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NON-CASH BENEFITS
AND POVERTY IN IRELAND

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Non-cash Benefits and Poverty in Ireland

1. Introduction

Typically, analyses of poverty and of the role of social transfers in poverty alleviation concentrate on cash incomes as the measure of resources available to households. However, in addition to cash transfers the State also provides a range of free or subsidised services and other benefits to households, which affect their living standards and the resources they can devote to other uses. Some of these, such as education, are available to all households. Entitlement to others is limited, however, on the basis of for example income, social welfare reciprocity or age. Focusing simply on cash income and not taking such targeted non-cash benefits into account could lead to an under-estimation of the resources available to some low-income households and an over-estimation of the extent of their poverty. Benefits-in-kind are not exclusively provided by the State, employers also provide non-cash benefits in various forms to some employees, and taking these into account gives a more comprehensive picture of the relativities between households in terms of command over resources.

Provision of support in kind rather than in cash to social welfare recipients or low income households has grown in importance in Ireland in recent years. Some schemes, such as free TV licence and telephone rental, were originally designed to benefit older people in receipt of a social welfare payment and living alone but have been extended to some other recipients. Free travel has applied since introduction to all elderly people, while free medical care under the GMS is available to all those below an income threshold. As discussed in depth in the recent study by Quinn (2000), the extension of the scope of such schemes raises major issues not only in terms of administration and complexity for recipients, but also in terms of their rationale and effectiveness in alleviating poverty and social exclusion.

This study focuses on the impact of such non-cash provision on poverty, using data from the 1994 and 1997 Living in Ireland surveys. It analyses the value of targeted State non-cash benefits to Irish households and explores how the inclusion of the value of these benefits in income affects the incidence and distribution of relative income poverty. We also examine which groups benefit most from State non-cash

benefits, and how effective these benefits are in alleviating poverty compared to cash transfers. (In doing so we build on Layte, Fahey and Whelan's 1999 analysis of the impact of selected State non-cash benefits on relative income poverty rates for the elderly). In addition, non-cash benefits provided by employers are also considered, in order to give a more rounded picture of command over resources and relative income poverty. Poverty measures developed at the ESRI and incorporated into the National Anti Poverty Strategy do not in fact rely solely on household cash income, but also take into account levels of deprivation as reflected in a range of indicators. The impact on measured poverty of employing broader measures of income, including non-cash benefits, together with such indicators is also addressed.

We begin by outlining in Section 2 the issues that arise in seeking to go beyond cash incomes to include non-cash benefits in assessing living standards and poverty. We then describe in Section 3 the specific State non-cash benefits currently available to Irish households that are the focus of this study. Section 4 discusses the general issues that arise in seeking to attribute cash values to the beneficiaries, then describes the data employed in this study and the way they are used to attribute valuations for the different State benefits or schemes to households. Section 5 presents the overall results on the impact of the inclusion of State non-cash benefits on relative income poverty rates in 1994. Section 6 analyses which households – in terms of position in the income distribution and household composition – benefited most from these State schemes in that year. Section 7 turns to non-cash benefits provided by employers rather than the state, describing the main areas involved and how we tentatively assign values for these benefits to the beneficiaries. Section 8 then looks at relative income poverty when both State and employer-provided non-cash benefits are included. Section 9 looks at the impact of non-cash benefits on the measures of poverty developed at the ESRI that take both relative income and direct indicators of deprivation into account. Finally, Section 10 summarises the conclusions and highlights their implications.

2. Non-cash Benefits and Poverty

Irish households benefit from a wide range of services provided free or in a subsidised manner from the State in areas such as education, health care, public amenities, and housing. Some of these services, such as primary and secondary level education, are

universal (although not necessarily delivering the same quality to all). The distributional impact of State spending on education, housing and transport has been analysed by Rottman and Reidy (1988) and Murphy (1984), using data from special redistributive analyses carried out by the Central Statistics Office based on the Household Budget Surveys.¹ Rottman and Reidy found for example that in 1980 the bottom 20% of the equivalent income distribution "received" slightly more than 20% of State spending on health and education, 43% of spending on housing and 18% of other non-cash spending (including in-kind social welfare benefits). However, middle income groups also benefited substantially from these forms of public spending. When allocated among households on the basis of utilisation and valued at the cost of provision, these State services improve the relative position of those on low incomes, though their contribution is much less than that of cash transfers. Similar studies of the redistributive impact of state spending have been available for many years in the UK, carried out by the UK CSO, and reveal a broadly similar picture.

While it is valuable in itself to measure the overall redistributive impact of State spending, how important is it to take such spending into account in measuring poverty? Callan *et al* (1989) pointed out that in the UK it hardly featured at all in studies focusing specifically on the measurement of poverty, whereas in the USA the treatment of non-cash benefits has probably been the issue giving rise to the biggest debate among poverty researchers. This reflects differences both in the institutional setting and in the way poverty standards are most often derived. In the UK, health care and education are available from the State, for the most part free of charge, to all, and there is little direct provision of for example food or food vouchers to the poor. In the USA, by contrast, in-kind benefits such as health care and food vouchers targeted specifically on the poor are very important. The Irish system, as we shall see, is an intermediate one in this sense, with entitlement to full health care available only to those below an income ceiling and some non-cash provision targeted on specific groups of social welfare recipients.

¹ This special redistributive analysis has been implemented by the CSO with the 1973, 1980 and 1987 Household Budget Surveys (CSO 1980, 1984, 1995), but not so far with the 1994 HBS.

It also matters in this context how the poverty standard is derived. In the UK for many years (and still in some other industrialised countries), the usual practice was to take official income support rates paid by the social security system as the adequacy standard. Since these are framed taking the level of non-cash provision into account, the comparison between cash incomes and these cash support rates is then most relevant. In the USA, on the other hand, the official poverty line is derived by costing a food budget, and multiplying that by a factor to reflect other needs. Since this is intended to be an inclusive measure of needs, it may then be very important in measuring who falls below that standard, to have an equally inclusive measure of household resources, including for example food stamps, school lunches and Medicaid.

