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Targeting Poverty: Lessons from Monitoring Ireland's National Anti-Poverty Strategy

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ABSTRACT
In 1997 the Irish government adopted the National Anti-Poverty Strategy (NAPS), a global target for the reduction of poverty which illuminates a range of issues relating to official poverty targets. The Irish target is framed in terms of a relative poverty measure incorporating both relative income and direct measures of deprivation based on data on the extent of poverty from 1994. Since 1994 Ireland has experienced an unprecedented period of economic growth that makes it particularly important to assess whether the target has been achieved, but in doing so we cannot avoid asking some underlying questions about how poverty should be measured and monitored over time. After briefly outlining the nature of the NAPS measure, this article examines trends in poverty in Ireland between 1987 and 1997. Results show that the relative income and deprivation components of the NAPS measure reveal differential trends with increasing relative income poverty, but decreasing deprivation. However, this differential could be due to the fact that the direct measures of deprivation upon which NAPS is based have not been updated to take account of changes in real living standards and increasing expectations. To test whether this is so, we examine the extent to which expectations about living standards and the structure of deprivation have changed over time using confirmatory factor analysis and tests of criterion validity using different definitions of deprivation. Results show that the combined income and deprivation measure, as originally constituted, continues to identify a set of households experiencing generalised deprivation resulting from a lack of resources.

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* This paper draws on data obtained in the 1987 Survey of Poverty, Income Distribution and Usage of State Services and the 1997 wave of the Living in Ireland Survey. We gratefully acknowledge the work of the ESRI's Survey unit and particularly Brendan Whelan, James Williams and Dorothy Watson who were responsible for the survey design, data collection and database creation.

INTRODUCTION

Following the United Nations Social Summit in Copenhagen in 1995, the Irish Government decided to draw up a strategy to combat poverty in the medium to long term. The centrepiece of the National Anti-Poverty Strategy (NAPS), which was launched in 1997, was a global target for the reduction in poverty to be achieved over the period 1997–2007. This was based on what was known about the extent of poverty in Ireland from 1994 survey data. Since 1994, Ireland has experienced extremely rapid economic growth rates, by far the fastest in the European Union over the period. In this context, monitoring poverty trends becomes especially important, to see whether the Strategy is achieving its aims, but we also cannot avoid hard questions about what poverty means and how progress in combating it is best measured.

Atkinson (1997) has advocated adoption of an explicit target for the reduction of poverty in the UK, with an official poverty line decoupled from social security rates playing a central role in national discourse on poverty and the way anti-poverty policies are assessed. The Irish case is instructive in this regard, highlighting core issues about how a poverty target is formulated and operated, and in doing so placing in particularly sharp focus fundamental questions about measuring poverty. The Irish target is framed in terms of a poverty measure incorporating both relative income and direct measures of deprivation; Callan *et al.*'s (1993) *Journal of Social Policy* paper set out the basis for this measure illustrated with results for 1987. Here we use new evidence for 1997 to describe trends in relative income poverty and deprivation, and in this combined income and deprivation poverty measure, over the subsequent ten years. We then examine how expectations have changed, and assess the extent to which these should be taken into account in measuring deprivation and poverty. Finally, we use these results to illuminate central issues about framing poverty targets and measuring progress in reducing it.

THE IRISH POVERTY TARGET

The NAPS Strategy Statement sets out its overall or global goal as follows:

> Over the period 1997–2007, the National Anti-Poverty Strategy will aim at considerably reducing the numbers of those who are 'consistently poor' from nine to fifteen per cent to less than five to ten per cent, as measured by the Economic and Social Research Institute. (Sharing in Progress: National Anti-Poverty Strategy, 1997)

In addition to the global poverty target, the Strategy contains a number of supplementary targets relating to educational disadvantage, unemployment, income adequacy, disadvantaged urban areas and rural poverty. However, these targets are either rather modest given the extraordinarily favourable macroeconomic environment Ireland has experienced in recent years, or unspecific and anodyne. The global poverty reduction target is therefore absolutely central to the NAPS.

