
50% relative income line	19.7	19.3
60% relative income line	31.3	31.8
Scale C (1/0.7/0.5):		
40% relative income line	7.1	11.1
50% relative income line	19.1	19.8
60% relative income line	30.3	32.1

3.4 Other Summary Poverty Measures

We have stressed in previous work that head count measures of the percentage falling below a given poverty line have major limitations as summary measures of poverty. As discussed at length in for example Callan *et al* (1996) Chapter 2 and 4, more sophisticated summary poverty measures based on income poverty lines are available, which take into account not only the extent of poverty as measured by a head count, but also the depth of income poverty and the distribution of income among the poor. Rather than simply concentrating on whether someone is below the income poverty line, this involves focusing on the gap between their income and the poverty line, their "poverty gap".

Here we again employ two widely-used summary measures based on this gap, 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: it involves squaring the proportionate income gaps and taking the mean of that variable, which has the effect of 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 for 1994 and 1997 with the 40 per cent, 50 per cent and 60 per cent lines, and the three equivalence scales, are shown in Table 3.5.

(We now revert to calculating the mean across households in deriving the poverty line). In each case the aggregate poverty measure - having fallen between 1987 and 1994 - rose sharply between 1994 and 1997. Indeed the 1997 levels are mostly rather higher than those seen in 1987 (and reported in Callan *et al* 1996 Chapter 4, Table 4.10). These increases arise not only because the numbers falling below the relative income lines increased, but also because by 1997 those below the lines fell further beneath them on average.

Table 3.5: *Per Person Income Gaps Using Relative Poverty Lines and Different Equivalence Scales, 1994 and 1997 Living in Ireland Surveys*

Equivalence Scale	*Relative Poverty Line* 40%		50%		60%	
	1994	*1997*	*1994*	*1997*	*1994*	*1997*
A	0.010	0.033	0.034	0.058	0.075	0.097
B	0.011	0.034	0.039	0.060	0.079	0.098
C	0.015	0.038	0.046	0.065	0.087	0.105

Table 3.6 shows that the same conclusion applies with the distributionally-sensitive weighted poverty gap measure: these are considerably higher in 1997 than they were in 1994 with all three lines. Once again this reflects the fact that by 1997 the gap between the poor and the poverty line has increased, with the largest poverty gaps now being given most weight in the measure.

Table 3.6: *Distribution-sensitive Weighted Poverty Gap Measure Using Relative Poverty Lines and Different Equivalence Scales, 1994 and 1997 Living in Ireland Surveys*

Equivalence Scale	*Relative Poverty Line* 40%		50%		60%	
	1994	*1997*	*1994*	*1997*	*1994*	*1997*
A	0.003	0.020	0.010	0.029	0.023	0.044
B	0.004	0.020	0.011	0.030	0.026	0.045
C	0.004	0.021	0.014	0.032	0.030	0.048

The relative poverty lines used so far in comparing 1997 with 1994 are based on proportions of average equivalent household income. As mentioned earlier, the mean may be quite sensitive to a small number of very high incomes reported at the top of the distribution. As in Callan *et al* (1996) we also examine trends based on poverty lines derived as proportions of median incomes, since the median is not affected by outliers in the same way. Because income distributions are skewed the median invariably lies below the mean, so this also entails using lower poverty lines. In 1994, the percentage of persons falling below 40, 50

and 60 per cent of median equivalised income was about 5%, 15% and 26% respectively. In 1997, the corresponding figures were about 9-10%, 17-19% and 27-29%.[5] Once again, then, these suggest that the extent of relative income poverty was, if anything, higher in 1997 than in 1994.

3.5 Income Poverty Lines Held Constant in Real Terms

In our analysis of trends in income poverty we have concentrated thus far on purely relative income poverty lines. 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 in the society, 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 a lengthy period of growth, in Callan *et al* (1996) we also regarded it as important to look at how household incomes evolved *vis-a-vis* such a fixed real standard over the relatively short time period from 1987 to 1994. Specifically, we looked at how many persons in 1994 fell below real income standards corresponding in real terms to relative income poverty line cut-offs set at 40, 50 and 60 per cent of mean equivalised income in 1987.

It is, if anything, even more important to do so over the 1994-1997 period, since it saw unprecedented rates of economic growth with incomes increasing substantially in real terms. Since the choice of base year is in our view essentially arbitrary - and the search for an "absolute" poverty line for a country such as Ireland is a fruitless one - we continue to employ lines derived as proportions of the mean in 1987, uprated only in line with prices since then. During the 1987-94 period, Callan *et al* (1996) showed that the proportions of persons falling below these fixed real income standards fell sharply - with equivalence scales A and B the risk of poverty fell by more than two-thirds at the 40 per cent cut-off, more than half at the 50 per cent cut-off, and more than one-third at the 60 per cent line. Table 3.7 now shows for

[5] The figure is within the range shown for each line whether equivalence scale A, B or C is used.

1997 the percentage of persons below such lines, up-rated in terms of prices only, still from 1987, and compares them with 1994.

We see that there has been a further sharp decline in the percentage of persons falling below the highest of these lines. By 1997 only about 11-14% of persons are below that line, compared with about 20% in 1994 (and 30% or more in 1987). There was only a marginal decline with the middle line, however, and an increase with the lowest of the three lines. The percentage below the 40% uprated line was still well below the percentage falling beneath this line in 1987. The number of cases involved with that line is relatively small, and the measurement of very low incomes, right at the bottom of the income distribution, raises particularly problems which may contribute to variability in these estimates over time.

Table 3.7: *Proportions of Persons Below 1987 Real Income Standards, 1994 and 1997 Living in Ireland Surveys*

	Percentage of /persons below line: Equivalence Scale					
Real income standard	*A*		*B*		*C*	
	1994	*1997*	*1994*	*1997*	*1994*	*1997*
40 per cent line, 1987	1.8	3.8	1.8	3.4	2.3	4.5
50 per cent line, 1987	7.2	6.6	7.7	6.3	10.7	8.9
60 per cent line, 1987	18.4	11.4	19.8	10.8	20.3	14.2

3.6 Conclusions

To conclude this chapter, it is worth summarising our main findings from the application of income poverty lines to the data from the 1997 Living in Ireland Survey. As in our previous studies, we have employed a range of relative income lines and equivalence scales. The main finding is that the percentage of persons or households below relative income poverty lines was generally higher, and in no case markedly lower, in 1997 than in 1994. In contrast to the 1987-1994 period, distribution-sensitive summary poverty measures, taking into account not only numbers below the lines but how far their incomes are below the line, rose particularly sharply between 1994 and 1997 with all the relative income lines. There has been a further sharp decline since 1994 in the percentage of persons falling below a "real income" line, set at 60 per cent of average equivalent income in 1987 and up-rated in line only with increases in prices since that date. However, such a marked decline was not seen with lower lines held constant in real terms since 1987.

Chapter 4

The Profile of Households Below Relative Income Poverty Lines

4.1 Introduction

A detailed analysis of the types of household falling below income poverty lines in 1997 is required if the implications of the results we have seen on income poverty rates in that year are to be understood. In particular, an in-depth comparison with the profile of those below income poverty lines in 1994 will be particularly illuminating. This chapter presents some results from such an analysis, focusing first on household composition and then on the labour force participation of the household head. Finally, we look at how the risk of being below relative income lines varies for adults versus children, and for households headed by an elderly person versus other households.

4.2 Income Poverty by Household Composition

In looking at the composition of the households below income poverty lines, we focus first on the number of adults and children they contain. Table 4.1 presents the risk of falling below the 50% relative income line in 1994 and 1997 by household composition type. Equivalence scale A described in Chapter 3 is employed throughout, with those aged under 14 again being counted as children. We see that the risk of being below the 50% line increased sharply between 1994 and 1997 for households comprising one adult. That risk also rose for households comprising two or three or more adults without children, and for couples with 3 or more children. It fell, however, for the "others with children" group (comprising either one adult or more commonly 3 or more adults living with children) [6], and was fairly stable for two adults with one or two children. Comparing poverty rates across composition types, couples with 4 or more children were the group at highest risk in both 1994 and 1997, but single adult households had become the next-highest risk group by 1997.

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[6] Since all those aged over 14 are counted as adults here, households with a married couple and older teenage offspring would be "3 or more adults", with or without children.

Table 4.1: *Percentage Below 50% Relative Income Poverty Line by Household Composition Type, Living in Ireland Surveys 1994 and 1997*

	1994	1997
1 adult	21.4	36.5
2 adults	9.3	14.7
3 or more adults	9.7	17.1
2 adults, 1 child	14.1	16.7
2 adults, 2 children	14.3	12.7
2 adults, 3 children	22.2	31.1
2 adults, 4 or more children	38.2	44.1
Others with children	32.8	23.1
All	18.5	21.9

Table 4.2 presents the corresponding incidence results – the breakdown of all those below the poverty line by household composition type. This shows that one-adult households accounted for a substantially greater proportion of all those below the 50% line in 1997 than they had in 1994, rising from 25% to 37%. Households with two or three or more adults also increased in importance among those below the poverty line. This was balanced by a decline in the proportion coming from the "others with children" group from 34% to 16%. This reflected both changing numbers in these groups in the overall sample and the changing risk rates seen in Table 4.1. Overall, there was a major shift in the composition of poor households as between households with versus without children. In 1994, households with children accounted for 55% of all those below the 50% relative income line. By 1997, this had fallen to only 35%.

Table 4.2: *Breakdown of Households Below 50% Relative Income Poverty Line by Household Composition Type, Living in Ireland Surveys 1994 and 1997*

	1994	1997
1 adult	25.4	37.0
2 adults	10.1	14.2
3 or more adults	9.5	15.6
2 adults, 1 child	4.1	4.8
2 adults, 2 children	6.0	4.2
2 adults, 3 children	6.2	6.2
2 adults, 4 or more children	5.0	2.3
Others with children	33.7	15.7
All	100	100

Turning to the 60% relative income line, Table 4.3 shows a rather different risk pattern by composition type in both years compared with the 50% line, and rather less change in risk across composition types between 1994 and 1997. The poverty rate with this line is over 50% for single adult households, but with only a marginal increase between 1994 and 1997. The risk facing households comprising two or three adults without children is not as high as that, but did rise sharply between 1994 and 1997. Poverty rates for two-adult households with children were generally much more stable, while the risk for "others with children" fell quite markedly.

Table 4.3: *Percentage Below 60% Relative Income Poverty Line by Household Composition Type, Living in Ireland Surveys 1994 and 1997*

	1994	1997
1 adult	51.7	53.7
2 adults	26.5	35.7
3 or more adults	18.4	26.8
2 adults, 1 child	23.7	23.0
2 adults, 2 children	19.3	18.7
2 adults, 3 children	32.3	39.6
2 adults, 4 or more children	48.0	47.6
Others with children	47.1	39.3
All	34.6	36.5

Similarly, Table 4.4 shows that the make-up of those below the 60% line was more stable over the period than that below the 50% line. Households comprising two or three adults did however became more important and "others with children" less so. In 1994, households without children already comprised a much higher proportion of those below the 60% than the 50% line. Almost 60% of the households below the higher line in that year did not contain a child, compared with 45% with the 50% line. This was accentuated by the changes in incidence which took place between 1994 and 1997. These meant that by the latter year, households without children accounted for almost 70% of those below the 60% relative income line.

Table 4.4: *Breakdown of Households Below 60% Relative Income Poverty Line by Household Composition Type, Living in Ireland Surveys 1994 and 1997*

	1994	1997
1 adult	32.9	33.4
2 adults	15.5	21.1
3 or more adults	9.6	14.9
2 adults, 1 child	3.7	4.1
2 adults, 2 children	4.3	3.8
2 adults, 3 children	4.8	4.8
2 adults, 4 or more children	3.3	1.5
Others with children	25.9	16.4
All	100	100

Much of the underlying explanation for these trends is likely to be found in the evolution of social welfare rates compared with average incomes, to which the income poverty lines are linked. It was already the case by 1994 that most welfare rates were below the 60% line. The fact that they lagged further behind average incomes between 1994 and 1997 would thus not have produced an increase in risk at that line, but would have had a greater impact with lower relative lines.

4.3 Income Poverty by Labour Force Status

We now turn to the pattern of income poverty by labour force status. Table 4.5 shows that the risk of being below the 50% relative income line was very high for households headed by an unemployed person, at about 60%, but was stable at this level between 1994 and 1997. For households headed by someone ill or disabled that risk was lower but still very high in 1994. For this group a substantial increase was seen over the period, so that by 1997 their risk approached that of the unemployed. Other groups of households seeing a particularly sharp increase in risk were those headed by someone "in home duties", for whom the poverty rate at this line rose from 35% to over 50%, and households headed by a retired person where the increase was from a much lower base, from 11% to 21%. The only group for whom the risk of being under the 50% relative income line fell was those headed by a farmer. For households headed by an employee the risk rose from only 3% to over 6%.