When the poverty standard is derived as a purely relative income line, as is now quite common practice (including in the UK), the situation is more complex. The intention of this procedure is to base the poverty standard on the average or ordinary living standards available to the general population. If State services are available to everyone and affect both those around the middle and those towards the bottom of the income distribution similarly, including them both in deriving the poverty line and measuring the resources of the poor would not make much difference. Non-cash benefits targeted specifically towards those on low incomes are a different matter, however, since they affect the resources available to those around the poverty line but have little or no impact on the location of that line.²

However, the broader implications of seeking to go beyond cash incomes when using a relative income poverty line also need to be highlighted. It is not only the State that provides services and non-cash benefits. The market also provides a range of benefits to those at work over and above cash income, notably free or subsidised accommodation, health insurance, child care or other facilities, remuneration in the form of a company car and share options, and employer pension contributions. Since these affect living standards and command over resources, mostly higher up the

² A relative income poverty line derived as a proportion of median income will not be affected at all by inclusion of benefits going exclusively to those below the median; lines derived as proportions of the mean will be affected, but much less than the incomes of the beneficiaries.

income distribution, ignoring them while seeking to incorporate State non-cash benefits targeted on lower incomes could produce a distorted picture.

The complexities of going beyond cash incomes do not end there. Housing costs may differ widely for households on the same cash income, for a variety of reasons, leaving them able to spend very different amounts on other goods and services. A household owning its own house is in a very different position to one with a very large mortgage, and households paying below market rents in local authority housing are in a different position to those in private rented accommodation. One analytical approach to taking this into account would be to add imputed rent to the income of owner-occupiers, and the value of the rent subsidy to those on subsidised rents. Valuing these is problematic, however, and so an alternative (common in UK research) is simply to look at income net of housing costs. Callan *et al* (1989) carried out such an analysis with data from the ESRI's 1987 survey, constructing income net of housing costs and deriving relative income poverty rates based on this income measure. The results in that instance showed that the proportions below various poverty lines were not significantly altered by this adjustment. Since housing costs include an element of choice, the conclusion was that income net of housing costs is best regarded as a complement to, rather than a substitute for, disposable income.

A very wide range of State and market non-cash provision, over and above cash incomes, thus affects living standards and command over resources. While it is essential to be aware of this broader context, this study has a specific and limited objective. It concentrates primarily on targeted non-cash benefits in kind provided by the State to specific groups, namely the various free schemes mostly aimed at the elderly and some other social welfare recipients and free health care provided through the medical-card system to the bottom third of the population. The main question addressed is whether failure to take these benefits into account seriously distorts measures of the extent of poverty, who is affected by poverty, and the effectiveness of the social protection system. In answering this question, however, it is necessary to take benefits provided to those at work over and above cash income into account, since to include State non-cash transfers alone could produce an misleading picture of the relative position of welfare recipients.

3: State Non-Cash Benefits

Seven different in-kind benefits provided by the State are covered in this study. These are as follows:

Free Electricity / Free Natural Gas /Free Bottled Gas Allowance

One of these three allowances is available to people getting certain (disability related) social welfare payments and to those aged over 65 and receiving a State pension or certain other state benefits³ or who satisfy a means test. The means-test for those aged over 65 not in receipt of the one of the listed pensions or benefits is set at the maximum rate of Old Age (Contributory) Pension plus £30 per week (Dept of Social Community and Family Affairs, 1998). Eligible recipients must also live alone or only with dependants/full-time carer. Those aged over 75 who fulfil the other eligibility requirements qualify for an allowance regardless of who lives with them if they are the registered consumer. Only one allowance is granted per household.

Free Television Licence

Those who qualify for free electricity, free natural gas or free bottled gas are also entitled to a free television licence.

Free Telephone Rental

This benefit is available to all pensioners aged over 65 who live alone or only with dependants and those aged 65 or under who are in receipt of disability or invalidity allowances. In addition to covering the line rental the allowance also covers 20 free call units in each 2 month billing period.

Butter Vouchers

Anyone who receives social assistance payments is entitled to butter vouchers. In 1994 recipients were entitled to two vouchers for themselves and two vouchers for each dependant per month. Each voucher was worth 61p towards the cost of butter. Since then both the value and number of vouchers has been reduced. Currently, claimants receive one voucher per person per month and each one is worth 36p.

³ Deserted wife's Benefit/Allowance, Prisoner's Wife's Allowance, Carer's Allowance, Ordinary Garda Widow's Pension.

Free Travel

This benefit-in-kind is available to all those aged over 65. Those aged under 66 receiving benefits for disability or invalidity or who are blind or severely visually impaired also qualify for free travel passes. The holders are entitled to free travel on all suburban bus and rail services and national rail and coach services at non-peak times. The travel pass also allows a partner or spouse to travel free if he/she is travelling with the holder. A *Companion Free Travel Pass* is available for certain categories of individuals who are medically unfit to travel alone or are blind/severely visually impaired or wheelchair bound (see Guide to Social Welfare Services for further details). The companion pass allows the holder to have any one person aged 16 or over accompany him/her free of charge when travelling.

Fuel Allowance (+ smokeless fuel allowance)

This benefit is available to households dependent on social welfare benefits, including contributory pensions. To qualify the household must satisfy a means test. Only one allowance is paid per household and the allowance is paid for 26 weeks from mid-October to mid-April. Those living in areas where there is a requirement to use smokeless fuel receive an extra supplement to cover this expense.