The Strategy operates on the basis of the following definition of poverty:

> People are living in poverty if their income and resources (material, cultural and social) are so inadequate as to preclude them from having a standard of living which is regarded as acceptable by Irish society generally. As a result of inadequate income and resources people may be excluded and marginalised from participating in activities which are considered the norm for other people in society. (Sharing in Progress, 1997, p. 3)

This has much in common with the influential formulation produced by Peter Townsend (1979), and with the definition adopted by the European Council of Ministers in 1984 referring to exclusion from the minimum acceptable way of life in the member state in which one lives.[1]

The specific measure of poverty incorporated in the NAPS global target relates to those both below relative income lines and experiencing 'basic deprivation', as measured by various non-monetary indicators in research carried out at the Economic and Social Research Institute (ESRI) (Callan *et al.*, 1993; Nolan and Whelan, 1996). Studies by the ESRI and others show that Ireland has relative income poverty rates rather higher than the more prosperous European Union members, lower than Greece or Portugal, but now quite similar to the UK rates given the dramatic increases there since 1979 (Nolan and Maître, 1999). However, our research has also focused on the relationship between household income and non-monetary indicators of deprivation, of the type developed and applied in the UK by, for example, Townsend (1979), Gordon and Pantazis (1997, forthcoming), Mack and Lansley (1985) and Bradshaw (1993), Bradshaw *et al.* (1998).[2] This research has brought out the extent to which a household's current living standards are influenced not only by income but also by resources and experiences (particularly in the labour market) over a long period (Callan, Nolan and Whelan, 1993; Nolan and Whelan, 1996). Income-based poverty lines can be seen as focusing wholly on the 'resources' element of the poverty definition. However, as Ringen (1987, 1988) amongst others has argued, low income on its own may not be a reliable measure of exclusion arising from lack of resources.

We sought to construct a more reliable measure by 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. Factor analysis of Irish data for 1987 revealed three underlying dimensions of deprivation which we have called basic, secondary and housing dimensions. The 'basic deprivation' cluster included not being able to afford heating, a substantial meal once a day, new rather than second-hand clothes, a meal with meat, chicken or fish every second day, a warm overcoat, two pairs of strong shoes, a 'roast' or equivalent once a week, and not falling into arrears or debt paying everyday household expenses. These items were perceived to be social necessities: 'things that every household should be able to have and that nobody should have to do without'. They were possessed by most people, reflect rather basic aspects of current material deprivation, and cluster together. On this basis we concluded that they were most suitable as indicators of the underlying generalised deprivation one is trying to measure. Most of the items in the secondary dimension, such as a car or a telephone, were not overwhelmingly regarded as necessities in 1987. The housing and related durables indicators in the third dimension appeared to be related to very specific factors, and so while providing valuable information about one important aspect of living standards were not satisfactory as indicators of current generalised exclusion. Those on relatively low incomes and experiencing basic deprivation we then identified as experiencing generalised deprivation or exclusion due to lack of resources. When we looked at the other features that one might expect to be associated with exclusion – such as low levels of savings and high levels of economic strain and psychological distress – this combined measure performed much better than income on its own.

In 1987, about 16 per cent of households were below the 60 per cent relative income poverty line and experiencing basic deprivation, while 10 per cent were below half average income and experiencing such deprivation. By 1994, there had been little change and the corresponding figures were 15 per cent and 9 per cent – the 'nine to fifteen per cent consistently poor' figure referred to in the NAPS target. The poverty reduction target is thus in effect a joint one: to reduce the percentage of households below 60 per cent of mean income and experiencing basic deprivation from 15 per cent to below 10 per cent, and the percentage below half average income and experiencing such deprivation from 9 per cent to below 5 per cent.

It must be emphasised that our combined poverty measure was never intended to be a mixture of relative income and absolute or fixed deprivation indicators. Instead, the conceptual underpinnings of the measure highlight the need to adapt and augment the non-monetary deprivation indicators in the light of improved living standards, changing perceptions about what constitute necessities, and potential transformations of the underlying structure of deprivation. Significant change within one of these areas could lead to the need for a revision and adaptation of the deprivation component of the poverty measure. The need to review the measure is further accentuated by the fact that incomes and living standards have increased dramatically in Ireland over the past decade. Purely relative income poverty measures are particularly problematic in periods where living standards are falling, or are improving rapidly. In this instance, when deprivation is falling markedly many people may not regard rising numbers falling below a relative poverty line as an unambiguous increase in poverty. This may be true even if they accept that, over a lengthy period as new patterns of living standards emerge, societal expectations may indeed catch up and adjust fully to higher average incomes. Where a poverty measure incorporates a deprivation index, on the other hand, the concern may be that even if those on low incomes share in the benefits of growth and see their living standards rise significantly, it fails to capture deterioration in their relative situation.

In the light of these issues, we seek in this article to assess how well our original measure of poverty performs ten years after the data on which it was constructed were collected and what the implications are for deprivation bases approaches to the measurement of poverty.

THE DATA

The data used in this article come from two large-scale social surveys: the 1987 Survey of Income Distribution, Poverty and Usage of State Services and the 1997 wave of the Living in Ireland Survey, the Irish component of the European Household Panel Survey. In 1987 the Register of Electors was used for the sampling frame and households drawn from a random multi-stage cluster sample. As the 1997 survey was the fourth wave of a panel survey, this sought to interview all members of households first interviewed in 1994, when the Register of Electors had again provided the sampling frame.