Table 4.5: *Risk of Falling Below 50% Relative Income Poverty Line by Labour Force Status of Household Head, Living in Ireland Surveys 1994 and 1997*

	1994	1997
Employee	3.1	6.6
Self-employed	14.7	20.4
Farmer	20.4	12.5
Unemployed	59.4	60.1
Ill/disabled	44.5	56.5
Retired	10.6	21.3
Home duties	34.9	51.2
All	18.5	21.9

Table 4.6 shows the changes in the composition of those below the 50% line produced by these changes in risk, together with changes in the overall numbers in the various groups in the sample. We see that households headed by an employee and by a retired person became more important among those below the line, because they are large groups within the population for whom risk rose. Households headed by an unemployed person accounted for a substantially lower proportion of all those below the line by 1997, down from one-third to just over one-fifth, because of the substantial decline in the level of unemployment combined with a stable risk. The proportion of those below the line headed by farmers also declined.

Table 4.6: *Breakdown of Households Below 50% Relative Income Poverty Line by Labour Force Status of Head, Living in Ireland Surveys 1994 and 1997*

	1994	1997
Employee	6.2	12.7
Self-employed	6.7	7.7
Farmer	8.9	3.8
Unemployed	32.6	21.1
Ill/disabled	9.5	9.8
Retired	10.5	15.7
Home duties	25.5	28.9
All	100	100

We now repeat this analysis, still categorising households by the labour force status of the head, but using the 60% relative income poverty line. Table 4.7 shows that in 1997 three-quarters of all households headed by an unemployed or ill/disabled person were below that line, and the risk for households headed by someone "in home duties" is now as high. For households headed by a retired person the risk of poverty at that line is lower but has risen to

almost 50%. For households headed by an employee the risk also rose, though only from 7.5% to 12%.

Table 4.7: *Risk of Falling Below 60% Relative Income Poverty Line by Labour Force Status of Household Head, Living in Ireland Surveys 1994 and 1997*

	1994	1997
Employee	7.5	12.0
Self-employed	19.0	31.7
Farmer	32.2	27.3
Unemployed	77.8	75.5
Ill/disabled	74.1	72.5
Retired	38.9	49.4
Home duties	71.3	78.1
All	34.6	36.5

Table 4.8 shows the breakdown of the households below the 60% relative income line in the two years. We see once again the declining importance of households headed by an unemployed person, together with an increase in the importance of households headed by an employee.

Table 4.8: *Breakdown of Households Below 60% Relative Income Poverty Line by Labour Force Status of Head, Living in Ireland Surveys 1994 and 1997*

	1994	*1997*
	%	*%*
Employee	7.9	14.2
Self-Employed	4.7	7.5
Farmer	7.8	5.3
Unemployed	23.3	15.7
Ill/Disabled	8.0	7.8
Retired	20.6	22.4
Home Duties	27.7	27.1
All	100	100

We have concentrated here on the labour force status of the household head, without reference to the extent and nature of labour force participation by other members of the household, if any. Ways of broadening the categorisation of households to take this into account were discussed and implemented with 1994 Living in Ireland survey data in Nolan and Watson (1999). These approaches will be applied to 1997 in future work, but it is worth noting here that among households below the 50% relative income line where the household

head has a spouse, only 17% of those spouses are employed - most are unemployed or inactive. As found in Nolan and Watson, where the spouse or other household members are in employment the risk of poverty is significantly reduced.

4.4 Income Poverty and Age

The evolution of income poverty risks between 1994 and 1997 in terms of household composition and labour force status is associated with an important change in the age profile of those below the income poverty lines. We saw that the risk of being below the 50% line increased particularly sharply for single person households and for those headed by someone who is retired or in home duties. In fact, two-thirds of the single person households below that line are persons aged 65 or over, and two-thirds of the household heads in home duties are also that age. Table 4.9 shows the risk of being below the relative income lines for households where the head is aged 65 or over, in 1994 and 1997. We see a sharp rise in the risk of being below the 50% or 60% line over the period, with almost 60% now below the highest line.

Table 4.9: *Risk of Falling Below 50% Relative Income Poverty Line for Households Headed by an Elderly Person, Living in Ireland Surveys 1994 and 1997*

Poverty line	Percentage of households below line	
	1994	1997
40% relative income line	3.2	4.8
50% relative income line	9.8	29.0
60% relative income line	41.5	59.5

This increasing risk for the elderly reflects the impact of the rapid increase in average household incomes since 1994 on the relative position of those living on state pensions. Although social welfare pensions have risen by 10-12% since 1994, this has been outpaced by market incomes. As we saw earlier, average equivalent household income thus rose by more than 20% between 1994 and 1997, well ahead of social welfare pensions. However, the growth in their real incomes (above the rate of inflation) has meant that the numbers of elderly people experiencing deprivation decreased markedly over the period, as we shall see in chapter 5.

Turning to the situation of children, Table 4.10 shows the percentage of children (aged under 14) and adults living in households below each of the relative income lines, in 1994

and 1997. This shows a falling risk for children with both the 50% and 60% lines, while that for adults increased. The decline in unemployment will have contributed to an improvement in the position of families with children, while the increasing risk for adults is influenced by the deterioration in the relative position of the elderly. The net impact is a significant narrowing in the gap which had been present in 1994 (and 1987) between the poverty risk of children versus adults.

Table 4.10: *Risk of Falling Below Relative Income Poverty Lines for Adults and Children, Living in Ireland Surveys 1994 and 1997*

Poverty line	*Percentage below line*	
	1994	1997
Children		
40% relative income line	7.7	9.5
50% relative income line	29.3	23.7
60% relative income line	40.3	37.7
Adults		
40% relative income line	6.5	9.1
50% relative income line	17.9	20.5
60% relative income line	31.9	34.4

If children are defined as under 16 years of age rather than under 14, a similar trend is seen. In 1997, the percentage of children under the 50% line is then 25%, with 35% below the 60% line.

4.5 Conclusions

This chapter has analysed the types of household falling below income poverty lines in 1997, and how this has changed since 1994. Focusing first on household composition, the most notable change was the rapid increase in the risk of being below half average income for single person households. That risk was fairly stable for two adults with one or two children, and fell for some other households with children. The result was that households containing children comprised 55% of all households below the 50% relative income line in 1994, but this had fallen to only 35% over the short period to 1997. With the 60% line this fall was less pronounced but still marked.

Turning to labour force participation, the risk of relative income poverty remained very high for households headed by an unemployed person, but the numbers in that situation

declined as the unemployment rate fell sharply. As a result, households headed by an unemployed person accounted for a much smaller proportion of those below the relative income lines in 1997 than they had in 1994. Households headed by a retired person or someone "in home duties", on the other hand, saw their risk of relative income poverty rise and comprised an increasing share of households below half average income. Households headed by an employee also saw the risk of relative income poverty rise at both 50% and 60% lines.

The risk of being below the 50% or 60% line rose markedly between 1994 and 1997 for households where the head is aged 65 or over, with almost 60% of those households below the highest line in 1997. For children, the risk of relative income poverty fell at both the 50% and 60% lines, while that for adults increased. The decline in unemployment will have contributed to an improvement in the position of families with children, while the increasing risk for adults is influenced by the deterioration in the relative position of the elderly. The net impact is a significant narrowing in the gap which had been present in 1994 (and 1987) between the poverty risk of children versus adults.

Chapter 5

Poverty Measures Incorporating Non-Monetary Deprivation Indicators

5.1 Introduction

We have argued strongly in previous work that income does not tell us all one needs to know about the living standards and command over resources of a household at a point in time. Poverty is now widely conceptualised in terms of exclusion from the life of a society because of a lack of resources, and so involves experiencing various forms of what the society in question regards as serious deprivation. Direct measures of deprivation can play an important role, together with income, in identifying those experiencing generalised deprivation due to lack of resources. The question of how best to arrive at indicators of deprivation suitable for this purpose has been extensively investigated in our earlier work using the 1987 and 1994 ESRI surveys (Callan, Nolan *et al.*, 1989, Callan, Nolan and Whelan, 1993, Nolan and Whelan, 1996, Callan et al 1996).

Here our aim is to employ the non-monetary indicators developed in that work to the new data from the 1997 Living in Ireland survey, compare the results with 1994, and tease out the implications. In Section 5.2 we describe the deprivation indicators, and look at how summary measures based on these items have changed between 1994 and 1997. Section 5.3 discusses the way these indicators can be grouped into different dimensions of deprivation, and looks at how what we have termed basic deprivation has been changing. Section 5.4 focuses on the combined income and basic deprivation poverty measure, and examines how it has changed between 1994 and 1997. Perceptions about what constitute necessities are an important element in arriving at an appropriate set of indicators for measuring generalised deprivation, and so are the inter-relationships between the deprivation indicators: Section 5.5 looks at how these have changed between 1987 and 1997. Section 5.6 explores what would happen if the basic deprivation index was broadened to include more items in measuring poverty in 1997. Finally, Section 5.7 summarises the conclusions.

5.2 The Deprivation Items and Summary Measures

The full set of 23 non-monetary indicators which we employ from the 1994 and 1997 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. (In 1994 and 1997 these questions were on the household rather than individual questionnaire and thus responses were from the person completing that questionnaire). For the last four items in the table, it is presence rather than absence which constitutes deprivation.

Table 5.1: *Indicators of Style of Living and Deprivation in 1994 and 1997 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*

* Presence rather than absence of these items denotes deprivation.

From this set of items, one can first simply construct an aggregate deprivation index with all 23 items on which we have information. A household then scores 1 for each of the first 19 items in Table 5.1 which they do not have because they cannot afford it, and one for each of the four additional aspects of deprivation at the end of the table which they do experience. The pattern of scores on the index for both 1994 and 1997 on this 23-item enforced lack index is shown in Table 5.2. The percentage of households scoring zero rose sharply from 32 per cent in 1994 to 47 per cent in 1997, a continuation of the trend seen

between 1987 and 1994. Over the ten years since 1987, this means that the percentage showing no deprivation in terms of this measure has more than doubled. Similarly, the percentage of households experiencing an enforced lack of more than three items declined from 28 to 17 per cent.

Table 5.2: *Distribution of Scores on 23 Item Enforced Lack Summary Index, 1994 and 1997 Living in Ireland Surveys*

	% of Households	
Score	1994	1997
0	32.0	46.7
1-3	41.2	36.6
4-6	16.1	10.5
7-9	5.4	4.3
10-12	3.0	1.5
13-15	1.9	0.3
16 or More	0.4	0.1
All	100.0	100.0

In previous work on 1987 and 1994 data we have also constructed an index comprising 13 of these items, focusing on the ones which (in 1987) were both regarded as a necessity by a majority of the sample and possessed by a majority. Table 5.3 shows the distribution of scores on the 13-item enforced lack indices in both 1994 and 1997. We see again that there has been a substantial increase in the percentage of households with scores of zero, from 62% to 72%, and a corresponding fall in the percentage with scores of three or more.

Table 5.3: *Distribution of Scores on 13 Item Enforced Lack Summary Index, 1994 and 1997 Living in Ireland Surveys*

	% of households	
Score	1994	1997
0	61.6	72.2
1-2	25.4	19.7
3-5	9.0	6.4
6-9	3.9	0.2
10-13	0.1	0.1
All	100	100

5.3 Dimensions of Deprivation

So far we have focused on summary indices of deprivation, without taking into account the nature of the items or the relationships between them. However, 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. We have thus in previous work for 1987 and 1994 examined in depth the relationships between the different items, and sought to bring out the implications for the construction of deprivation indices. Factor analysis was used to systematically examine the manner in which items cluster into distinct groups, in order to identify dimensions of deprivation. Each factor or dimension is defined by 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 dimensions of deprivation remained unchanged between 1987 and 1994 (see Callan *et al*, 1996, Chapter 6).

On this basis, together with information from 1987 on which of the items were widely perceived as necessities, we proceeded to construct separate indices for enforced lack of basic, housing and secondary deprivation. These are of substantive interest in themselves, but in seeking to identify those excluded due to a lack of resources, we then concentrated on the basic deprivation index. The items in the basic deprivation index 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". In both 1987 and 1994 they were possessed by most people, they reflect rather basic aspects of current material deprivation, and they cluster together, which lends support to the notion that they are useful as indicators of the underlying generalised deprivation we are trying to measure. Most of the items in the secondary dimension, on the other hand, were not overwhelmingly regarded as necessities in 1987. Deprivation in terms of the third dimension, the housing and related durables, appears to be a product of very specific factors, and so - while providing valuable information about one important aspect of living standards - are not satisfactory as indicators of current generalised exclusion (Nolan and Whelan, 1996).