Medical Card

Medical Cards are issued to those considered by the area Health Board to be unable to afford health care for themselves and their dependants without undue hardship. Entitlement to a medical card is based on a means test, but a person whose income exceeds the guidelines may still receive a medical card where the Health Board considers his or her circumstances to warrant it. The card covers the holder, his/her spouse and any dependent children. In 1994 the scheme covered approximately 36% of the population (GMS 1995a). Those in possession of a medical card are entitled to free GP services, prescribed drugs/medicines, in-patient services, out-patient hospital services, dental, ophthalmic and aural services and appliances.

These non-cash benefits play a significant part in the State's social expenditure. Table 1 shows that in 1997 spending on these non-cash benefits including the medical card amounted to 11% of total welfare expenditure, up from 10% in 1994.

Table 1: Expenditure on Cash and Non-cash Benefits, 1994 and 1997

	1994	1997
	£000	£000
Expenditure on cash welfare	3635524	4369242
Expenditure on non-cash welfare schemes	125542	155140
Expenditure on Medical Card ^a	272920	388604
<i>Total Expenditure</i>	<i>4033986</i>	<i>4912986</i>
<i>Total Non-cash</i>	<i>398462</i>	<i>543744</i>
Non-Cash/Total	10%	11%

Sources: Department of Social Community and Family Affairs (1998); Department of Social Welfare (1995).

^a GMS spending only: does not include expenditure on hospital services.

Callan, Nolan and Whelan (1996), in reviewing the Commission on Social Welfare's minimum adequate income recommendations, looked at the importance of both additional cash payments - over and above basic weekly social welfare payments - and non-cash benefits to different types of beneficiaries. (As well as the non-cash benefits we have just described, Local Authority Differential Rents were included in their discussion). They showed that in 1996, these extra benefits could add as much as 15-20% to the basic weekly payment for some beneficiaries, notably the elderly or families depending long-term on Unemployment Assistance. Their illustrative examples bring out both that these extra benefits - including the non-cash elements with which we are concerned here - are quantitatively important, and that their impact varies widely across different groups of social welfare beneficiaries. Such conclusions clearly require assumptions about valuation of the non-cash benefits, the knotty issue to which we turn in the next section.

4. Imputing Values for State Non-Cash Benefits

Estimating the value of non-cash benefits is not a straightforward matter, facing both conceptual and data-related challenges. Difficulties arise first of all because we do not know whether households would have bought the same amount of the goods or services in question if they were not provided free or at a subsidised rate. Microeconomic theory suggests that, in general, recipients will place a value on non-cash benefits that is less than the market price of the good or service, because the recipient has no choice in its allocation. Efforts in the USA to estimate the value placed by recipients on in-kind transfers show that this may in some instances be considerably below market price, but this value is very difficult to estimate satisfactorily. However, a study of food stamps in the US suggests that where the item

is a basic necessity and the in-kind transfer is smaller than the amount the household would normally spend on that good, the value to the recipient may be very close to the market price (Moffitt, 1989).

The second general issue arises where the non-cash benefit covers something like health care, which is required to meet a specific contingency facing some households. In those circumstances, if we simply add the cost of the free or subsidised services supplied by the State to the household income of the people using those services, it would imply that sick people are richer than the healthy at any cash income level. A more attractive approach is to seek to attribute to all those eligible for State provision extra income equal to the insurance premium they would have to pay to obtain the same level of cover in the market. Even assuming the cost of this cover can be established satisfactorily, a serious problem remains however. As Smeeding (1982) points out, entitlement to State health care for an elderly individual in the USA represents in effect an insurance policy worth almost enough by itself to bring that person above the official US poverty line. Such an individual could clearly still have insufficient cash income to buy enough food, clothing or shelter, which brings us back to the point that the in-kind transfer does not represent command over resources in the same way that cash income does. Since these problems loom particularly large in the case of health care, it is interesting to note current official US practice in this regard. Official poverty measures there now do estimate the value of State-provided health care cover, but continue to look separately at cash incomes and at a resource measure including health cover.

Finally, the level of information available is also likely to pose problems in valuing non-cash benefits and attributing those values to households. A service which is in principle provided free to everyone, for example, may actually be readily available only in certain areas or to certain groups, and is in any case likely to be taken up to a varying degree by different people. For example, free travel may be of little use to those living in rural areas without public transport services, and even where it is available will be used more heavily by some than by others. The level of information required to assess actual use patterns, much less the value placed on the entitlement by different people, may simply not be available.

Looking at the value of non-cash benefits for a set of hypothetical illustrative households, as in Callan, Nolan and Whelan (1996), has value but cannot hope to reflect the complexities of actual households in the population. Here we seek to estimate the value of non-cash benefits for a representative sample of actual rather than hypothetical households, taken from the 1994 Living in Ireland Survey. The survey provides a nationally representative sample of 4,048 households in Ireland, containing 14,585 individuals, with each adult being interviewed where possible. The survey, and the extent and nature of poverty in the sample using cash income and non-monetary deprivation indicators, have been described in detail in Callan *et al* (1996). We present later some summary results from the Living in Ireland Survey carried out in 1997, allowing us to assess whether the main patterns found in the 1994 survey still pertained then.

We now describe the way in which values for the State non-cash benefits covered in this study are derived and attributed to the households in the survey. For the most part, we know from the survey which households have benefited from the different non-cash benefits. In general terms, the value of most of these non-cash benefits is estimated as the average cost of provision per recipient, derived using published figures on total expenditure by the State and number of recipients per scheme. These values are then attributed to the households identified in the survey as beneficiaries of the scheme in question. We now discuss this procedure in detail scheme by scheme.

Average cost to the Department of Social, Community and Family Affairs of the free TV license scheme works out at a value of £54 per household in 1994, below the market price of £62. Households in the survey stating that they had benefited from this scheme in 1993 are each attributed this figure. Attributing this value to beneficiaries assumes that they would want a television even if the license were not provided free. Since 95% of Irish households had a colour television in 1994 this seems a reasonable assumption, although not all TV owners buy a license.