In 1987, 3,294 households or 64 per cent of the effective sample (excluding addresses which could not be located or turned out to be institutions) were successfully interviewed. In the 1994 first wave of the panel survey, 4,048 households, comprising 62 per cent of valid contacted addresses, were successfully interviewed. These response rates compare well with other surveys seeking detailed income information such as the household budget surveys in Ireland or the Family Expenditure Survey in Britain. External information was used to reweight each sample to adjust for any bias in the pattern of response across a number of dimensions. In

1987 this entailed re-weighting on the basis of rural/urban location and the age and occupation of the head of household, as well as the number of adults to correct for the fact that the sampling frame comprised individuals rather than households. The 1994 survey was weighted in a very similar manner. The 1997 sample was weighted along a number of dimensions to account for attrition among the original sample and the addition of new individuals and households (where households in the original sample split or join new households) in the period between 1994 and 1997 (the 1997 data comprised 2,945 households containing 6,868 individuals). A full description of the 1987 and 1994 surveys can be found in Callan *et al.* (1989) and Callan *et al.* (1996) respectively. A detailed examination of the possible effects of attrition on the representativeness of the Living in Ireland Survey has also shown that the data remain a reliable national sample of households and individuals once the appropriate weights have been applied (Watson and Healy, 1999).

Each survey sought a wide range of information on demographic and labour force characteristics, collecting particularly detailed information on income by source in a manner very similar to the UK Family Expenditure Survey (except that farm incomes were collected on a separate questionnaire). The surveys also included a range of items indicating whether certain items or activities were available to household members and if not, whether this was because of a lack of resources. Respondents were also asked whether they thought each of a list of items was a necessity, i.e., 'things that every household or person should be able to have and that nobody should have to do without'. We discuss these non-monetary deprivation indicators in more detail below. Throughout this article, we refer to the household as the unit of analysis since our measures of income and deprivation are household based. However, it has been suggested (Pahl, 1989) that resources may not be allocated equally within households, particularly between men and women. Unfortunately we do not have the space here to address this problem directly, though evidence suggests that, in terms of levels of deprivation at least, members of households tend to share the same standard of living (Nolan and Cantalon, 1998). This is not to say that gender does not play a major role in structuring inequality between households. As Nolan and Watson (1999) have shown using the Living in Ireland Survey, female headed households are far more likely than male headed, or single male households to be poor.

THE ECONOMIC CONTEXT AND TRENDS IN POVERTY 1987–1997

As we can see from Table 1, the period between 1987 and 1997 was one of remarkable growth accompanied by relatively low price inflation in

TABLE 1. *Change in Real Gross National Product, Gross Domestic Product, GNP per head, and consumer prices 1987–1997*

	Per cent change
GNP	67.2
GDP	77.6
GNP per Head	61.2
CPI	28.5

Source: National Income and Expenditure, 1995 & 1997, Tables A & B.

Ireland. GNP per head rose by 67 per cent and GDP by 78 per cent, while the CPI rose by less than 30 per cent. In each of the years from 1987 to 1994, growth in real GDP exceeded both the European Union and OECD average. Economic growth has been even more rapid since then, with GDP increasing by 7 per cent to 8 per cent per annum – the 'Celtic Tiger' phenomenon. Unemployment had risen very rapidly during the 1980s, reaching 18 per cent of the labour force by 1987, with those unemployed for a year or more accounting for a particularly high proportion of total unemployment in the Irish case. Unemployment proved initially resistant to the renewal of economic growth, still remaining as high as 16 per cent by 1994, but subsequently fell rapidly, down to 11 per cent by 1997 (and has fallen a good deal further since then). Again with something of a lag, long-term unemployment has also fallen very considerably.

Although these macroeconomic trends are dramatic, our survey evidence indicates that they translated into rather different outcomes for households depending on their main source of income. In households where the main source of income (i.e., providing 66 per cent or more of the total) is employment, disposable income rose by two-thirds between 1987 and 1997. On the other hand, those relying on non-market incomes such as unemployment benefits or old age pensions saw a substantial but lower increase in real incomes, of 41 per cent and 18 per cent respectively. Social welfare support rates, while increasing well ahead of prices, did not keep pace with the very exceptionally rapid rise in incomes from the market.