Table 5.4 shows scores on the 8-item index of enforced basic deprivation in 1994 and 1997. It shows a very marked decline in basic deprivation throughout the range of scores. The percentage of households registering a score of one or more has fallen from 25% to 15%,

while the percentage scoring two or more has fallen from 12.5% to 7%. We go on in the next section to bring out the implications of this decline for the poverty measure we have developed which takes both basic deprivation and low income into account.

Table 5.4: *Distribution of Scores on 8 Item Basic Deprivation Index, 1994 and 1997 Living in Ireland Surveys*

	% of Households	
Score	1994	1997
0	74.9	84.7
1	12.6	8.3
2	4.6	3.4
3	2.6	1.3
4	1.7	1.2
5	1.7	0.3
6	1.0	0.4
7-8	1.0	0.1
All	100.0	100.00

Since the marked declines in deprivation between 1994 and 1997 shown by these results are of central importance for the NAPS targets – to which we turn in the next section – we need to be sure that they do not reflect selective attrition in the course of the panel survey, whereby many of those reporting deprivation in 1994 simply drop out of the survey in subsequent years. This possibility is analysed in some depth in Appendix 2, and the conclusion reached is that there is no evidence that households experiencing deprivation in 1994 were more likely to drop out of the survey than others. The substantial fall in the numbers reporting deprivation on the various indicators by 1997 is not therefore an artifact of sample attrition.

5.4 The Combined Income and Deprivation Poverty Measure

In identifying households that are excluded because of a lack of resources, we focus on those reporting enforced lack of basic items *and* on low income. The rationale for concentrating on the basic items was outlined above, but what constitutes low income in this context? A range of income lines allows us to see the consequences of varying the income criterion for the numbers and types of household identified as poor, so we again employ relative income lines derived from average disposable equivalent income, namely 40, 50 and 60 per cent of the mean. Table 5.5 shows the percentage of households in the sample falling

below each of the relative income thresholds (using equivalence scale A) *and* experiencing enforced deprivation of at least one basic item, for 1994 and 1997. We see that there has been a marked fall in the percentage below the relative income lines and experiencing basic deprivation with the highest, 60 per cent income line. The percentage below that line and experiencing basic deprivation has fallen from 15% to 10% - having fallen only marginally, from 16% to 15%, between 1987 and 1994. The percentage below the 50% relative income line and experiencing basic deprivation has also fallen, though less sharply, while the percentage below the 40% line and experiencing such deprivation has risen slightly. Thus, combining relative income poverty lines with a deprivation criterion held fixed from 1987 to 1997 gives a very different picture to that described in Section 3 above with the income lines alone.

Table 5.5: *Percentage of Households Below Relative Income Thresholds and Experiencing Basic Deprivation in 1987 and 1994 Samples*

Relative Income Line (Eq. Scale A)	*% of households below Line and Experiencing Enforced Basic Deprivation*	
	1994	1997
40% line	2.4	3.0
50% line	8.9	7.3
60% line	14.9	9.9

In Table 5.6 we look at the labour force composition of those below the 60% relative income line and experiencing basic deprivation in 1997, compared with 1994. We see that there has not been a marked change in the profile of these households despite the fall in their numbers between 1994 and 1997. The most important groups continue to be households headed by an unemployed person or someone working full-time in the home: these two categories account for almost 60% of the total. In terms of household composition, 45% of the households meeting the combined income/deprivation criteria contain children, significantly higher than the figures seen in Chapter 4 when the relative income lines were used though still down from 1994. Most of these poor households with children were not a couple with only one or two children: they were either larger families or lone parents. As far as the elderly are concerned, households headed by a retired person comprise a significantly smaller proportion of those below the 60% line and experiencing basic deprivation than those simply under the 60% relative line. Like other groups, the growth in their real incomes has meant that the numbers of elderly people experiencing deprivation decreased markedly over the period. (This is brought out in detail in a forthcoming study using this data being carried out for the National Council on Ageing and Older People (Fahey, Layte and Whelan, 1999)).

Table 5.6: *Households Below Income Poverty Lines Versus Combined Income/Deprivation Criteria by Labour Force Status of Head, 1994 and 1997 Living in Ireland Surveys*

Labour Force Status of Reference Person	*Below 60% Income Line and Experiencing Basic Deprivation*	
	1994	*1997*
Employee	7.4	11.6
Self-Employed	2.2	2.6
Farmer	2.8	1.3
Unemployed	35.7	31.9
Ill/Disabled	10.1	10.6
Retired	13.0	14.7
Home Duties	28.6	27.2
Total	100	100

The evidence at this point shows significant reductions in levels of deprivation between 1994 and 1997. Focusing on basic deprivation, the consistent result across relative income poverty lines is that there has also been a marked reduction in the percentage of households below these lines and experiencing basic deprivation. Given the way the global poverty target adopted in the NAPS has been framed, these results are clearly particularly salient. As we saw, that target is that over the period 1997-2007, the Strategy will aim at considerably reducing the numbers of those who are "consistently poor" from 9 to 15% to less than 5 to 10%. These numbers quoted as "consistently poor" are those below the 50 and 60 per cent relative income lines and experiencing basic deprivation in 1994, as shown in Callan *et al* (1996). The results we have presented suggest that, by 1997, the numbers below those income lines had risen, but the numbers below them and experiencing basic deprivation with an unchanged set of deprivation indicators had fallen. This contrasts with the 1987-1994 period, during which there was only a marginal decline in the numbers below the 60 per cent line and experiencing such deprivation.

This represents an important and welcome development. However, it also gives rise to an important question about the poverty measure: does an unchanged set of indicators continue to adequately capture what is regarded as generalised deprivation as living standards rise? 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. It may therefore be necessary to incorporate further items which, through changing attitudes and expectations "become necessities". This requires *inter alia* information about views in the population as to which items from a broad range are seen as constituting necessities. We did not have such

information in the 1994 Living in Ireland Survey, but it has been sought in the 1997 survey. In the next two sections we examine how perceptions about what constitutes necessities have changed between 1987 and 1997, and work through the implications of these findings, and of the way the deprivation items relate to one another, for the measurement of how generalised deprivation has been evolving to 1997.

5.5 Non-Monetary Deprivation Indicators in 1987 and 1997

When poverty is measured using the combined 60% relative income line and basic deprivation (with the same set of items throughout), the percentage in poverty fell only marginally between 1987 and 1994, from 16% to 15%, but then as we have seen declined sharply to 10% by 1997. Table 5.7 sets out the extent of lack and perceived lack, and the percentage regarding items as a necessity, for twenty life-style items for which this information is available for 1987 and 1994. It is clear that across the range of items there has been a significant reduction in the numbers lacking items and in the extent of enforced lack.

There was a significant reduction in the numbers experiencing an enforced lack of items such as a warm waterproof overcoat and a meal with meat, chicken or fish every second day. There was also a dramatic movement for many of the secondary items. The number lacking central heating fell from 45% to 17%, and enforced absence declined from 30% to 10%. Similarly by 1997 only one in seven households lacked a telephone compared to one in two in 1987, while for enforced absence the corresponding figures were three in ten and one in ten. The changes relating to car ownership are less dramatic but even so the percentage lacking a car fell from 38% to 30% and enforced lack was almost halved, dropping from 22% to 13%. By 1987 the percentage lacking colour television declined from 20% to only 3%, and percentage unable to afford one fell from 11% to 1%. Finally the percentage not giving presents to friends or family fell from just less than one in four to one in nine, and the number unable to afford such presents went from 13% to 6%. Most of the housing dimension items had already been available to the vast majority of households in 1987, but over the ten year period we observe a further decline in the percentage of households lacking such items.

Table 5.7: *Lack, Enforced Lack and Perceived Necessity of Life-style Items in 1987 and 1997*

Item	% lacking		% enforced lack		% stating necessity	
	1987	1997	1987	1997	1987	1997
Refrigerator	5	1	3	1	92	99
Washing machine	20	10	10	4	82	93
Telephone	48	14	31	9	45	82
Car	38	30	22	13	59	70
Colour TV	20	3	11	1	37	75
A weeks annual holiday away from home	68	45	49	32	50	62
A dry damp free dwelling	10	6	9	6	99	99
Heating for the living room when its cold	3	6	2	5	99	99
Central heating in the house	45	17	30	10	49	81
An indoor toilet in the dwelling	7	2	6	2	98	99
Bath or shower	9	3	7	2	98	99
A meal with meat chicken or fish every second day	13	3	9	2	84	94
A warm waterproof overcoat	13	4	8	2	93	93
Two pairs of strong shoes	16	5	11	4	88	96
To be able to save	57	38	55	34	88	82
A daily newspaper	45	43	16	9	39	33
A roast meat joint or equivalent once a week	24	11	13	4	64	76
A hobby or leisure activity	33	26	12	8	73	70
New not second hand clothes	10	8	8	6	77	86
Presents for friends or family once a year	24	11	13	6	60	73

In relation to the items displaying the most rapid increases in availability, it is particularly interesting to examine the extent to which normative expectations kept pace. The short answer is that they adjusted rapidly. The numbers considering central heating and a telephone to be necessities went from under half to over eight out of ten. For car ownership the figure increased from six out of ten to seven out of ten. The corresponding figures for a colour TV were just over one in three and three out of four. Finally for presents to families and friends the figure rose from six out of ten to three out of four. The pattern of change in expectations thus very much mirrors the increasing extent to which these items are possessed in the society. With the exception of the availability of a daily new paper, the remaining items were already thought to be necessities.

Our analysis reveals a set of five items that between 1987 and 1997 became available to a substantial majority of households and came to be perceived as necessities by comparable numbers. These items are central heating, a telephone, a car, a colour TV and presents for friends and families once a year. The question arises as to whether our basic deprivation index, while adequate in 1987, had by 1997 become too narrowly defined and detached from the reality of contemporary life-styles. Should these additional five items now be incorporated in the basic deprivation index and consequently in the combined income and deprivation poverty measure?

The first point to keep in mind in answering this question is that in 1987 there was already a set of items widely available and generally considered necessities that were not incorporated in the basic deprivation index. These comprised a set of items relating to housing deprivation. The reason these items were not included in the basic index was that factor analysis suggested that the basic and housing deprivation dimensions constituted quite distinct dimensions. Households suffering basic deprivation were also more likely to suffer housing deprivation but the relationship between them was modest, indicating that many households that experienced one type of deprivation managed to avoid the other and *vice versa*. Further analysis showed that rather different socio-demographic factors determined basic and housing deprivation. Thus a household with an unemployed head of household might be exposed to deprivation in relation to basic food, clothing and heating items while residing in high quality public sector housing. Similarly an elderly rural household might score high on the housing deprivation scale without being exposed to difficulties in relation to food, clothing or debt. Thus before making any decisions on the inclusion of additional items

in the basic index, we have to examine if the structure of deprivation has changed between 1987 and 1997.

Table 5.8 shows the factor analytic results for 1987 and 1997. There is a striking similarity in the results for the two years. In each case a clear three dimensional pattern emerges with distinct basic, secondary and housing dimensions. Since these results suggest that these dimensions continue to be determined by rather different factors, the logic of our earlier argument would suggest that in the combined income and deprivation poverty measure we should restrict ourselves to the original basic deprivation items. However, the concern may persist that by failing to incorporate a range of items that are now both widely available and generally perceived to be necessities, the poverty measure could be seen as increasingly restrictive and perhaps absolutist in nature. We therefore explore in the next section what would happen if the basic deprivation index was indeed broadened in measuring poverty in 1997.