The annual value of free telephone rental (plus the free call units) based on expenditure per recipient works out at £152 in 1994. Households in the survey stating that they had benefited from the free telephone rental scheme in 1993 are each attributed this figure. Once again, it is close but not equal to the market price for this

service, which amounts to £159.⁴ Possession of a telephone is not as common as TV ownership: in 1994, 78% of Irish households had a telephone. Therefore, a certain percentage of recipients might not choose to buy this commodity if it was not provided free of charge.

The electricity, natural gas and bottled gas allowances have somewhat different costs per recipient, with the bottled gas refill allowance costing the State more per recipient than the other two schemes. Therefore although these allowances are functionally equivalent, i.e. they supply free power in the form chosen by the household, they are attributed a different value. However, the costs of these goods also differ for private purchasers. Furthermore, because power is a basic necessity and for many households the amount provided free of charge is likely to be less than total usage, the value of these allowances is likely to be close to their face value. Recent research on electricity expenditure in Ireland (Conniffe 2000) addresses the question of whether some households in receipt of the free electricity allowance would consume less than 1500 units if this were not granted free. Conniffe (p181) estimates that across all recipient households, the *upper boundary* of welfare loss is in the region of 7% of expenditure, that is if households had been given a cash transfer instead, in aggregate they would have spent 7% less on electricity. As the author points out this figure assumes that there is no benefit from electricity consumption above the preferred level (p180). It is possible that those who consume less than 1500 units of electricity may live in inadequately heated homes and that the allowance encourages elderly households to heat their homes properly.

The Fuel Allowance is given directly to the consumer rather than deducted from utility bills. The regular fuel allowance is worth £5 per week and the smokeless fuel allowance is worth £3 per week. These allowances are available for only 26 weeks per year, so 50% of this weekly value is attributed as the average weekly value to households in the survey who report that they benefited from these schemes.

⁴ The market price is based on a line rental charge of £10 per month, a unit charge of 9.5p and VAT at 21%.

Butter vouchers are given an imputed value equivalent to their face value, which stood at £1.22 per person per month in 1994. This assumes that all the vouchers were redeemed and that the recipients did not place a lower value on the vouchers because of the lack of choice on how to allocate this benefit. Figures supplied by Department of Social, Community and Family Affairs show that in 1994, 83% of butter vouchers were redeemed, which suggests that our valuation is on the high side. There is no available evidence on whether this non take-up is evenly spread across recipients or concentrated in a limited percentage of households who do not redeem any of their vouchers. The Living in Ireland survey identifies households benefiting from the scheme, but the number of butter vouchers received by the household is also determined by the number of dependants. Therefore the value of this benefit for each household is the average per person multiplied by the number of eligible persons.

The provision of free travel cost the State an average of £68 for each beneficiary in 1994.⁵ The unevenness of service provision across the country means that free travel passes will be of less value in rural areas than in urban areas with more public transport.⁶ Furthermore, use of public transport is likely to vary depending on car ownership within the household, physical health and proximity of friends and relatives. However, for simplicity we have attributed the average value to each beneficiary, irrespective of location etc. Information on free travel was collected at the household level in the survey, but where the household reported receiving this benefit, the average value was attributed to each member aged over 65.

Table 2 brings together the values attributed for these different schemes. Taken together, they can clearly represent a significant addition to the resources available to beneficiaries, of up to about £10 per week.

⁵ The number of beneficiaries shown in the official statistics is higher than the number in the relevant age group in the population, because few travel passes are actually returned when the holder dies. This means that the average value calculated in this way is biased downward.

⁶ The 1994-95 Household budget survey shows that on average households spent £2.98 on bus and train fares per week. However, this figure varied from £5.75 in Dublin to £1.36 in the Midlands.

Table 2: Imputed Values for Non-Cash Benefits, 1994

	1994	
	Yearly value	Weekly value
	£	£
Free TV Licence	53.82	1.03
Free Telephone Rental	151.88	2.92
<i>Free Electricity</i>	<i>126.98</i>	<i>2.44</i>
<i>Free Natural Gas</i>	<i>116.49</i>	<i>2.24</i>
<i>Free Bottled Gas</i>	<i>145.04</i>	<i>2.79</i>
Fuel Allowance	130.00	2.50
Smokeless Fuel	78.00	1.50
Butter vouchers (per person)	14.64	0.28
Free Travel (per person)	67.71	1.30

Finally, we turn to the most problematic of the schemes to be covered, free health care through the medical card scheme, which faces the particularly severe conceptual and methodological problems highlighted above. The medical card scheme is administered by the General Medical Services Board, which provides yearly accounts on the costs of running the service. In 1994, 1.3 million people in Ireland (36% of the population) were eligible for a medical card under the GMS scheme. The average cost of delivering the service to each eligible person was £182.49 (General Medical Services Board 1994). However, this does not necessarily represent the value of the medical cards for those receiving it.

Firstly, given that levels of health and illness, and consultation behaviour vary very substantially within the population, people do not make equal use of the health services. At one extreme, if an individual experiences no illness throughout the year the use value of the medical card would be close to zero, while someone with a chronic or serious illness will have much higher health costs and therefore the medical card will have a much higher use value. However, as already noted, simply attributing a value on the basis of each individual's use of the health services would have the effect of making sicker people look richer.

An alternative strategy is to make adjustments for a broader group of individuals on the basis of average health needs. For example, health and health service usage varies with age, with the elderly having by far the greatest health needs. Therefore the 'potential' value of the medical can be adjusted according to the age group of the

holder. The GMS provides figures showing spending on pharmacy services broken down by age group. In the following analysis these figures are used to calculate the estimated value of the medical card for individuals of different ages.