We now examine the trends in relative income poverty over this period of unprecedented economic growth. Household income as reported in the surveys is used to create relative income poverty lines, based on proportions of mean equivalent disposable household income. Here we use an equivalence scale implicit in the rates of Irish social welfare payments in the late 1980s: where the household head is given a value 1, each extra adult is given a value of 0.66 and each child a value of 0.33. Elsewhere

TABLE 2. *Household risk of relative income poverty and risk of falling below 1987 real income standards, 1987 and 1997*

	Per cent Below Relative Income Line in 1987	Per cent Below Relative Income Line in 1997	Per cent Below 1987 Real Income Line in 1997
40 per cent Mean Line	6.2	7.6	3.8
50 per cent Mean Line	16.3	21.9	6.6
60 per cent Mean Line	28.5	36.4	11.4

we have employed a variety of other equivalence scales to test the sensitivity of the results, including one giving a value of 0.6 to each extra adult and 0.4 to each child (often used in UK research), and one giving a value of 0.7 to each extra adult and 0.5 to each child (the so-called OECD scale). The main findings reported here hold across this range of scales (see Callan *et al.*, 1996).

Table 2 shows that, despite the buoyant economic situation between 1987 and 1997, the percentage of households below the relative income lines increased over the period, consistently from the 40 per cent up to the 60 per cent line. At the 40 per cent line the increase was a modest 1.4 per cent, but it was almost 6 per cent at the 50 per cent line and 8 per cent at the 60 per cent line. Thus the unequal distribution of increased income resulted in a situation where a substantial increase in average household income, shared in by those on lower incomes, was accompanied by increasing relative income poverty rates.

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 income line conception of poverty. However, it is also of some interest to know what has been happening to real incomes. 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. Table 2 also therefore shows for 1997 how many households fell below income standards set at 40, 50 and 60 per cent of mean equivalised income in 1987 and adjusted upwards only in line with prices from then on. We see that by 1997 the percentage of households below these 1987 real income standards had fallen dramatically. With the 1987 60 per cent line, the poverty rate on this basis would have fallen from 28 per cent to 11 per cent – whereas when uprating in line with average income we saw that it rose to 36 per cent. Thus, in a period of rapid though uneven income growth, relative income and real

TABLE 3. *Percentage of households below relative income line thresholds and experiencing basic deprivation in 1987 and 1997*

	1987	1997
40 per cent Mean Line	3.3	3.0
50 per cent Mean Line	9.8	7.3
60 per cent Mean Line	16.0	9.9

income poverty lines provide radically different perspectives on the evolution of poverty.

Against this background, how have the combined relative income line and basic deprivation measures behaved during a period of rapid but unequally distributed income growth – does it produce outcomes closer to the relative income or the absolute income approach? In Table 3 we show the percentage of households below the relative income lines and experiencing basic deprivation for 1987 and 1997, using the same set of deprivation indicators in each year. We see that there was little change in the percentage below the 40 per cent relative line and experiencing basic deprivation, with only 3 per cent of households in that situation. However, at the 50 per cent line a reduction of 2.5 percentage points is found, and with the 60 per cent line this increases to 6 per cent. Thus the combined income and deprivation approach suggests a decline in poverty over time, albeit a good deal more modest one than indicated by the absolute income line approach.

Given the way the global poverty target adopted in the NAPS has been framed, these results are particularly salient. They suggest that if the indicators employed remain unchanged, the numbers below the 60 per cent relative income line and experiencing basic deprivation had already fallen by 1997 to the level the global poverty reduction target sought for 2007! There have clearly been significant reductions in levels of deprivation between 1987 and 1997, which represents an important and welcome development. However, it also gives rise to an important question about the poverty measure: as living standards rise, does an unchanged set of indicators continue to adequately capture what is regarded as generalised deprivation? Are these findings a consequence of the failure of the combined income and deprivation approach to capture fundamental changes in living standards and expectations that are reflected in the relative income poverty lines, resulting in an unduly absolutist conception of poverty? Or do they reflect the success of the deprivation approach in capturing real improvements in the living standards of households, missed by a strictly relativist view of poverty? In order to answer these questions it is necessary to address in detail the validity over time of the combined income and deprivation approach.

THE VALIDITY OF THE NAPS MEASURE OVER TIME

The notion that expectations and perceptions of need will change over time as general living standards rise is central to a relative conception of poverty. It may therefore be necessary to incorporate into a measure of generalised deprivation additional 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 now examine how perceptions about what constitutes necessities have changed in Ireland between 1987 and 1997. Table 4 sets out the extent to which households lack an item, say this is because they cannot afford it, and regard the item as a necessity, for twenty life-style items for which this information is available in the surveys.