Table 5.8: *Rotated Factor Solution for Life Style Indicators*

	Basic		Housing Services		Secondary	
Basic Dimension	1987	1997	1987	1997	1987	1997
A meal with meat, chicken or fish	**0.59**	**0.49**	0.22	0.29	0.24	0.11
A warm, waterproof overcoat	**0.55**	**0.72**	0.23	0.01	0.13	0.06
Two pairs of strong shoes	**0.58**	**0.71**	0.20	0.05	0.17	0.13
A roast joint of meat or its equivalent once a week	**0.46**	**0.45**	0.16	0.09	0.38	0.28
New, not second hand clothes	**0.58**	**0.55**	0.13	0.01	0.22	0.34
Go without a substantial meal	**0.61**	**0.51**	0.04	0.02	-0.05	-0.01
Go without heat	**0.63**	**0.56**	-0.10	0.02	0.12	0.05
Go into debt for ordinary living expenses	**0.58**	**0.50**	-0.10	-0.15	0.15	0.24
Housing/Services Dimension						
Refrigerator	0.07	0.02	**0.44**	**0.75**	0.07	0.05
Washing Machine	-0.02	-0.08	**0.45**	**0.50**	0.30	0.41
Colour TV	0.02	0.02	**0.43**	**0.61**	0.24	0.04
Dry, damp free dwelling	0.15	0.28	**0.31**	**0.31**	0.21	0.21
Non-shared indoor toilet	0.11	0.1	**0.84**	**0.82**	-0.13	-0.03
Non-shared bath or shower	0.11	-0.02	**0.84**	**0.80**	-0.09	0.13
Secondary Dimension						
Telephone	0.04	0.05	0.19	0.15	**0.59**	**0.56**
Car/Van	0.14	0.24	0.05	0.04	**0.53**	**0.41**
Weeks annual holiday away	0.08	0.17	0.04	0.03	**0.68**	**0.72**
Central heating	0.07	0.13	0.23	0.33	**0.52**	**0.44**
Be able to save regularly	0.17	0.14	0.10	0.05	**0.58**	**0.67**
Daily newspaper	0.18	0.04	0.09	0.07	**0.52**	**0.46**
Hobby or leisure activity	0.25	0.32	-0.08	-0.02	**0.46**	**0.49**
Presents for friends or family	0.32	0.39	0.08	0.19	**0.48**	**0.39**
Able to afford afternoon or night out	0.20	0.42	-0.03	-0.04	**0.43**	**0.35**

5.6 Broadening the Basic Deprivation Measure?

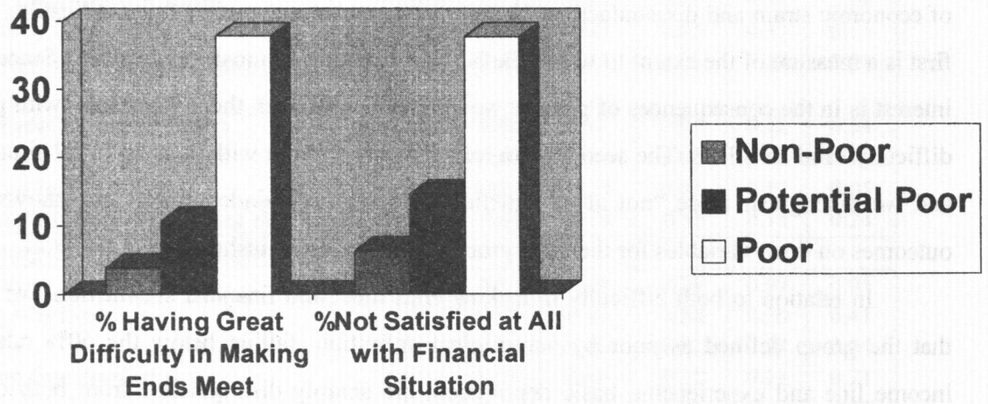
To explore the impact which broadening the set of items included in the basic index would have, we begin by distinguishing three groups of households. The first we refer to as the 'poor': the households who in 1997 fall below the sixty per cent relative income line and are experiencing basic deprivation with an unchanged set of items. The second are households fulfilling the 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 friends and family at least once a year. This group, which we label the 'potentially poor', constitutes an additional 7.6% of households. Finally we have those households who fulfil neither criteria and whom we

label the 'non-poor'. We then proceed to examine how these different groups of households are differentiated in terms of the sort of features that one might expect to be associated with poverty.

We start by examining the relationship between our classification and the experience of economic strain and dissatisfaction. 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 their financial situation and we distinguish those "not at all satisfied" from the remainder. Figure 5.1 shows the outcomes on these variables for the three groups we have distinguished.

In relation to both difficulty in making ends meet and financial satisfaction, we find that the group defined as poor by our original definition, falling below the 60% relative income line and experiencing basic deprivation, are sharply distinguished from both other groups. For the economic strain variable we find that almost four out of ten conforming to our original definition of poverty report experiencing "extreme difficulty" in making ends meet. This falls to one in nine for the group who would be counted as poor if we broaden the deprivation criteri, and declines to one in twenty-five for the non-poor. A very similar pattern emerges in relation to extreme dissatisfaction with current financial situation. Once again almost four out of ten of the households falling into the poor category express such dissatisfaction, compared with one in seven of the "potentially poor" and one in sixteen of the non-poor category. While the households included in our potentially poor category are experiencing slightly greater economic stain and greater financial dissatisfaction than the non-poor, they are much closer to the non-poor than they are to the poor.

Figure 5.1: Economic Strain By Poverty Status



The next outcome to which we turn our attention is psychological distress. The General Health Questionnaire (or GHQ) is a short, self-administered survey designed to detect minor psychiatric disorders that has been adapted for use in survey questionnaires administered through interview. In the survey format, the original 60-item version is usually shortened to either a 12 item or 30-item version and it is the 12 item version which is used in the Living in Ireland Survey. Tests show that the 12-item version is as reliable as the 60-item version (although it is obviously less sensitive) as well as being appropriate for use among older people (Bowling 1991). These 12 question items ask respondents about their *present* mental and emotional condition 'over the last few weeks' in comparison to their *normal* condition. The concept of the 'normal' self is a tenuous one, especially where individuals are experiencing recurrent bouts of some illness, or have acquired a chronic illness which has been with them for some time and will continue to be. Nonetheless, research has shown that respondents do still tend to see their 'ill self' as not the 'normal' them and thus can give a reliable account of their psychological condition in general terms (Goldberg and Williams, 1988). The questions are also relative to the person concerned as they ask about deviations from the normal self and thus do not imply an absolute standard.

Research on the GHQ has shown that if we compare scores with clinical diagnoses, there is a point on the scale where the probability of diagnosis of a psychiatric disturbance rises to at least 0.5 or more. Thus, if we were to present all those with a score above this

threshold to a clinician, on average one half would be diagnosed with a psychiatric disturbance. Tests show that this point is reached at a score of three or more, thus we can dichotomise scores on the scale running from zero to twelve into scores under three and three or more. In Figure 5.2 we show the percentage scoring above this threshold by our poverty classification. For the set of poor households we find that almost one in two are found above the GHQ threshold. For the potentially poor households the figure falls to one in five, and for the consistently non-poor households to one in six. Thus, even more than for economic strain and satisfaction, the set of poor households are sharply differentiated from all other households.

Figure 5.2:Psychological Distress and Poverty Status

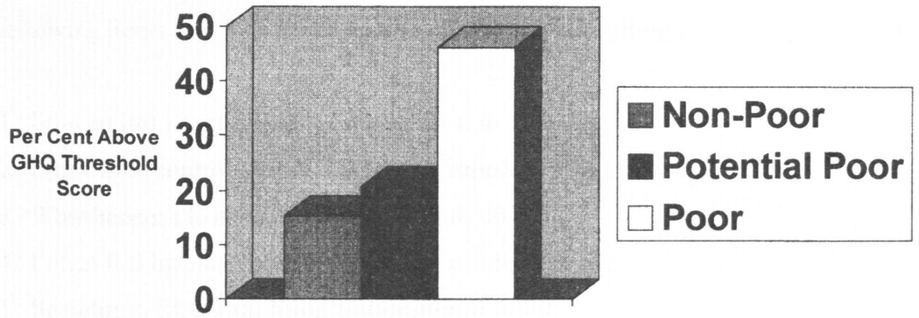


Table 5.9 illustrates the nature of these differences by looking at the individual GHQ items. Somewhere between one-third and four-fifths of the heads of of poor households felt constantly under stain, felt they couldn't overcome their difficulties, were unable to enjoy their day-to-day activities, were unable to face up to their difficulties and felt unhappy or depressed. For the group who would be counted as poor if one broadened the deprivation criteria, the corresponding figures range between one in five and one in eight. For the non-poor they span the range one in six to one in twelve. Similarly, among poor household heads between one sixth and one quarter felt unable to concentrate, had lost confidence in

themselves, felt incapable of making decisions and felt they were worthless persons. For the "potentially poor" group the corresponding figures ranged from one in twenty to one in seven, and for the non-poor from one in thirty to one in nine. Only in the case of " feeling they were playing a useful part in things" were the "potentially poor" more like the poor than the non-poor group. Otherwise, the poor display a profile of psychological distress which is quite distinctive.

Table 5.9: *Extremes of Psychological Distress by Poverty Status*

	Non-Poor	*Potentially Poor*	*Poor*
	% Distressed		
Not able to concentrate	11	14	27
Lost sleep over worry	11	17	45
Did not feet were playing a useful part in things	11	24	26
Did not Feel capable of making decisions	5	6	21
Constantly under strain	16	22	40
Couldn't overcome difficulties	9	14	38
Not able to enjoy day-to day activities	14	17	35
Not able to face up to problems	8	15	35
Feeling unhappy or depressed	9	12	38
Losing confidence in yourself	6	10	27
Feeling a worthless person	3	5	17
Not reasonably Happy	5	5	19

The second aspect of psychological well being that we consider is fatalism. In doing so we drew on a set of items that have been fairly widely used to measure fatalism in the research literature (e.g. Pearlin *et al,* 1981*)*. Survey respondents were asked to react to the following items on a four- point scale running from 'strongly agree' to 'strongly disagree':

1. I can do just about anything I set my mind to
2. I have little control over the things that happen to me.
3. What happens to me in the future depends on me.
4. I often feel helpless in dealing with the problems of life.
5. Sometimes I feel I am being pushed around in life.
6. There is a lot I can do to change my life if I want to.
7. There is really no way I can solve some of the problems I have

Scoring on the items was carried out so as to take into account the direction of the items. The final scale has a potential range of scores running from 4, indicating the highest level of fatalism, to 1 indicating the lowest level.[7]

Since our interest is the extreme effects produced by the experience of poverty, in Table 5.10 we show the percent of respondents choosing the most fatalistic response category for each item broken down by poverty status. For the group falling below the 60% income

[7] The scale has a very satisfactory level of reliability with Cronbach's alpha of 0.76.

line and experiencing basic deprivation, the number choosing the most fatalistic category ranges between 14% and 18% for four of the items and is greater than 8% for six out the seven items. For the group who would be brought below the combined poverty line by the inclusion of the additional deprivation indicators, in no case does the percentage choosing the most extreme category rise above 7%. For the non-poor category the highest number opting for the most fatalistic response on any of the questions is 5%. Thus once again households are sharply differentiated from all others. In addition, the potentially poor and the non-poor households are barely distinguishable from each other. Poverty defined in the original sense of incorporating basic deprivation is associated with distinctively high levels of economic strain, psychological distress and fatalism.

Table 5.10: *Extreme Fatalism Response by Poverty Status*

	Non-Poor	*Potentially Poor*	*Poor*
	% Fatalistic		
Can (not) do just about anything I set my mind to	4	4	15
Have little control over the things that happen to me	5	6	9
What happens in the future (does not) depends on me	4	2	8
Helpless dealing with problems	4	2	15
Sometimes feel that I am being pushed around	2	6	5
(Not) A lot I can do to change my life	4	7	14
Really no way I can solve some of my problems	4	5	18

One objection that could be raised to the procedure that we have adopted so far is that there may exist within the 'potentially poor' a sub-set of households suffering multiple deprivation, who should be included within our category of poor households. In order to test this possibility, in Table 5.11 we distinguish between those households in the potentially poor category suffering enforced lack of only one of the items which have more recently come to be defined as social necessities, and those deprived of more than one item. It is clear from this table that the latter do not differ systematically from the former in terms of psychological distress and experience of economic strain, and display a profile that is distinctly more favourable than that observed for the original group of poor households.

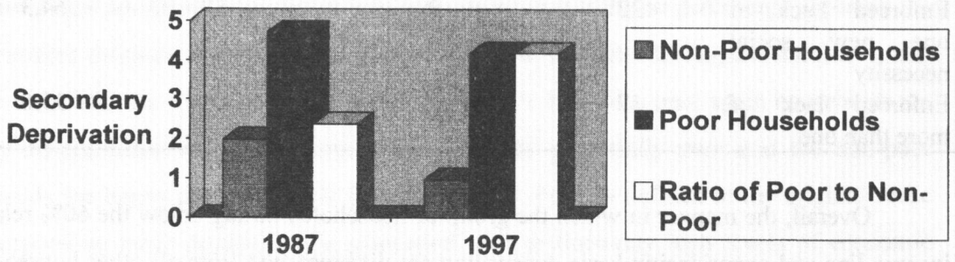
Table 5.11: *Economic Strain and Psychological Distress within the 'Potentially Poor' Group*

	% Above GHQ Threshold	% Extreme Difficulty making ends Meet	% Not Satisfied at All with Financial Situation	% of Group
Enforced Lack of one new social necessity	22	9	17	64.3
Enforced lack of more than one	17	15	10	35.6

Overall, the manner in which the group of households falling below the 60% relative income line and experiencing basic deprivation are differentiated from all other households, in terms of a range of features that one might expect to be associated with poverty, argues against extending the life-style deprivation component of the poverty measure. However, the fact that the measure remains constant over time does not imply that the standard of living enjoyed by such households remains constant. The original set of items includes a broadly defined item relating to the experience of debt. In addition, in our earlier work we were clear that possession of items not included in the basic item set did not preclude households from being classified as poor. Our assumption was that households on low incomes could experience basic deprivation at the same time as attempting to afford items such as phones, cars, colour televisions and so on. Indeed we expected that sort of financial brinkmanship to be typical of poor households rather than exceptional. Thus our definition of poverty even in terms of the life-style items was from the outset a relative rather than an absolute one. We would thus anticipate that between 1987 and 1997, as possession of a range of items became more widespread, enforced absence of such items would have declined significantly among poor households.