A second problem is the absence of a clear link between the cost to the State of delivering this service and its market value. The scheme is administered through a set of agreements with doctors and pharmacists. The majority of GPs are paid an annual capitation fee for each eligible patient regardless how often the patient avails of services. It is therefore possible that the cost of delivering the GP service is lower than the market cost. Similarly, the fees paid to pharmacists and dentists under the scheme are likely to be lower than those charged to private patients. Furthermore, the cost of the extra State subsidy for hospital services to those with medical card cover versus the rest of the population – because the latter pay some charges but the former do not – is not included in the calculation of total GMS expenditure under the medical card scheme.

One approach, implemented as noted above in some US studies, would be to estimate the insurance premium that a household would have to pay to obtain the same level of cover. However, health insurance schemes in Ireland have been designed mainly to cover in-patient services and in general have not covered the costs of GP visits, dental care or drug costs. More recently, schemes have been introduced to cover some elements of outpatient care. These schemes offer a subsidy rather than a full refund for GP visits and also impose a high excess on claims for out-patient services.⁷ Furthermore the schemes provide no subsidy for prescription costs and little or no coverage for routine dental costs. This coverage falls far short of the services supplied by the medical card, therefore, it would be unrealistic to take the price of such schemes as the market value of the medical card.

As well as the outpatient services provided through the GMS, those with medical card cover effectively receive an additional subsidy on hospital care, compared with the rest of the population. Those without medical card cover are obliged to pay a nightly

⁷ In the 1999/2000 period the minimum excess per adult member for out-patient coverage from the VHI and BUPA was £175, and in both cases the maximum subsidy per GP visit was £15.

Hospital In-Patient Charge of £25 per night up to a maximum of £250.⁸ Although this charge is itself highly subsidised, it represents the cost of public hospital care to those without medical cards. Once again, though, the ex post value of this extra subsidy to a particular individual or household in a particular year will vary with the extent of use of the service.

We therefore value the medical card by estimating age-specific average costs of providing the service. For GMS services we base the age weights on the pattern of spending on pharmacy services across the age groups. A set of figures weighting for sex and age were also calculated, but the differences between the sexes within each age group were very small (see Table 5). For hospital services we use the average number of nights spent in hospital by those with medical card cover from the 1987 ESRI household survey. On average, medical card holders were found to have a higher incidence of hospital stays than non-holders (1.7 nights per year compared to 0.9 nights). The weights are shown in Table 3 and the imputed value of the medical card for individuals based on these adjustments are presented in Table 4. The average imputed value for the medical card in 1994 is £217, which works out at £4.16 per person per week. The estimated value of the card ranged from £1.22 per week for children aged between five and fifteen to £8.20 per week for individuals aged 65 and over.⁹

⁸ Between 1994 and 1997 the in-patient charge was £20 and the maximum charge was £200. Price increases occurred in 1998.

⁹ Our average imputed value is somewhat higher than the estimates produced by Goodbody Consultants (1998, p58). Using a survey of health service usage among 260 unemployed individuals they estimate that the average monthly cost of GP visits and prescription drugs would be £15.50 per person (based on an estimated cost of £15 per GP visit and £20 per prescription). This works out at an estimated value of £3.57 per week. Part of the reason for the difference in estimates is likely to be the lack of adjustment for hospital costs in the Goodbody calculations. It should also be noted that Goodbody's use an even lower imputed value of £1.35 per week when calculating replacement rates (1998, Appendix A4). This figure is based on two GP visits and two prescriptions per person per year. There is no explanation of why this lower estimate is used.

Table 3: Age Weights Used to Calculate Medical Card Values

	<i>% of National Average 1994¹</i>	<i>Mean number of hospital nights 1987</i>
Under 5	26.9	0.98
5-15yrs	23.8	1.00
16-44yrs	64.0	1.43
45-64yrs	146.8	1.81
65 plus	198.7	3.24
All	100.0	1.72

¹ Based on percentages of pharmaceutical costs. GMS 1995b

Table 4: Imputed Individual Medical Card Values by Age Group

	<i>Per Annum</i>	<i>Per Week</i>
Under 5	£68.63	£1.32
5-15yrs	£63.51	£1.22
16-44yrs	£145.49	£2.79
45-64yrs	£304.10	£5.83
65 plus	£427.41	£8.20
All	£216.91	£4.16

In the 1994 Living in Ireland survey, information on medical card coverage was collected for every adult in the household. However, if a medical card holder has any dependent children they too are covered by the card, therefore these children were also counted in the total number of medical card beneficiaries in the household. The majority (56%) of households in the sample had no medical card holders. Amongst households with at least one holder, the mean number of beneficiaries was 2.6. The value of the medical card for each household was then calculated by summing the estimates for individual members. As shown in Table 4, the mean imputed value of the medical card per household in 1994 was £513 per year. The median value was £427 per year and its value ranged from £145 to £1726.

Table 5: Imputed Yearly Value of Medical Card to Recipient Households, 1994

	<i>Adjusted for Age of HH Members</i>	<i>Adjusted for Age & Sex of HH Members</i>
Mean	£513	£514
Median	£427	£451
Mode	£427	£412
Minimum	£145	£139
Maximum	£1726	£1755

5. Relative Income Poverty in 1994 When State Non-Cash Benefits are Included

We now go on to assess the impact of attributing these values to sample households on the extent of relative income poverty in the 1994 Living in Ireland survey. As discussed in detail in previous ESRI studies, relative income can most usefully be complemented by non-monetary indicators of deprivation in measuring poverty, and such combined measures of poverty are examined below. At this point, however, the most transparent way to proceed is to concentrate first on the implications of non-cash benefits for relative income poverty. Previous publications have described in detail the derivation of relative income poverty lines, taken as proportions of average disposable equivalised income, and the pattern of relative income poverty these reveal with alternative poverty lines and equivalence scales for the 1994 Living in Ireland Survey sample (see Callan *et al* 1996). Here we once again use 40, 50 and 60% of mean income as poverty lines, and for simplicity concentrate in the text on one equivalence scale, applying a value of one to the first adult in the household, 0.66 for additional adults and 0.33 for each child (under 14 years). (To test the sensitivity of our result to changes in the equivalence scale we recalculate the 1997 poverty figures using alternative scales in Appendix 1).