This shows that, across the range of items, there has been a significant reduction in the numbers lacking items and in the extent of enforced lack. This is true of basic items such as a warm waterproof overcoat and a meal with meat, chicken or fish every second day. It is even more marked for many of the secondary items, such as central heating, a telephone, a car, a colour television and presents for friends or family at least once a year. Most of the housing items were already possessed by the vast majority of households in 1987, but there was also a further decline in the percentage lacking those items. To what extent did normative expectations about what constitutes a necessity keep 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 80 per cent. For car ownership the figure increased from 59 per cent to 70 per cent, and for a colour TV from 37 per cent to 75 per cent. Finally, for presents to families and friends the figure rose from 60 per cent to 73 per cent. The pattern of change in expectations thus very much mirrors the increasing extent to which these items are possessed in the society.

Our analysis thus 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 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

TABLE 4. *Lack, enforced lack and perceived necessity for life-style items in 1987 and 1997*

Item	Per cent lacking 1987	Per cent lacking 1997	Per cent enforced lack 1987	Per cent enforced lack 1997	Per cent stating necessity 1987	Per cent stating necessity 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 week's 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 it's 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

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 the 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 were quite distinct. Households suffering basic deprivation were also more likely than others to suffer housing deprivation but the relationship between them was modest, indicating that many households experiencing one type of deprivation managed to avoid the other and *vice versa*. Further analysis showed that rather different sociodemographic factors determined basic and housing deprivation. Thus a household with an unemployed head might be exposed to deprivation in relation to basic food, clothing and heating while living in relatively 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 (Layte *et al.*, 1999). 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 1994.

The answer to that question is entirely straightforward. As demonstrated in detail in Appendix Tables A1 and A2, the factor analysis results turn out to be remarkably similar at both points in time. In particular, the five items on which we are focusing continue to cluster with the secondary rather than basic deprivation dimension in 1997 as they did in 1987. Appendix Table A2 shows the results for a formal comparison of the factor structures in the two years. A range of goodness of fit statistics show that the results for 1997 are not significantly different from those for 1987 since a three-factor model constraining the factor structure to be the same across years and allowing the factors to correlate (the constrained oblique solution) fits the data better than an unconstrained model.

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. Therefore, in the next section we explore what would happen if the basic deprivation index were indeed broadened to include these additional items in measuring poverty in 1997.

BROADENING THE BASIC DEPRIVATION MEASURE?

To explore the impact of broadening the set of items included in the basic index to include central heating, a telephone, a car, a colour television or presents for friends and family at least once a year – we begin by distinguishing three groups of households. The first we refer to as the ‘poor’: the households who in 1997 fall below the 60 per cent relative income line and are experiencing basic deprivation with our original set of items. As we have seen, this comprises 10 per cent of households in the 1997 sample. The second group are households falling below that income line, not experiencing basic deprivation in terms of our original items, but suffering enforced absence of one (or more) of the five additional items. This group, which we label the ‘potentially poor’, constitute an additional 7.6 per cent of households. Finally, we have all other households, who do not

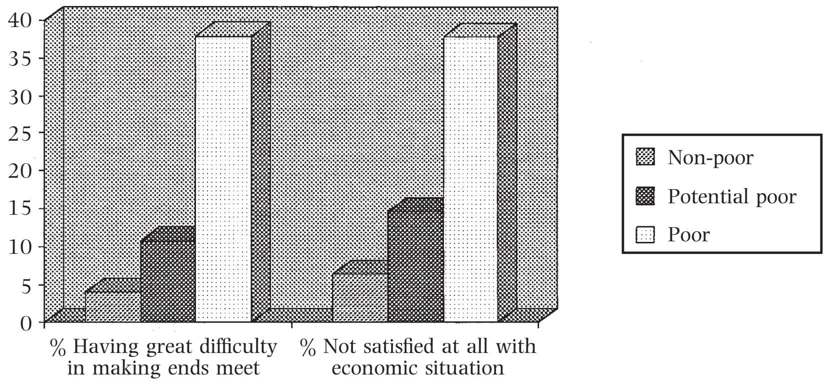

Figure 1. Economic strain by poverty status.

meet even this broader set of poverty criteria and whom we label the 'non-poor'. We now proceed to examine how these different groups of households are differentiated in terms of a range of features one might expect to be associated with poverty.