Figure 5.3 compares the level of secondary deprivation for poor and non-poor households in 1987 and 1997. Over time the level of secondary deprivation did fall for poor households from an average of 4.71 items to 4.10. The 1997 figure was thus 87% of the 1987 one. What is striking, however, is how much more modest the rate of improvement over time is for poor households compared to non-poor households. For the latter the level of secondary deprivation was halved over time. These differential rates of improvement meant that the disparity between poor and non-poor households increased dramatically over time. In 1987 the secondary deprivation level for poor households was 2.37 times that of non-poor households. By 1997 this ratio had risen to 4.18.

Figure 5.3: Secondary Deprivation Among Poor Households



In Table 5.12 we elaborate on the nature of this development by looking at the trend for individual secondary items. There are five items that show a significant improvement in the situation of poor households with regard to enforced absence. These are a telephone, central heating, ability to save, affording a newspaper, and presents for family and friends at least once a year. For a telephone and central heating the numbers experiencing enforced deprivation declines from over half to one in three. The other changes are more modest but still significant. However, in every case the *proportionate* change is smaller than among non-poor households and the disparity between such households increases. For a range of other items that comprise a car, a holiday and a hobby, no improvement was observed over the ten-year period, in fact there was a slight deterioration for poor households. Since the non-poor households experienced a forty per cent reduction in such deprivations over the same period the gap between poor and non-poor widened considerably.

Table 5.12: *Enforced Absence of Recently Defined Necessities by Poverty Status*

% experiencing Enforced Absence of Recently Defined Necessities				
	1987		1997	
	Poor	Non-Poor	Poor	Non-Poor
Telephone	57	26	34	7
Holiday	79	43.	86	26
Car	42	17	44	10
Central Heating	52.	26	39	8
Presents for friends and family at least once a year	41	7	34	3
Save	97	47	78	30
Newspaper	34	12	24	7
Hobby	34	8	34	5

The most significant change between 1987 and 1994 that is concealed by focusing solely on the number of households falling below the 60% income line and experiencing basic deprivation is thus not the emergence of a new group of poor households, but the widening disparity in living standards between poor and non-poor households. The extent of poverty has been reduced but its depth, in the sense of exclusion of poor households has been increased. This finding is clearly consistent with the diverging trends shown by real versus relative income poverty lines described in Chapter 3. If the rate of increase in average household incomes continues to outstrip that in social welfare incomes, this polarisation is likely to be exacerbated.

5.6 Conclusions

To summarise the results of this chapter, the 1997 Living in Ireland Survey reveals significant reductions in levels of deprivation since 1994. Focusing on items which in previous work we have taken as representing basic deprivation, 15% of households reported enforced lack of one or more of these items in 1997, down from 25% in 1994. These marked declines in deprivation between do not reflect selective attrition: those dropping out of the survey in subsequent years were not more likely to have reported deprivation in 1994 than those continuing to respond.

The percentage both experiencing basic deprivation and below the 60% relative income poverty line has fallen from 15% to 10% between 1994 and 1997 - having fallen only marginally, from 16% to 15%, between 1987 and 1994. The percentage below the 50% relative income line and experiencing basic deprivation has also fallen, though less sharply.

Households where the head is unemployed or working full-time in the home continue to be the most substantial groups among the poor when a combination of income and deprivation information is used. In terms of household composition, 45% of the households meeting the combined income/deprivation criteria contain children, significantly higher than when relative income lines were used though still down from 1994. Most of these poor households with children were either couples with three or more children or lone parents.

Given the way the global poverty target adopted in the NAPS has been framed, these results are clearly particularly salient. The decline in the numbers below the 60% or 50% relative lines and experiencing basic deprivation, with an unchanged set of deprivation indicators, represents an important and welcome development. However, it also gives rise to an important question about the poverty measure: does an unchanged set of indicators continue to adequately capture what is regarded as generalised deprivation as living standards rise? 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. It is therefore necessary to consider incorporating further items which, through changing attitudes and expectations "become necessities".

Information about views in the population as to which items from a broad range are seen as constituting necessities was gathered in the 1997 survey, as it had been in 1987 (though not 1994). Expectations in fact adjusted rapidly to the extent of possession of items. Five items in particular became available to a substantial majority of households between 1987 and 1997, and also came to be perceived as necessities by comparable numbers. These items are central heating, a telephone, a car, a colour TV and presents for friends and families once a year.

We then considered whether these additional five items should now be incorporated in the basic deprivation index, and consequently in the combined income and deprivation poverty measure. Factor analysis shows a striking similarity in the relationships between deprivation indicators in 1987 and 1994, with distinct basic, secondary and housing dimensions. Since these continue to be determined by rather different factors, this suggests that in the combined income and deprivation poverty measure we should restrict ourselves to the original basic deprivation items.

We also looked at the households who would come to be included among the poor if the basic deprivation index was broadened. 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 our original basic deprivation and income poverty criteria, on the other hand, have distinctively high levels of economic strain, psychological distress and fatalism. This provides some reassurance that the original set of basic items is more successful in capturing generalised deprivation than an expended set would be at this point.

For the shrinking group falling below the 60% line and experiencing basic deprivation, other forms of deprivation - in terms of what we have called secondary items - did also fall between 1987 and 1997. What is striking, however, is how much more modest that rate of improvement was for consistently poor households compared to non-poor households. For the latter the average score on our secondary deprivation index was halved between 1987 and 1994, and the disparity between poor and non-poor households increased dramatically. Both the numbers consistently poor and the extent of their poverty in terms of such secondary indicators has thus been falling, but the gap between them and the living standards enjoyed by the rest of society has in this sense been increasing.

Chapter 6

Microsimulation Projections from the 1994 Living in Ireland Survey

6.1 Introduction

So far, this study has been based on results from the 1997 Living in Ireland Survey. It is useful to complement these results with some projections from the base of the 1994 data using the tax/benefit simulation model SWITCH. This simulation approach can be used to explore the impact of tax and social welfare policies on poverty, and has the advantage of allowing us to look out to 2001, to see what the implications of following current policies might be for the extent of relative income poverty. Since we cannot project forward non-monetary deprivation indicators using the simulation model, it is not possible to directly focus on the combined income plus basic deprivation measure used in framing the National Anti-Poverty Strategy's global target. However, the results in terms of relative income poverty lines are themselves highly informative.

6.2 The Microsmulation Approach

Microsimulation models simulate the tax and benefit position of a large-scale sample of families, using micro-level data on individual and family incomes and other characteristics. They thus permit a representative picture to be constructed of the overall effects of a policy change, the characteristics of gainers and losers, the overall impact of a change on the distribution of income, and the impact on financial incentives to work. For present purposes, though, the key feature of these simulation models is that they can in addition be used to project forward, to see both the impact of a specified pattern of evolution for the tax and welfare systems, and also changes in the demographic and economic background.

The tax-benefit model used here is the latest version of SWITCH, the ESRI tax-benefit model, based on data from the 1994 *Living in Ireland Survey*. This model – initially based on the 1987 ESRI survey data - has been tested, developed and used in a wide range of analyses. (A detailed description of the structure and validation of the model is given in Callan, Richardson and Walsh, 1997). This model can be used to project what the extent of income poverty might be beyond the base date of 1994, in the following manner. First, one needs to specify how the parameters of the income tax and social welfare system – built into the model - are to change. Second, changes in the demographic profile of the population, the numbers employed versus unemployed, and the growth in incomes from different sources and

the change in the income distribution can be incorporated by altering the weights applied to different observations in the sample.

A set of weights has been calculated for the *Living in Ireland Survey*, as described in Appendix 1. These weights ensure that the sample for analysis is nationally representative in terms of the number of adults in the household, the number of earners, the socio-economic group and the age of the "household reference person", and the location of the household. In using the tax-benefit model, an additional reweighting procedure has recently been developed to ensure that the survey estimates meet a number of other constraints, primarily that the number of taxpayers in certain income bands matches the numbers reported in the Income Distribution Statistics of the Revenue Commissioners. The same reweighting approach can be further developed to produce projections from the 1994 base. Here we discuss a set of projections out to the year 2001, under specified assumptions.

The model database is adjusted to take account of changes between 1994 and 2001 in three main areas:

- the level and distribution of gross income is aligned with the pattern for 2001 currently being projected by the Revenue Commissioners;
- the level of male and female employment and the level of unemployment are aligned with those projected in the ESRI's latest medium-term forecasts (Duffy, Fitz Gerald, Kearney and Shortall, 1997);
- the total population by age and sex, and number of households, are aligned with those projected for 2001 in the ESRI Medium Term Review.

6.3 Tax/Welfare Scenarios

In framing an illustrative scenario for the tax and social welfare systems we have been guided by past practice and current policy pre-commitments. The pattern of past policy has been a mixture of cuts in the standard and top rates of tax, widening of the standard rate band, and increases in personal allowances. The multi-annual projections accompanying last year's Budget indicate a "prudent provision" for tax relief of the order of £250m per annum over the years 1999 and 2000. Here we consider how a package of measures with that cost which meets the commitments in the government parties' commitments in the *Action Programme for a New Millennium* to a cut in the standard tax rate from 24% to 22%, a cut of one percentage point in the top tax rate (to 45%), a widening of the standard rate band from £10,000 to £10,300 and an increase in personal allowances. (A tax scenario with the same net

Exchequer cost but concentrating the tax cuts on increasing allowances, as in the recent Budget, was also examined and made no substantive differences to the results presented here – reflecting the fact that those towards the bottom of the income distribution pay little income tax.)

In projecting forward an illustrative scenario for social welfare policy we also take account of some specific government commitments. The government's *Action Programme for a New Millennium* states that key priorities for the elderly will include substantial social welfare increases including an increase in the Old Age Pension to £100 per week over a five year period. Our benchmark scenario includes an increase consistent with reaching that target in 2002. On the possible evolution of other social welfare rates, we are again guided by the multi-annual projections and by past policy. The multi-annual projections indicate possible provision for extra expenditure of £120m per annum on a full year basis. Historically, much of such expenditure has been on social welfare increases. Empirically, this amount would allow for a general increase in welfare rates somewhat higher than inflation, but lower than the growth in average incomes - the broad pattern which has been observed in the past five years or so.

6.4 The Impact on Relative Income Poverty

Combining this social welfare scenario with the tax scenario just outlined, we can estimate the likely impact on relative poverty - the proportion of persons in households falling below 40%, 50% and 60% of average income. (Since we cannot project forward non-monetary deprivation indicators using the simulation model, it is not possible to directly focus on the combined income plus basic deprivation measure used in framing the National Anti-Poverty Strategy's global target). Table 6.1 shows the results from this projection for 2001 compared with the 1994 base. (Note that since for consistency all the figures have to be based on *simulated* tax and social welfare entitlements, the results for 1994 are slightly different from those shown in Chapter 3, which are based on actual tax and welfare receipts). The results suggest that under these circumstances, the percentage falling below half average income, or the lower poverty cut-off of 40% of average income, would rise over the 1994-2001 period, while the proportion below 60% of average income would be roughly constant.

Table 6.1: *Percentage of Persons Below Relative Income Poverty Lines, 1994 and Projected 2001 Under Specified Assumptions*

% of persons below	*1994*	*2001*
40% of average income	5.8	11.5
50% of average income	18.7	21.6
60% of average income	31.9	31.8

It must be emphasised that this projection to 2001 takes account of the likely fall in unemployment and rise in employment, as well as the special increases for social welfare pensioners to which the government is committed. This reflects the fact that the incomes of people relying on social welfare (including many pensioners, widows, lone parents and those who are ill or disabled, as well as the unemployed) would fall relative to average income if present policies are continued. These results appear entirely consistent with the preliminary results for 1997 in terms of relative income poverty described above. They bring out in an even more direct way the crucial role, as far as relative income poverty rates are concerned, of the evolution of social welfare income support rates relative to other incomes in society.

6.5 Conclusions

This chapter complements the results from the 1997 Living in Ireland Survey presented in the rest of the report with some projections from the base of the 1994 Living in Ireland data using the tax/benefit simulation model SWITCH. This simulation approach has the advantage of allowing us to look out to 2001, to see what the implications of following current policies might be for the extent of relative income poverty. Since we cannot project forward non-monetary deprivation indicators using the simulation model, it is not possible to directly focus on the combined income plus basic deprivation measure used in framing the National Anti-Poverty Strategy's global target, so the results are in terms of the numbers falling below relative income poverty lines.