Household incomes are now adjusted to include State non-cash benefits using the imputed values outlined in the previous section, and the mean poverty lines and poverty rates are then re-calculated. Table 6 shows that adding values for all the State non-cash benefits except the medical card to household income leads to a reduction in the proportion of households falling below the 50% and 60% poverty lines, by more than 2 and 3 percentage points respectively. However, these benefits have little effect on households whose income is less than 40% of mean equivalised income, with the poverty rate at that line remaining at about 5%.

Table 6: Percentage of Households Below Relative Income Poverty Lines Excluding & Including State Non-cash Benefits, 1994

<i>% of mean equivalised income</i>	<i>Income excluding non-cash benefits</i>	<i>Income & non-cash except medical card</i>	<i>Income & all non-cash benefits</i>
	<i>% of households below line</i>		
40% line	5.0	4.9	3.9
50% line	19.1	16.8	14.5
60% line	34.6	31.2	27.0

When the imputed value of the medical card is included along with other non-cash benefits, the table shows that the impact on household poverty levels is even more substantial. The incidence of household poverty decreases for all three poverty lines, with the percentage below the 40% line falling to about 4%. Overall, including all these benefits in kind leads to a reduction of between one-fifth and one-quarter in the number of households below relative income poverty lines.

We noted earlier that for various reasons the valuations of the medical card based on the costs of delivery are lower than the price the recipient would probably have to pay for the same service on the open market. As a crude sensitivity check we increased the value of the medical card by 25% and recalculated the poverty figures. This produced a change of less than 0.5 of a percentage point in the adjusted 40% and 50% poverty lines and a decrease of only 1.1 percentage point at the 60% line.¹⁰

We noted in the introduction and Section 2 that non-cash benefits provided by employers to some employees also affect both mean income and the relative position of different households, so taking them into account will give a more comprehensive picture of relative income poverty. We incorporate them into the analysis in Section 7, but first look at how poverty rates for different types of household are affected by the inclusion of State non-cash transfers, and in the next section at who benefits from those transfers.

We focus first on the employment status of the household head.¹¹ If we look first at the 50% line, Table 7 shows that including all non-cash benefits in income, including the medical card, produces lower poverty rates for households headed by someone who is unemployed, ill or disabled, working full-time in the home, or retired. The scale of the reduction is lower for the unemployed than for the other three groups, with the biggest reduction being for the ill or disabled where the poverty rate falls from almost 50% to 30%. The 40% and 60% poverty lines show a generally similar

¹⁰ The revised poverty figures keeping the free schemes at the same level but adding a higher medical card value are: 3.7% of households at the 40% line, 14.1% at the 50% line and 25.9% at the 60% line.

¹¹ The head of household is defined as the person in whose name the accommodation is held, however, in the case of married or cohabiting couples the male partner is taken as the head, in other cases of joint-ownership/tenancy the eldest person is taken as the head of household.

pattern, although with the highest line the decline for the unemployed or ill/disabled is more marginal whereas those in home duties or retired still see a substantial decline.

Table 7: Percentage of Households Below Relative Income Poverty Lines by Labour Force Status of Household Head, 1994.

	<i>Cash Incomes</i> <i>% below line</i>			<i>Adjusted for Non-cash Benefits</i> <i>% below line</i>		
	<i>40%</i>	<i>50%</i>	<i>60%</i>	<i>40%</i>	<i>50%</i>	<i>60%</i>
Employed	0.7	3.9	8.6	0.7	3.7	8.9
Self-employed	9.0	13.0	18.2	9.4	13.0	19.3
Farmer	10.5	21.0	32.1	10.5	20.1	31.5
Unemployed	15.4	64.0	80.8	11.8	53.6	77.2
Ill/disabled	7.8	49.2	77.0	3.7	30.5	72.3
Retired	2.8	11.3	39.4	1.4	6.5	17.3
Home duties	7.1	38.0	72.9	4.0	23.5	48.4

The relatively large effects among households headed by those who are retired or ill/disabled can be accounted for by the qualification rules for non-cash benefits outlined in Section 3. For many of these benefits, eligibility is based on old age or receipt of disability or invalidity benefits. This explanation is also likely to apply to the 'full-time home duties' category, which includes many elderly female-headed households.¹² Despite these substantial changes in the poverty rates, it is worth noting that the ranking of these household types by poverty risk remains the same when non-cash benefits are included, and very large differences in the poverty risks of different household types remain.

Table 8 looks at poverty rates by the age of the household head. We now distinguish the non-cash social welfare benefits excluding the medical card and the medical card itself, because many of the welfare benefits are particularly targeted on pensioners. The results show that, as this would suggest, adding non-cash welfare benefits has little impact on the poverty rates of households headed by someone aged under 65. (The only exception is a small reduction in the percentage of households in the 45-64 age falling below the 50% poverty line.) In contrast, we see substantial reductions in poverty levels among households headed by someone aged 65 or over, regardless of which poverty line is used. For example the proportion of these households below the

50% poverty line falls from 13% to 7% when we take into account non-cash benefits other than the medical card.