We start by examining their experience of economic strain and dissatisfaction. In order to do so we make use of two indicators available in our surveys. The first is a measure of the extent to which the household is 'able to make ends meet', where we distinguish those reporting 'with great difficulty' from all others. The second item relates to satisfaction with financial situation and we distinguish those 'not at all satisfied' from the remainder. Figure 1 shows the outcomes on these variables for our three groups, using the responses of the household head. We see that the group defined as poor by our original definition, falling below the 60 per cent relative income line and experiencing basic deprivation, is sharply differentiated from both the other groups. Almost four out of ten of the poor report 'extreme difficulty' making ends meet, compared to only about 11 per cent of the additional group who would be counted as poor if the deprivation criteria were expanded, and under 5 per cent of those who are non-poor even with the expanded criteria. 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 original poor category express such dissatisfaction, compared with one in seven of the households that would be added under the expanded definition and one in sixteen of those who even then are not counted as poor. While the households included in our 'potentially poor' category are experiencing greater economic stain and greater financial dissatisfaction than the non-poor category, they are much closer to the non-poor than they are to the 'poor'.

The next outcome to which we turn is fatalism. In doing so we drew a set of items that have been 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.[3]

Since our interest is the extreme effects produced by the experience of poverty, in Table 5 we show the percentage of respondents choosing the most fatalistic response category for each item, broken down by poverty status. For the group falling below the 60 per cent income line and experiencing basic deprivation, the number choosing the most fatalistic category ranges between 14 per cent and 18 per cent for four of the items and is greater than 8 per cent for six out the seven items. For the group who would be brought below the combined poverty line by the inclusion of the additional life-style items, in no case does the percentage choosing the most extreme category rise above 7 per cent. For the non-poor category the highest number opting for the most fatalistic response on any of the questions is 5 per cent.

Thus, once again the original group of poor households is 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.

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 subset of households suffering multiple deprivation, who should be included

TABLE 5. *Extreme fatalism response by poverty status (percentage)*

	Non-Poor	Potentially Poor	Poor
I can do just about anything I set my mind to	4	4	15
I have little control over the things that happen to me	5	6	9
What happens in the future depends on me	4	2	8
I feel helpless dealing with problems	4	2	15
Sometimes I feel that I am being pushed around	2	6	5
There is a lot I can do to change my life	4	7	14
There is really no way I can solve some of my problems	4	5	18

TABLE 6. *Economic strain within the 'potentially poor' group*

	Per cent extreme difficulty making ends meet	Per cent not satisfied at all with financial situation	Per cent of group
Enforced lack of one additional social necessity	9	17	64.3
Enforced lack of more than one	15	10	35.6

within our category of poor households. In order to test this possibility, in Table 6 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 the experience of economic strain and display a profile that is distinctly more favourable than that observed for the original group of poor households.

LIVING STANDARDS OF THE POOR VERSUS THE NON-POOR

Overall, the manner in which the households falling below the 60 per cent relative income line and experiencing basic deprivation are differentiated from all other households argues against extending the life-style deprivation component of the poverty measure in measuring poverty in 1997. However, the fact that the basic deprivation items remain unchanged over time does not imply a constant standard of living for households they (together with low income) identify as poor. Some households experiencing basic deprivation may well have items such as phones, cars, colour televisions and so on; as possession of these items became more widespread in the overall population between 1987 and 1997, what happened in these terms to poor households?

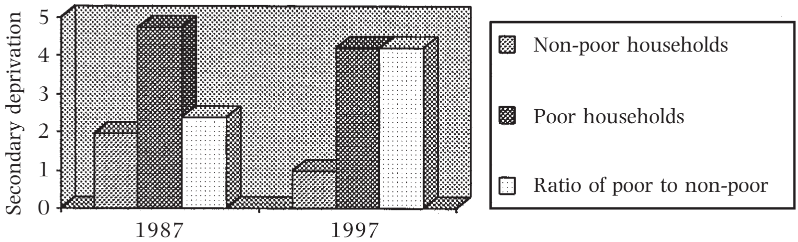

Figure 2. Secondary deprivation among poor households.

Figure 2 compares the level of secondary deprivation for poor and non-poor households (now including the 'potentially poor' group in the latter category) in 1987 and 1997. We see that 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 per cent of the 1987 one. What is striking, however, is how modest this rate of improvement for poor households is compared to that for non-poor households. For the latter the mean level of secondary deprivation halved over the period. This of course meant that the disparity between poor and non-poor households increased dramatically over the decade: in 1987 the mean level of secondary deprivation for poor households was 2.4 times that of non-poor households, but by 1997 this ratio had risen to 4.2.

In Table 7 we elaborate on the nature of this development by looking at the trend for individual secondary items for the poor versus the rest of the sample. There was a significant improvement in the situation of poor households with regard to enforced absence of five items: a telephone, central heating, ability to save, affording newspapers, and presents for family and friends at least once a year. However, in each case the proportionate reduction in deprivation is smaller than among non-poor households, and the disparity between the two groups increases. For a car, a holiday and a hobby no improvement was observed over the ten-year period among poor households, whereas non-poor households experienced a 40 per cent reduction in such deprivation, so the gap between poor and non-poor widened considerably.