In framing an illustrative scenario for the tax and social welfare systems we have been guided by past practice and current policy commitments including those in the government parties' *Action Programme for a New Millennium,* notably for cuts in tax rates and increases in social welfare old age pensions. Results from this projection for 2001 compared with the 1994 base suggest that under these circumstances, the percentage falling below 40% or 50%

relative income poverty lines would rise over the 1994-2001 period, while the proportion below 60% of average income would be roughly constant. This highlights the crucial role, as far as relative income poverty rates are concerned, of the evolution of social welfare income support rates relative to other incomes in society.

Chapter 7

Revising the National Anti-Poverty Strategy Global Poverty Target?

7.1 Introduction

The global poverty reduction target is absolutely central to NAPS, and the fact that Ireland now has such an official poverty target represents a major step forward. We have detailed in this study how different measures of poverty have been evolving up to 1997. This included the numbers who are both below relative income poverty lines and experiencing basic deprivation, which is the way in which the global target was framed in the Strategy Statement. It is worth quoting that target in full once again:

> Over the period, 1997-2007, the National Anti-Poverty Strategy will aim at considerably reducing the numbers of those who are "consistently poor" from 9 to 15% to less than 5 to 10%, as measured by the ESRI.

We have seen that in 1994, 15% of persons were found to be in households with incomes below 60% of the average and experiencing such deprivation, while the corresponding figure but using half average income as the cut-off was 9%. By 1997, if the set of items constituting the measure of basic deprivation is unchanged, these figures were down to 10% and 7% respectively. Since 1997 represents the date from which the NAPS was launched, this means that the numbers measured as "consistently poor" in this way were in fact rather lower at that point than envisaged, and the question of rebasing the global poverty target then arises.

7.2 The Purpose of Poverty Targets

In considering this question, it is worth stepping back to ask several basic questions. First, what is setting a global poverty target, and monitoring success in achieving it, intended to achieve? What sort of indicators would then be most satisfactory for monitoring purposes? We believe the answers to these questions point towards the desirability of both rebasing the global poverty targets initially adopted by NAPS, and reformulating them as a set of interlinked targets reflecting different dimensions of poverty.

In our view, the fact that through the NAPS the government acknowledges its responsibility for reducing the overall extent of poverty is the single most important element of the strategy. It is by setting out explicitly an overall standard against which success or

failure of the national effort to combat poverty can be assessed - both by those framing policy and the general public – that this is given content and meaning. The adoption of a national poverty target alters the nature of the national discourse on poverty and the way anti-poverty policies are assessed. The poverty targets become the touchstone for discussion and debate. Without such a standard, it is all too easy to concentrate on specific policy measures which, however valuable in themselves, do not match the scale of the problem. The poverty target should also serve as a very important lever for institutional change, with each government department, State agency and local and regional authority having to address the question of poverty and develop mechanisms for "poverty proofing" policy decisions.

The parallel with unemployment is a direct one. The government, by adopting an action plan incorporating quantitative targets for reducing the overall rate of unemployment, has acknowledged responsibility for ensuring that adequate resources are directed towards achieving that end, and that both specific policies and the policy framework are adapted accordingly. This parallel is also helpful in thinking about the nature of the exercise in setting and monitoring targets. Measuring the precise level of unemployment at a given point in time is problematic, at the conceptual level one can think of a range of alternative or complementary measures, and empirically the available data allow only some of these to be implemented. Setting and monitoring an overall unemployment target to be attained over a certain period does not require that everyone agrees on a single best measure of unemployment, to apply in all circumstances and to the exclusion of all other information. Instead, what is essential is that there be general acceptance that achieving the target as specified represents a very significant move in the right direction, that substantial and sustainable progress has been made. Having registered such progress, the precise manner in which the target is framed and monitored may be revisited as necessary.

7.3 The Nature of the Poverty Measures

These considerations have just as much relevance in the context of poverty targets, but applying them is more difficult, for two reasons. The first is that there is a greater degree of uncertainty, and perhaps less societal consensus, about what the underlying concept actually means in the case of poverty. The second is that empirical measurement is less developed, so there is probably an even greater degree of imprecision in available measures of poverty than of unemployment. The implications for framing poverty targets need to be thought through carefully. Obtaining widespread agreement on the broad definition, the general meaning to be

attributed to the term poverty, has not so far proved to be a major obstacle. The Strategy itself has set out a clear definition of poverty, quoted above, in terms of exclusion due to lack of resources from participation in activities considered the norm for other people in society. While some might quarrel with the resolutely relative conceptualisation spelt out in that definition, it emerged from a lengthy consultative process and has been accepted by successive governments.

Translating this definition into a target which commands widespread acceptance, and which serves the purposes outlined above, is not easy. The Strategy chose to focus on the measures of the numbers "consistently poor", below both relative income poverty lines and experiencing basic deprivation, developed in our earlier work and described in detail in Chapter 5. It did not set out an explicit justification for this choice of target and measure. Some have criticised the target for being insufficiently ambitious in the scale of the reduction sought, and indeed for not concentrating entirely on the numbers below relative income lines. Others criticise the inclusion of the relative income line component, regarding this as a measure of inequality rather than poverty, and would prefer to concentrate entirely on the deprivation measures or on real rather than relative income standards.

It is worth briefly reiterating what our combined income and deprivation measure is intended to achieve, in order to assess its suitability as the basis for the global poverty reduction target. Income-based poverty lines can be seen as focusing wholly on the "resources" element of the poverty definition, but not everyone on low income at a point in time is necessarily experiencing generalised deprivation. Our earlier research brought out the extent to which households' current living standards are influenced not only by current income but also by resources and experiences (particularly in the labour market) over a long period. Combining low income with suitable direct indicators of deprivation - items generally regarded as necessities, which individuals or families must do without because they "cannot afford" them – provides a more reliable measure of current exclusion arising from lack of resources than income alone. Of the indicators available to us, those we called indicators of "basic deprivation" appeared to be the most satisfactory "markers" for generalised deprivation or exclusion. When we looked at other features which one might expect to be associated with this sort of exclusion – such as very low levels of savings and high levels of subjective dissatisfaction and psychological distress - the combined low income and basic deprivation measure captured households at these extremes more successfully than low income on its own.

In using the combined income and deprivation measure to monitor poverty trends over time, these conceptual underpinnings highlight the need to adapt and augment the non-monetary deprivation indicators, to reflect changing living standards, expectations and perceptions about what constitute necessities. The combined measure was never intended to be a mixture of relative (income) and absolute or fixed (deprivation indicators) elements. However, only a limited set of indicators is available in the household surveys to implement such an adaptation over time. Some of the basic items employed are broad rather than specific, and respondents' interpretations of what is entailed will probably change over time - for example, what is taken to constitute going without a "substantial meal" or going into debt to meet "everyday expenses". This is not in itself likely to be sufficient to capture changing perceptions over time. One would like to capture incremental changes over time in attitudes about what constitutes necessities and in the way items cluster together, and gradually augment the set of basic indicators accordingly. In practice, we start with a set of 8 basic items, and have only 15 others as candidates for inclusion. We have explored in Chapter 5 the manner in which extra items might be included in the basic index, and there is considerable scope to do so, though ideally one would like to be able to draw on a broader set of indicators.

An element of judgement is necessarily involved in making such adjustments to the basic deprivation measure, which may affect the precise level of the poverty measure at a particular point in time. While less serious in a measure aiming to capture broad directions and trends in poverty, this may be seen as a problem in a poverty target. It would also be undesirable in the latter context for changes in the key poverty number to be perceived as emerging from a "black box", given the importance of public acceptance of and identification with the poverty target. The fact that basic deprivation is measured in terms of items with which people can readily identify – such as not being able to heat one's house or have adequate clothing – we regard as a key argument for using deprivation indicators in the first place. In the same vein it is essential to ensure maximum transparency in the process of adapting the items over time as that becomes necessary, which it undoubtedly will at some point.

The other difficulty with the combined income and deprivation measure as the sole poverty target is specific to Ireland's current situation. If a global poverty reduction target framed in terms of the combined income/deprivation poverty measure is to be reached it seems likely that in normal circumstances other measures, such as the numbers in relative income poverty, would also have to be falling. The unusual situation in which that may not

hold is when average incomes are growing exceptionally rapidly, when those on low incomes share in that growth and see their real living standards rise significantly, but when they lag somewhat behind the mean. Of course, this is precisely what has been happening in Ireland over the period we have been studying. Deprivation levels can then be falling while relative income poverty is rising. Even augmenting the set of deprivation measures to take into account changing expectations may not then be enough to alter this picture, since expectations themselves probably lag behind such rapid income growth.

This could be seen as simply a problem with the measure which using a purely relative income poverty standard such as half average income would avoid. However, if it is to achieve its core objective the national poverty target has to be seen as broadly acceptable by the general public. We suspect that when deprivation is falling markedly, many people may not simply regard an increase in numbers falling below a relative income line as an unambiguous increase in poverty. Over a lengthy period when living standards stabilise, societal expectations may indeed catch up and adjust fully to higher average incomes. Higher real incomes and lower deprivation levels, however welcome, would not then mean that everyone was able to participate fully in society: they would not represent a sustained reduction in poverty. In the shorter term, however – over which a poverty target may be operating – the fact that real and relative income levels are diverging so markedly cannot be simply ignored. The key challenge in setting and monitoring poverty targets is to capture these realities, but also take into account the long-term consequences of lower incomes lagging behind the average.

7.5 Revisiting the Poverty Target

At a minimum, this means that a poverty target should be re-based regularly, perhaps every five years or so, rather than cast in stone. As far as the combined income and deprivation poverty measure is concerned, its 1997 (rather than 1994) level could be taken as the baseline for NAPS purposes, and a target reduction for the period to 2002 rather than for the ten years to 2007 specified. Changes between 1994 and 1997 would thus have been incorporated, and adjustment of the deprivation element of the measure over the relatively short period to 2002 would also be less of an issue.

More fundamentally, though, it may be worth broadening the scope of the poverty target to encompass more distinct elements. As well as the combined income/deprivation measure, one could have distinct targets for the key elements underpinning it. 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. A/ reflects the assumption that if real incomes of the poor are falling and their deprivation levels rising, then even if their relative positions were improving most people would see poverty as increasing. B/ reflects the assumption that the combined effect of changes in relative incomes and deprivation should be to reduce the extent of what is regarded as exclusion at a point in time. C/ reflects the assumption that in the long term, people will not be able to participate in what comes to be regarded as ordinary living standards if their incomes fall too far below the average: a sustained reduction in poverty can then be achieved only by bringing them closer to average incomes.

There is a real dilemma here. Atkinson (1997), in calling for the introduction of an official poverty target in the UK, advocates an annual Poverty Report presenting a range of information as well as an informed commentary: one of its objectives would be to divert attention from a single number. From an analytical point of view, and in order to inform both the policy-makers and the public as fully as possible, this makes perfect sense. From a political perspective, however, a key element in the exercise is to have a national commitment to attaining a clearly-articulated target, with regular monitoring of performance crucial to the credibility of that commitment and of the government's anti-poverty strategy. This means that there has to be a headline number, or very limited set of numbers, against which success or failure will be judged. So the way in which the official target is framed is still critical. It has

to try to meet the need for a headline number, but still seek to encapsulate key elements of the complexity of the underlying reality.[8]

Similar considerations apply in considering some other aspects of the way the targets are framed. In constructing relative income poverty lines, for example, a case can be made for using the median rather than the mean of the distribution as the reference point. The mean can be sensitive to movements at either end of the distribution, with the median generally being more stable over time, but the mean still has an appeal in terms of transparency. One could also make an argument for specific targets for certain sub-groups, such as the elderly or those with disabilities for example, which take into account special features of their situation. Once again, though, the cost if this involves moving away from a clearly-articulated overall is a real one.

Finding the appropriate balance will be difficult, and the aim of our discussion here has been to clarify the issues and contribute to both the work of the Inter-Departmental Committee and to broader public debate on these complex questions.

[8] See also Nolan (1999) for a discussion of these issues.

Chapter 8

Conclusions

8.1 Purpose of the Study

The National Anti-Poverty Strategy set out a number of goals to be achieved over the decade to 2007, together with the broad policy directions which would be required to work towards these goals, based on an understanding of the extent and nature of poverty and social exclusion in Ireland. Chief among these explicit objectives was the global poverty reduction target. The global poverty reduction target is framed in terms of a measure of poverty incorporating both low income and manifest deprivation - in terms of what are widely regarded as basic necessities - developed at the ESRI. The extent of poverty on this basis as the Strategy was initiated was based on ESRI research carried out using the 1994 Living in Ireland Survey.