Table 8: Percentage of Households Below Relative Income Poverty Lines by Age of Household Head, 1994

	Unadjusted			Adjusted for Non-cash exc. Med. Card			Adjusted for all Non-cash Benefits		
	40%	50%	60%	40%	50%	60%	40%	50%	60%
	%	%	%	%	%	%	%	%	%
Under 45	4.9	21.9	30.1	4.9	21.6	30.4	4.0	20.1	29.9
45-64	6.3	20.1	30.3	6.3	18.0	30.1	5.6	14.3	28.8
65 plus	3.5	13.2	48.1	2.9	7.2	34.1	1.5	5.6	19.9

The impact of the medical card on household poverty is somewhat more evenly spread across age groups, although the table shows that households headed by someone under 45 are least affected and those headed by someone 65 or over are most affected. This reflects the higher value attributed to the medical card for older age groups on the basis of their higher utilisation of health services, as described earlier. It is worth emphasising the scale of the overall impact of the non-cash welfare benefits and the medical card on the poverty rate for households headed by someone aged 65 or over. At the 50% line, their poverty rate based on cash incomes is 13%, whereas when all the non-cash benefits are included this rate falls to about 6%.

Turning to household composition, Table 9 shows that in terms of cash incomes the rates of relative income poverty are highest among single parent households, with 57% under the 50% line. Large families, with 4 or more children, also fare badly with 41% below that line. Adding in non-cash benefits, including the medical card, does not have a big impact on the income poverty levels of these two household types: their poverty rates are reduced by 4 and 3 percentage points respectively. The household type that is most affected is the single adult household, where the poverty rate falls from 24% to 9%. This category includes many elderly households, so this effect once again reflects the age-targeted nature of the benefits.¹³

¹² Fifty three% of household heads who describe their employment status as home duties are aged 65 or over, and 99% are female.

¹³ Half of all single person households in the sample consist of a respondent aged over 64.

Table 9: Percentage of Households Below Relative Income Poverty Lines by Household Composition, 1994

	<i>Unadjusted % below 50% Line</i>	<i>Adjusted for Non-cash Benefits % below 50% Line</i>
1 adult	24.0	9.1
2 adults	9.3	7.3
3 or more adults	9.6	9.0
2 adults 1 child	14.2	13.6
2 adults 2 children	12.9	11.5
2 adults 3 children	22.0	21.4
2 adults 4+ children	41.0	38.1
1 adult child(ren)	56.9	53.1
Others with child(ren)	29.3	27.3

6. Who Benefits from State Non-cash Transfers?

The analysis so far has shown that State non-cash benefits, if valued at the average cost of provision in 1994, particularly affected the resources available to households headed by an elderly person or somebody who is disabled. In this section we seek to establish how well these benefits are targeted at the most needy, and how the pattern of their distribution compares to income from other sources.

The first step in this analysis is to divide the sample of households into deciles on the basis of their equivalised cash income (excluding benefits-in-kind). We then look at the proportion of total income of different types going to each of these decile groups. The first column in Table 10 shows that the poorest 10% of households receive 5% of total cash income, while the top 10% of households receive 23% of total income. Focusing on shares in total equivalised income, the bottom ten% of households receive slightly less, 4% of the total, and the top 10% receive over a quarter of the total.

We now examine the distribution of State non-cash benefits, looking first at all non-cash benefits together. State non-cash benefits appear well-targeted towards the bottom of the income distribution. The poorest 30% of households receive over half (53%) of non-cash transfers, whereas the richest 30% receive only 5%. The benefits are not entirely progressive however, as households in the third and fourth deciles receive a greater proportion than the bottom two groups.

The medical card appears to be somewhat more redistributive than other types of State non-cash benefit. The bottom decile receives a higher proportion of this income

source (18%) than of other non-cash benefits (11%) or of any other income type. However, if we look at the bottom 30% of the income distribution we see little difference: 52% of medical card spending and 55% of other State non-cash benefits go to these households

Table 10: Distribution of Income Sources Across Weighted Equivalised Income Deciles 1994

<i>Decile (equiv. cash income)</i>	<i>% of Non- Equiv. Income</i>	<i>% of Equiv. Income</i>	<i>% of State Non-Cash Income</i>	<i>% Non-cash benefit ex. Med card</i>	<i>% of Medical Card benefit</i>	<i>% of Cash Transfers</i>
	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>
1	4.8	3.9	16.1	11.3	18.3	16.0
2	3.9	4.8	16.6	20.7	14.7	15.1
3	4.8	5.3	20.5	23.4	19.2	16.8
4	5.8	6.0	19.3	20.7	18.6	16.9
5	7.7	7.0	11.4	10.4	11.9	12.6
6	10.1	8.6	7.2	5.5	8.0	8.4
7	11.5	10.5	4.0	3.8	4.0	5.1
8	13.9	12.7	2.9	2.5	3.1	5.4
9	14.9	15.8	1.5	1.2	1.6	2.4
10	22.6	25.4	0.5	0.5	0.4	1.2

It is particularly relevant to compare the distribution of State non-cash and cash transfers. Table 10 also shows this comparison, and we see that the non-cash benefits provided by the State, taken together, are in fact slightly more concentrated towards the bottom of the income distribution than total cash transfers. For example, the poorest 30% of households receive 48% of cash transfers from the State, compared with 53% of total non-cash transfers. However, given the difference in the scale of total spending on these two types of benefits, cash transfers are much more important in terms of overall impact on income redistribution and poverty.

It is also interesting to explore the distribution of different income types by household type. Table 11 looks at the distribution in terms of the labour market status of the head of household. We see that over one-third of non-cash benefits go to retired households, while a further 26% goes to households headed by someone working full-time in the home (which as we have seen includes both elderly and younger single parent households). Households headed by someone who is unemployed or ill/disabled also receive a greater share of non-cash than of cash income. Comparing non-cash and cash transfers from the State, households headed by someone who is retired or in home duties receive a greater share of total non-cash than cash transfers,

though this reflects the distribution of spending on the free schemes rather than the medical card. Across all the labour force status categories, the distribution of medical card spending is similar to that of cash transfers, whereas the other non-cash benefits (mainly the free schemes) are rather more concentrated among the retired and home duties categories.