The most significant change between 1987 and 1997 concealed by focusing solely on the number of households falling below the 60 per cent 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 from everyday living patterns, has been increased. This finding is

TABLE 7. *Enforced absence of recently defined necessities by poverty status*

	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
Able to save	97	47	78	30
Newspaper	34	12	24	7
Hobby	34	8	34	5

clearly consistent with the diverging trends shown by real versus relative income poverty lines described earlier.

CONCLUSIONS

At the United Nations Social Summit held in Copenhagen in 1995, the Irish government was among those endorsing a programme of action aimed at not only eliminating absolute poverty in the developing world but also reducing poverty and inequalities everywhere. At that Summit, the following commitment was agreed upon: 'We commit ourselves to the goal of eradicating poverty in the world, through decisive national actions and international co-operation as an ethical, social, political and economic imperative of humankind.'

Arising from this commitment, the Irish government initiated the development of a National Anti Poverty Strategy, which was subsequently adopted in 1997 (Sharing in Progress: National Anti-Poverty Strategy, 1997). The measure and targets adopted by the NAPS combined both relative income and non-monetary deprivation indicators and it is the overtime validity of this measure that we sought to evaluate in this article. We have used data for Ireland but the approach is applicable, and the lessons learned relevant, across industrialised countries generally. Moreover, the results of this article are given added salience because of the extraordinary pace of economic growth that Ireland has experienced in recent years. This analysis therefore serves to illuminate a range of issues relating to official poverty targets and to what constitutes progress in combating poverty.

We found that between 1987 and 1997 there was a significant increase in the numbers falling below relative income poverty lines, while real income measures (indexed to prices) suggested a dramatic decline in poverty. Our measure combining relative income and direct indicators of deprivation produced an intermediate picture, with poverty decreasing but to a much more modest extent than suggested by real income lines. We therefore wanted to be sure that this measure is not missing fundamental changes in living patterns and expectations captured by the relative income line approach, or understating the impact of significant improvements in living standards captured by the real income line approach.

We saw that over the decade in question substantial reductions in the extent of deprivation were accompanied by a corresponding adjustment in normative expectations about which items constitute necessities. In particular, a set of five items comprising central heating, a telephone, a car, a colour TV and presents for friends and family at least once a year had become available to a substantial majority of households and came to be perceived as necessities by comparable numbers. In considering whether to incorporate these items into the basic deprivation component of the poverty measure we noted that not all socially perceived necessities are suitable for this purpose, but only ones which appear to tap the underlying generalised deprivation one is attempting to capture. Factor analysis then showed the structure of deprivation to be remarkably stable between 1987 and 1997, supporting the argument that the basic deprivation index should not at this point be expanded to include these additional five items. It should be made clear that those items in the secondary index may well be incorporated into the basic measure in future, *if the structure of deprivation changes*. Following Townsend (1979), we fully accept that deprivation is a relative concept and that absence of what we have termed 'secondary' items could be seen as a defining characteristic, but as the preceding analysis has shown inclusion of these items at this point would weaken the validity of the deprivation measures, even though it may make it more reliable statistically.[4]

We then examined the additional households who would be counted as poor if one did broaden the deprivation element of the measure by incorporating these five additional item – the 'potentially poor'. In terms of self-assessed economic strain and fatalism the consistent picture was that the profile of these households was similar to that of the 'non-poor' and strikingly different from the 'poor'. Further analysis failed to identify a sub-set of 'potentially poor' households more closely resembling the latter.

On the basis of these results, we conclude that the combined income and deprivation measure as originally constituted continues to identify a set of households experiencing generalised deprivation resulting from a lack of resources. These households are suffering a degree of economic strain and general fatalism that mark them out from the rest of the population. The decline in numbers poor by this measure captures the effects of improvements in living standards that are not reflected in the relative income line results. However, we also found that the disparity in life-style deprivation between poor and non-poor households widened between 1987 and 1997: while the number of households in poverty declined their level of relative deprivation increased.

While this measure of poverty has performed remarkably well over time, the complexity of the results we have presented also brings out that in attempting to understand the changing nature and extent of poverty it is unwise to rely on any single measure. There is a real dilemma here as far as official targets are concerned. Atkinson (1997) in the UK context 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 official target has to be framed to try to meet the need for headline numbers, but still seek to encapsulate key elements of the complexity of the underlying reality. It remains true none the less that the underlying reality is complex and that there is no one method that is ideal at all times and in all situations. In future work, we hope to compare the different methods of constructing deprivation indices and compare these to the method used in the NAPS monitoring exercise. Only on this basis can we get a better understanding of the most appropriate measure to use in different circumstances.