In order to be able to monitor the Strategy's success in meeting its overall poverty reduction target, and to understand how poverty is evolving through time, it is essential to have up-to-date measures of poverty. The present study for the NAPS Inter-Departmental Policy Committee seeks to provide an updated picture of trends in poverty since 1994, using results from the 1997 round of the Living in Ireland Survey. In addition, a microsimulation projection approach (on the 1994 base) is used to see the likely impact of major changes in policy and the macroeconomic environment up to 2001. This is intended to be an important contribution to on-going development of the anti-poverty strategy.

8.2 The 1997 Living in Ireland Survey

The Living in Ireland survey is the Irish element of the European Community Household Panel (ECHP) which is being funded and co-ordinated by the European Statistical Office (Eurostat) in most of the EU member states. The aim of panel surveys is to follow a large random sample of households through time, so the original 1994 sample has been sought out for re-interview in each year since then. The sample for 1997 analysed in this report comprises the fourth wave of the ECHP in Ireland. Additional information has been incorporated into the Irish surveys over and above that required by Eurostat, particularly with respect to income currently being received by each respondent, in order to make possible inter alia the measurement of poverty in Ireland across time in a consistent and satisfactory manner.

Particular attention was devoted to the representativeness of these samples, and assessment of any possible biases associated with the fact that 1997 is the fourth wave in a panel survey. The evidence presented does not suggest that households with specific characteristics related to the measurement of poverty and income distribution were selectively lost from the sample.

8.3 The Numbers Below Relative Income Poverty Lines

As in our previous studies with 1994 and 1987 data we have used a range of relative income lines and equivalence scales, applied here to the data from the 1997 Living in Ireland Survey. The main finding is that the percentage of persons or households below relative income poverty lines was generally higher, and in no case markedly lower, in 1997 than in 1994. About one in five persons were below half average income in 1997. Poverty measures taking into account not only numbers below the lines but how far their incomes are below the line rose sharply between 1994 and 1997: in that sense the depth of relative income poverty is increasing, having fallen between 1987 and 1994. There has been a further sharp decline since 1994 in the percentage of persons falling below a "real income" line set at 60 per cent of average equivalent income in 1987 and up-rated in line only with prices, but such a marked decline was not seen with lower "real" lines.

8.4 Who Is Below Relative Income Poverty Lines?

Between 1994 and 1997 the risk of being below half average income rose rapidly for single person households, and fell for some types of households with children. The result was that households containing children comprised 55% of all households below the 50% relative income line in 1994, but this had fallen to only 35% over the short period to 1997. The risk of relative income poverty remained very high for households headed by an unemployed person, but the numbers in that situation declined as the unemployment rate fell sharply. Households headed by a retired person or someone "in home duties", on the other hand, saw their risk of relative income poverty rise and comprised an increasing share of households below half average income. Households headed by an employee also saw the risk of relative income poverty rose at both 50% and 60% lines.

The risk of being below the 50% or 60% line rose markedly between 1994 and 1997 for households where the head is aged 65 or over, with almost 60% of those households below the highest line in 1997. For children, the risk of relative income poverty fell with both

the 50% and 60% lines, while that for adults increased. The decline in unemployment will have contributed to an improvement in the position of families with children, while the increasing risk for adults is influenced by the deterioration in the relative position of the elderly. The net impact is a significant narrowing in the gap which had been present in 1994 (and 1987) between the poverty risk of children versus adults.

8.5 Poverty Using Income and Non-monetary Indicators

The 1997 Living in Ireland Survey reveals significant reductions in levels of deprivation since 1994. Focusing on items which in previous work we have taken as representing basic deprivation, 15% of households reported enforced lack of one or more of these items in 1997, down from 25% in 1994. These marked declines in deprivation do not reflect selective attrition: those dropping out of the survey in subsequent years were not more likely to have reported deprivation in 1994 than those continuing to respond.

The percentage both experiencing basic deprivation and below the 60% relative income poverty line has fallen from 15% to 10% between 1994 and 1997 - having fallen only marginally, from 16% to 15%, between 1987 and 1994. The percentage below the 50% relative income line and experiencing basic deprivation has also fallen, though less sharply. Since the global poverty target adopted in the NAPS has been framed in terms of these measures of poverty, these results are clearly particularly salient.

Households where the head is unemployed or working full-time in the home continue to be the most substantial groups among the poor when a combination of income and deprivation information is used. In terms of household composition, 45% of the households meeting the combined income/deprivation criteria contain children, significantly higher than when relative income lines were used though still down from 1994. Most of these poor households with children were either couples with three or more children or lone parents. Households headed by a retired person comprise a significantly smaller proportion of those below the 60% line and experiencing basic deprivation than those simply under the 60% relative line.

The decline in the numbers below the 60% or 50% relative lines and experiencing basic deprivation, with an unchanged set of deprivation indicators, represents an important and welcome development. However, it also gives rise to an important question about the poverty measure: does an unchanged set of indicators continue to adequately capture what is regarded as generalised deprivation as living standards rise? 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. We therefore considered incorporating further items which, through changing attitudes and expectations have "become necessities".

Information about views in the population as to which items from a broad range are seen as constituting necessities was gathered in the 1997 survey, as it had been in 1987 (though not 1994). Expectations in fact adjusted rapidly to the extent of possession of items, with five items in particular becoming available to a substantial majority of households between 1987 and 1997, and also coming to be perceived as necessities by comparable numbers. These items are central heating, a telephone, a car, a colour TV and presents for friends and families once a year.

Factor analysis showed a striking similarity in the relationships between deprivation indicators in 1987 and 1994, with distinct basic, secondary and housing dimensions, suggesting that in the combined income and deprivation poverty measure we should restrict ourselves to the original basic deprivation items. We also looked at the households who would come to be included among the poor if the basic deprivation index was broadened. 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 our original basic deprivation and income poverty criteria, on the other hand, have distinctively high levels of economic strain, psychological distress and fatalism. This provides some reassurance that the original set of basic items is more successful in capturing generalised deprivation than an expanded set would be at this point.

For the shrinking group falling below the 60% line and experiencing basic deprivation, deprivation in terms of what we have called secondary items also fell between 1987 and 1997, but at a much more modest rate than for non-poor households so the disparity between poor and non-poor households increased dramatically. Both the numbers consistently poor and the extent of their poverty in terms of such secondary indicators have thus been falling, but the gap between them and the living standards enjoyed by the rest of society has in this sense been increasing.

8.6 Results from A Microsimulation Approach

The results from the 1997 Living in Ireland Survey were supplemented with some projections from the base of the 1994 Living in Ireland data using the tax/benefit simulation

model SWITCH. This simulation approach has the advantage of allowing us to look out to 2001, to see what the implications of following current policies might be for the extent of relative income poverty. Since we cannot project forward non-monetary deprivation indicators using the simulation model, it is not possible to directly focus on the combined income plus basic deprivation measure used in framing the National Anti-Poverty Strategy's global target, so the results are in terms of the numbers falling below relative income poverty lines.

In framing an illustrative scenario for the tax and social welfare systems we have been guided by past practice and current policy commitments including those in the government parties' *Action Programme for a New Millennium,* notably for cuts in tax rates and increases in social welfare old age pensions. Results from this projection for 2001 compared with the 1994 base suggest that under these circumstances, the percentage falling below 40% or 50% relative income poverty lines would rise over the 1994-2001 period, while the proportion below 60% of average income would be roughly constant. This highlights the crucial role, as far as relative income poverty rates are concerned, of the evolution of social welfare income support rates relative to other incomes in society.

8.7 The Poverty Target

The global poverty reduction target is absolutely central to NAPS, and the fact that Ireland now has such an official poverty target represents a major step forward. The adoption of a national poverty target alters the nature of the national discourse on poverty and the way anti-poverty policies are assessed. The poverty targets become the touchstone for discussion and debate. Without such a standard, it is all too easy to concentrate on specific policy measures which, however valuable in themselves, do not match the scale of the problem. The poverty target also serves as a very important lever for institutional change, with each government department, State agency and local and regional authority having to address the question of poverty and develop mechanisms for "poverty proofing" policy decisions.

Arriving at a poverty target which commands widespread acceptance, and which serves these purposes, is not easy. To remain relevant a poverty target should be re-based regularly, perhaps every five years or so, rather than cast in stone. As far as the combined income and deprivation poverty measure is concerned, its 1997 (rather than 1994) level could be taken as the baseline for NAPS purposes, and a target reduction for the period to 2002 rather than for the ten years to 2007 specified. Changes between 1994 and 1997 would thus

have been incorporated, and adjustment of the deprivation element of the measure over the relatively short period to 2002 would also be less of an issue.

More fundamentally, though, it may be worth broadening the scope of the poverty target to encompass more distinct elements. As well as the combined income/deprivation measure, one could have distinct targets for the key elements underpinning it. 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;

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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.

The poverty target has to try to meet the need for a "headline" number, but still seek to encapsulate key elements of the complexity of the underlying reality. Finding the appropriate balance will be difficult, and the aim of our discussion here has been to clarify the issues and contribute to both the work of the Inter-Departmental Committee and to broader public debate on these complex questions.

Appendix 1

Reweighting the 1994 and 1997 Samples

Sample Weights for the 1994 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 or to differential response rates. 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, Community and Family Affairs, and so on.

This approach was employed in developing weights for the 1994 Living in Ireland Survey, and the main elements in the reweighting scheme adopted in 1994 were as follows:

Step 1: Adjustment for Farm Households

Among farm households the response rate for small farmers is substantially lower than that of large farmers. Consequently, the first reweighting step adjusted the sample structure of farming households in line with the population structure derived from the Census of Agriculture.

Step 2: Weights Adjusting the Distribution of Households

This step adjusted the distribution of households in the effective sample with reference to independent population estimates provided by the Central Statistics Office in the form of detailed cross-tabulations from the Labour Force Survey. A five-way weighting matrix was used, based on the number of adults in the household, the number of persons at work, socio-economic group, age and location.

Step 3: Weights Correcting for the Distribution of Persons

The third step in the weighting procedure involved using the weight derived in the first two steps to adjust for the distribution of *persons*. This involved assigning the *household*-level weight of Steps 1 and 2 to each *individual* in the sample, deriving a weighted sample distribution of *persons* according to sex, age and marital status, and comparing this

with the distribution of *persons* from the Labour Force Survey. Ratio weights were then derived on the basis of the population and weighted sample distributions so as to bring the latter into line with the former. Household and individual weights were then re-estimated using an iterative procedure.

Sample Weights for the 1997 Data

As well as using external information to develop weights as we did for the 1994 survey, in subsequent waves of a panel or longitudinal survey one can also compare the characteristics of the individuals and households successfully followed with 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 details of this weighting process are now described. The same procedure was used in developing the weights for Waves 2, 3 and 4, but in the discussion below we will focus on the Wave 4 (1997) weights.

The household weights were developed in a number of steps:

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. In constructing the Wave 4 weights, for instance, the Wave 3 household weight was carried forward to the Wave 4 sample. The characteristics of all Wave 4 households (including the newly-generated households)[9] were compared to those of all completed Wave 4 households. Since no information was available on the Wave 4 characteristics of non-completed households, the Wave 3 characteristics were used[10]) in comparing the two groups. The household characteristics examined were household size, number of adults over 18 years; number over age 65; number at work; number unemployed; number of males and females in each of 11 age groups; number of males and females in each of (a) 11 age/marital status categories, (b) 9 economic status categories, (c) 5 socio-economic groups, and (d) 4 broad levels of education; and number of recipients of 12 different social welfare payments. In addition, the corresponding

[9] 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. In either case, the individual is followed and interviews are conducted in the 'newly-generated' household. Note that in checking for sample attrition effects we included households that would not have been eligible for inclusion in Wave 4 – either because the household members died, moved to an institution or moved outside the EU.

characteristics of the 'head' of household[11] were examined: age group, sex, level of education, socio-economic status, socio-economic group and marital status. Also included were the urban/rural location of the household in Wave 3 (Dublin, other urban and rural), the poverty status and equivalised income decile in Wave 1 (this information had not yet been computed for Wave 3) household, whether the household had moved since the previous wave, and whether the household was a split household in Wave 4.

In general, as we saw above, the distribution of the characteristics examined was very similar for the responding and non-responding Wave 4 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 3 household weights so that the distribution of each of the characteristics for the responding Wave 4 households was equal to the distribution of these characteristics for the total sample. The Gross program written by Johanna Gomulka of the London School of Economics 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 3 and the totals for all households (responding and non-responding, with the Wave 3 weight applied) were used as the control totals.

The next step was to apply external checks to the household weights using data from the 1997 Labour Force Survey and other sources, such as the Department of Social, Community and Family Affairs published statistics on social welfare recipiency levels. At this stage we compared the current characteristics of the completed Wave 4 sample to those of external sources. Even if there was no sample attrition between waves, some adjustment to the household weights would be needed at this point because the inclusion of newly-generated households and their members has an impact on the structure of the sample. This is principally by adding more newly-formed households which tend to have an over-

[10] In the case of newly-generated households, the Wave 3 characteristics of the household the individual(s) moved from were used.

[11] The 'head' was taken as the household reference person (the person responsible for the accommodation). If a couple was responsible for the accommodation, the characteristics of the male partner were used.

representation of young, single adults. The first stage in this external comparison involved using a special tabulation of the 1997 Labour Force Survey which was obtained from the Central Statistics Office. This classified households along six dimensions: number of adults in household (6 categories), location (Dublin, other urban and rural), number of individuals at work (0, 1 and 2 or more), socio-economic group of household head (agriculture/fishing; professional/managerial; other non-manual; manual; and 'not stated'); whether the household contains any persons age 65 or over; and whether the head is under age 25. The cells of the table were used to adjust the Wave 4 household weights, and further adjustments were made according to the marginal distributions on each of these variables.

The second stage in constructing the Wave 4 household weights was to adjust the weights from the previous stage to control for characteristics of individuals obtained from the Labour Force Survey microdata for 1997 and from the Department of Social, Community and Family Affairs' published report on Social Welfare Statistics for 1997. The external population characteristics used were household size, number of adults in the household, urban-rural location, socio-economic group of the household head, presence of individuals age 65 or over, whether the head is under age 25, number of males and females in each of 10 age groups, in each of 11 age/marital status groups, and in each of 8 principal economic status categories, number of recipients of each of 12 major types of social welfare payment, and size of farm for farm households. (Again, the Gross programme was used, with the initial weight being the household weight from the previous step and the control totals derived from the LFS and the Department of Social, Community and Family Affairs' Statistics.)

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 4 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 2-4 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.

Table A1.1 shows selected characteristics of all households in 1997 as estimated from the LFS data and with figures on social welfare recipiency from the Department of Social, Community and Family Affairs' published statistics, and the characteristics of the sample households from Wave 4 of the Living in Ireland Survey with the sample attrition weights

applied, and with the final household weights applied. This shows that the weighting procedure results in a very close match in terms of the controls used.

Table A1.1: Adjustment to Wave 4 Household Weights using External Population Data (from Labour Force Survey 1997, and Department of Social, Community and Family Affairs' Statistics).

		A.Population	B. Pct	C. Weighted Survey Data	D. Pct	E. Diff (D-B)	F. Diff2 (C-A)/A
Total Hsds		1,191,927	100.0%	1,191,927	100.0%	0.0%	0.0%
Household Size	One person	269,706	22.6%	269,705	22.6%	0.0%	0.0%
	2-person	288,507	24.2%	288,532	24.2%	0.0%	0.0%
	3-person	189,404	15.9%	189,404	15.9%	0.0%	0.0%
	4-person	204,805	17.2%	204,790	17.2%	0.0%	0.0%
	5+ persons	239,505	20.1%	239,495	20.1%	0.0%	0.0%
Location	Dublin	368,929	31.0%	368,874	30.9%	0.0%	0.0%
	Other Urban	377,552	31.7%	377,529	31.7%	0.0%	0.0%
	Rural	445,446	37.4%	445,525	37.4%	0.0%	0.0%
N At work	None	374,981	31.5%	374,901	31.5%	0.0%	0.0%
	One at work	425,116	35.7%	425,184	35.7%	0.0%	0.0%
	2+ at Work	391,830	32.9%	391,843	32.9%	0.0%	0.0%
Number over age 65	One or more	298,927	25.1%	298,921	25.1%	0.0%	0.0%
	None	893,000	74.9%	893,006	74.9%	0.0%	0.0%
Head Age	Under 25	19,543	1.6%	19,553	1.6%	0.0%	0.1%
	Over 25	1,172,384	98.4%	1,172,374	98.4%	0.0%	0.0%
Individuals: Total		3,604,957	100.0%	3,604,957	100.0%	0.0%	0.0%
N Females by Age	Under 15	444,623	12.3%	444,623	12.3%	0.0%	0.0%
	16-19	133,111	3.7%	133,111	3.7%	0.0%	0.0%
	20-24	145,766	4.0%	145,766	4.0%	0.0%	0.0%
	25-34	266,646	7.4%	266,646	7.4%	0.0%	0.0%
	35-44	252,797	7.0%	252,797	7.0%	0.0%	0.0%
	45-54	223,357	6.2%	223,357	6.2%	0.0%	0.0%
	55-59	60,538	1.7%	60,538	1.7%	0.0%	0.0%
	60-64	69,144	1.9%	69,144	1.9%	0.0%	0.0%
	65-70	63,714	1.8%	63,714	1.8%	0.0%	0.0%
	70+	148,370	4.1%	148,370	4.1%	0.0%	0.0%
N males by age	Under 15	469,006	13.0%	469,006	13.0%	0.0%	0.0%
	16-19	139,958	3.9%	139,958	3.9%	0.0%	0.0%
	20-24	151,322	4.2%	151,322	4.2%	0.0%	0.0%
	25-34	260,969	7.2%	260,969	7.2%	0.0%	0.0%
	35-44	248,278	6.9%	248,278	6.9%	0.0%	0.0%
	45-54	228,640	6.3%	228,640	6.3%	0.0%	0.0%
	55-59	62,230	1.7%	62,230	1.7%	0.0%	0.0%
	60-64	68,581	1.9%	68,581	1.9%	0.0%	0.0%
	65-70	59,368	1.6%	59,368	1.6%	0.0%	0.0%
	70+	108,539	3.0%	108,539	3.0%	0.0%	0.0%

Table A1.1 (continued)

Females, Age	< 30, Married	61,765	2.2%	61,758	2.2%	0.0%	0.0%
and Marital Status	<30, Single	380,845	13.8%	380,900	13.8%	0.0%	0.0%
	30-44, Mar.	288,401	10.5%	288,374	10.4%	0.0%	0.0%
	30-44, Single	68,828	2.5%	68,834	2.5%	0.0%	0.0%
	45-64, Mar.	267,938	9.7%	267,907	9.7%	0.0%	0.0%
	45-64, Single	32,051	1.2%	32,050	1.2%	0.0%	0.0%
	<65, Widow	36,181	1.3%	36,205	1.3%	0.0%	0.1%
	65+, Married	75,472	2.7%	75,479	2.7%	0.0%	0.0%
	65+, Single	29,941	1.1%	29,932	1.1%	0.0%	0.0%
	65+, Widow	103,928	3.8%	103,931	3.8%	0.0%	0.0%
	All, Div./Sep.	51,370	1.9%	51,391	1.9%	0.0%	0.0%
Males, Age	< 30, Married	39,113	1.4%	39,106	1.4%	0.0%	0.0%
and Marital Status	<30, Single	418,865	15.2%	418,858	15.2%	0.0%	0.0%
	30-44, Mar.	271,882	9.9%	271,864	9.9%	0.0%	0.0%
	30-44, Single	90,873	3.3%	90,893	3.3%	0.0%	0.0%
	45-64, Mar.	279,808	10.1%	279,785	10.1%	0.0%	0.0%
	45-64, Single	54,863	2.0%	54,884	2.0%	0.0%	0.0%
	<65, Widow	11,410	0.4%	11,410	0.4%	0.0%	0.0%
	65+, Married	103,948	3.8%	103,940	3.8%	0.0%	0.0%
	65+, Single	33,205	1.2%	33,214	1.2%	0.0%	0.0%
	65+, Widow	28,130	1.0%	28,128	1.0%	0.0%	0.0%
	All, Div./Sep.	30,778	1.1%	30,780	1.1%	0.0%	0.0%
Social Welfare	Unemp. Assi.	167,735	6.1%	167,676	6.1%	0.0%	0.0%
(as Pct of pop15+)	Unemp Ben.	63,914	2.3%	63,915	2.3%	0.0%	0.0%
	OAP-Con./RP	141,815	5.1%	141,795	5.1%	0.0%	0.0%
	OAP-Non-con	98,835	3.6%	98,815	3.6%	0.0%	0.0%
	Pre-Retir All.	13,647	0.5%	13,641	0.5%	0.0%	0.0%
	Widow-Con.	97,340	3.5%	97,311	3.5%	0.0%	0.0%
	Widow Non-c	18,786	0.7%	18,786	0.7%	0.0%	0.0%
	Lone Parent	58,960	2.1%	58,956	2.1%	0.0%	0.0%
	Carer's Allow	10,196	0.4%	10,201	0.4%	0.0%	0.0%
	Disability Ben	43,957	1.6%	43,949	1.6%	0.0%	0.0%
	Invalidity Pen	43,633	1.6%	43,634	1.6%	0.0%	0.0%
	DPMA	43,192	1.6%	43,193	1.6%	0.0%	0.0%
N Females by	At work	511,567	18.5%	511,692	18.5%	0.0%	0.0%
PES	Unemployed	37,883	1.4%	37,901	1.4%	0.0%	0.0%
	Seeki 1st job	10,690	0.4%	10,678	0.4%	0.0%	-0.1%
	Educ/Train	181,847	6.6%	181,822	6.6%	0.0%	0.0%
	Home Duties	585,844	21.2%	585,756	21.2%	0.0%	0.0%
	Retired	53,058	1.9%	53,078	1.9%	0.0%	0.0%
	Disabled	15,831	0.6%	15,834	0.6%	0.0%	0.0%
	Other		0.0%	0	0.0%	0.0%	
N Males by	At work	829,724	30.1%	829,749	30.1%	0.0%	0.0%

PES	Unemployed	111,191	4.0%	111,154	4.0%	0.0%	0.0%
	Seeki 1st job	20,296	0.7%	20,283	0.7%	0.0%	-0.1%
	Educ/Train	175,967	6.4%	175,954	6.4%	0.0%	0.0%
	Home Duties	9,236	0.3%	9,237	0.3%	0.0%	0.0%
	Retired	172,607	6.3%	172,626	6.3%	0.0%	0.0%
	Disabled	43,853	1.6%	43,859	1.6%	0.0%	0.0%
	Other		0.0%	0	0.0%	0.0%	

Appendix 2

Attrition and Non-Monetary Deprivation Indicators

In constructing the household weights for the second and subsequent waves of the *Living in Ireland Survey,* explicit account has been taken of any effect of sample attrition on the income distribution of households. However, in the context of the NAPS global target it is also important to explicitly examine whether sample attrition varied according to levels of deprivation. That question is addressed in this appendix: is there any evidence that levels of sample attrition are associated with differences in non-monetary indicators of deprivation, or can we be confident that the observed decline in non-monetary deprivation between 1994 and 1997 reflects a real change in the circumstances of households?

Comparing the average level of deprivation in Wave 1 (1994) on each of 24 non-monetary indicators for those households which responded in Wave 2 with non-responding (including non-sample) households in Wave 2, we found very little difference. While there is some tendency for deprivation scores to be higher for the non-responding households, the differences are small in size and are generally apparent only at the second decimal place. An analysis of variance revealed that only one of the differences is statistically significant – household managers in non-responding households were less likely to have had a night out in the previous two weeks. Looking at mean Wave 1 deprivation scores for responding and non-responding households in Wave 3, again, the average scores are very similar for responding and non-responding households.

We also checked to see whether there were differences between responding and non-responding Wave 3 households in terms of the deprivation scores of these households in Wave 2. The Wave 2 deprivation scores are strikingly similar for the responding and non-responding households and the analysis of variance shows that none of the mean differences reaches statistical significance.

The same procedure was repeated for Wave 4; first checking the impact of cumulative attrition from Wave 1 to Wave 4; then examining the impact of attrition between Wave 3 and Wave 4, using the Wave 3 household deprivation indicators. The Wave 1 mean deprivation scores are very similar for responding and non-responding households, and the analysis of variance revealed that there is no significant difference in the mean scores of the two groups.

The picture is slightly different if we look at the Wave 3 deprivation scores for the subset of households responding in Wave 4. On nine of the 24 items there is a small but significant difference in the Wave 3 deprivation score between the households that responded in Wave 4 and those that did not respond. In all cases, however, the responding households appear slightly worse off (have a higher deprivation score) than the non-responding households.

To summarise, while there was some tendency for the Wave 1 deprivation scores to be higher for non-responding than responding households in Waves 2, 3 and 4, the differences are very small in magnitude and rarely reached statistical significance. The distribution of Wave 1 scores on three of the key scales was also remarkably similar for responding and non-responding households in each subsequent wave. In Wave 3 we found no significant difference in the Wave 2 deprivation score for responding and non-responding households. There were some differences in the Wave 3 household deprivation score in Wave 4; but the differences were small in magnitude and the deprivation score tended to be higher rather than lower for the responding households. There is no evidence, then, that the observed substantial fall in household non-monetary deprivation indicators between 1994 and 1997 is an artifact of sample attrition.

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