Poverty targeting therefore needs to encompass distinct elements. As well as a combined income/deprivation measure such as the one adopted by the Irish NAPS, 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 are 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.

APPENDIX A

In Table A2 we compare measures of fit for the three factor solutions where the dimensions are held constant across years (constrained) or can vary (unconstrained) and the factors are, or are not allowed to correlate (oblique and orthogonal). Following Kelloway (1998) we report measures of absolute, relative and parsimonious fit, as follows:[5]

- The Root Mean Squared Error of Approximation (RMSEA) is based on the analysis of residuals with smaller values indicating a good fit. Values below 0.1, 0.05 and 0.01 indicate a good, very good and outstanding fit respectively.
- The Adjusted Goodness of Fit Index (AGFI) is based on the ratio of the sum of the squared discrepancies to the observed variances, but adjusts for degrees of freedom. The AGFI ranges from 0 to 1 with values above 0.9 indicating a good fit.
- The Normal Fit Index (NFI) indicates the percentage improvement in fit over the baseline independence model.
- The Comparative Fit Index (CFI) is based on the non-central X^2, and is given by $1-[(X^2 \text{ model} - \text{df model})/(X^2 \text{ independence} - \text{df independence})]$. The CFI ranges between 0 and 1, with values exceeding 0.90 indicating a good fit.
- The Parsimonious Goodness of Fit Index (PGFI) adjusts GFI for the number of estimated parameters in the model and the number of data points. The values of the PGFI range from 0 to 1 but it is unlikely

TABLE A1. *Constrained and unconstrained confirmatory factor analysis oblique three-factor solutions for 1987 and 1997*

	Factor Loadings		
Basic Dimension	Unconstrained Solution 87	Unconstrained Solution 97	Constrained Solution
A meal with meat, chicken or fish	0.60	0.47	0.57
A warm, waterproof overcoat	0.52	0.54	0.54
Two pairs of strong shoes	0.59	0.61	0.61
A roast joint of meat or its equivalent once a week	0.57	0.49	0.56
New, not second-hand clothes	0.50	0.58	0.51
Go without a substantial meal	0.38	0.44	0.40
Go without heat	0.42	0.51	0.45
Go into debt for ordinary living expenses	0.31	0.42	0.33
Housing/Services Dimension			
Refrigerator	0.30	0.56	0.36
Washing machine	0.27	0.42	0.32
Colour TV	0.22	0.42	0.26
Dry, damp free dwelling	0.27	0.32	0.28
Non-shared indoor toilet	0.89	0.84	0.88
Non-shared bath or shower	0.94	0.86	0.92
Secondary Dimension			
Telephone	0.51	0.40	0.52
Car/Van	0.45	0.40	0.45
Week's annual holiday away	0.56	0.60	0.59
Central heating	0.45	0.45	0.49
Be able to save regularly	0.55	0.56	0.58
Daily newspaper	0.47	0.36	0.43
Hobby or leisure activity	0.45	0.48	0.45
Presents for friends or family	0.50	0.52	0.51
Able to afford afternoon or night out	0.43	0.46	0.46

TABLE A2. *Unconstrained and constrained oblique and orthogonal three-factor deprivation solutions for 1987 and 1997 using confirmatory factor analysis*

Model	X^2	df	RMSEA	AGFI	NFI	PGFI	CFI
Orthogonal							
Unconstrained	7154.73	460	0.052	0.873	0.731	0.745	0.743
Constrained	6675.78	230	0.072	0.877	0.750	0.748	0.756
Oblique							
Unconstrained	5122.08	454	0.043	0.904	0.807	0.758	0.821
Constrained	4502.61	227	0.059	0.913	0.831	0.763	0.838

to reach the 0.09 cut-off used for other indices and is best used to compare two competing models.

TABLE A3. *Correlation between deprivation dimensions in constrained oblique 3 factor solution*

	Basic	Secondary	Housing Services
Basic	1	0.73	0.24
Secondary	0.73	1	0.25
Housing Services	0.24	0.25	1

NOTES

1 For a more detailed discussion see Nolan and Whelan (1966, chapter 2).
2 For comparable Dutch and Swedish work see Muffels (1993) and Halleröd (1995).
3 The scale has a very satisfactory level of reliability with Cronbach's alpha of 0.76.
4 One test of the reliability of a scale is Chronbach's Alpha statistic where Alpha = Nρ[1+ρ(N–1]. As N is equal to the number of items (ρ is the inter-item correlation), *ceteris paribus*, the greater the number of items the higher the Alpha.
5 Our discussion of the properties of these indices which is set out below draws on Kelloway (1998) chapter 3.

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