Table 11: Distribution of Different Income Types by Labour Market Status of Household Head, 1994

	<i>Household Income</i>	<i>Equivalised household Income</i>	<i>State Non-Cash Income</i>	<i>Non-cash excluding Medical Card</i>	<i>Medical Card</i>	<i>Cash Transfers</i>	<i>All</i>
	%	%	%	%	%	%	%
Employee	50.7	50.3	9.0	4.2	11.2	11.1	38.9
Self-Emp	14.0	12.3	1.4	.8	1.6	1.6	8.5
Farmer	8.4	7.5	7.9	4.2	9.6	6.8	8.0
Unemployed	6.1	4.9	16.7	11.6	19.0	23.4	9.3
Ill/ Disabled	1.8	1.8	5.5	4.4	6.0	6.3	3.2
Retired	12.0	14.5	33.9	41.5	30.4	27.8	18.0
Home duties	6.7	8.4	25.5	33.3	21.8	22.8	13.6
Ed/ Training	0.3	0.3	0.2	0.1	0.2	0.2	0.4

Table 12 shows the share of different income types going to households in the three different age categories. Households headed by an elderly person receive over half of all non-cash income: they receive 43% of medical card income and 68% of other non-cash benefits. Cash-transfers are more evenly distributed across the age groups, however the over 65s still receive a substantial share.

Table 12: Distribution of Different Income Types by Age of Head of Household, 1994

	<i>Household Income</i>	<i>Equivalised HH Income</i>	<i>Total Non-Cash Income</i>	<i>Non-cash excluding Med Card</i>	<i>Medical Card</i>	<i>Cash Transfers</i>	<i>All</i>
	%	%	%	%	%	%	%
< 45	43.5	45.1	21.6	15.7	24.4	31.1	40.9
45-64	42.0	36.0	27.6	16.4	32.8	32.3	34.3
65 plus	14.5	19.0	50.7	67.9	42.8	36.6	24.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Finally, Table 13 examines the distribution of different income sources by household composition. This classification reveals that non-cash income goes disproportionately to households consisting of 1 adult, 2 adults or more than 2 adults plus children.

However, these deviations are small compared to those we have seen for age, employment status and income. The concentration of non-cash benefits excluding the medical card among single person households reflects their targeting by age.

Table 13: Distribution of Different Types of Income by Household Composition, 1994

	<i>HH Income</i>	<i>Equiv. HH Income</i>	<i>Total Non- Cash Income</i>	<i>Non-cash excluding Medical Card</i>	<i>Medical Card</i>	<i>Cash Transfers</i>	<i>All</i>
	%	%	%	%	%	%	%
1 adult	21.2	9.9	28.5	46.4	20.3	18.2	22.7
2 adults	23.4	18.0	23.7	25.6	22.9	20.7	20.4
3 or more adults	20.0	26.9	18.0	9.5	21.9	22.3	18.0
2 adult 1 child	6.2	5.7	1.7	1.3	2.0	3.6	5.3
2 adult 2 children	8.3	8.9	2.5	1.5	3.0	3.3	7.5
2 adult 3 children	4.7	5.8	2.8	1.9	3.2	3.0	4.9
2 adult >3 children	1.7	2.4	2.1	1.3	2.4	2.6	2.3
1 adult + children	1.6	1.2	2.6	2.2	2.7	4.5	2.7
Others with kids	12.9	21.2	18.1	10.3	21.6	21.8	16.2

7. Non-Cash Benefits from the Market

The point was made in Section 2 that non-cash benefits are not only provided by the State: those in employment may also benefit from a range of non-cash transfers from employers, such as a company car, leisure facilities, health insurance or employer pension contributions. Adding in the value of State non-cash benefits – which go predominantly to those on low incomes – while ignoring these employer benefits – which go predominantly to those on higher incomes – could produce a misleading picture of the overall distribution of command over resources. In this section we therefore assess the impact which incorporating these employer benefits as well as those from the State might have on relative income poverty.

The 1994 Living in Ireland survey contained a series of questions on the receipt of a limited range of fringe benefits from employment. Respondents working more than 15 hours per week were asked if they had personally benefited from a range of services or benefits, and the results are shown in Table 14. Very few employees were found to benefit from employer-funded childcare or from housing/mortgage subsidies. A somewhat greater proportion took advantage of employer-provided sport or leisure centres. Pensions and health insurance proved to be the most significant forms of non-wage compensation: 50% of employees had pension entitlements and 15% benefited

from health-care/insurance. These two fringe benefits are also likely to be the most significant in financial terms.¹⁴

Table 14: Proportion of Employees¹ Benefiting from Non-cash Transfers 1994

	%
Pension	49.8
Childcare	0.3
Health/Medical Insurance	15.0
Sports/Leisure Facilities	11.6
Subsidised Housing/Mortgage	3.9

¹ Working 15 hours or more per week

Respondents working less than 15 hours per week were not asked directly about employer-provided benefits. However, the data on their earnings includes information on whether pension contributions are deducted from pay, and only one of the 270 employees in the sample working less than 15 hours had in fact contributed to an occupational pension. On the basis of this evidence we assume that these marginal workers do not receive any of the other employee benefits in kind. When these workers are included in the analysis the proportion of employees receiving non-cash employer benefits is reduced.

No information was sought in the survey on the value of these benefits, and it is in fact very difficult to obtain sufficient details from individual employees to be able to value occupational pension schemes. In order to explore the impact of non-cash benefits from the market on incomes and poverty levels, we must therefore estimate approximate valuations for each of the benefits. As in the case of State-provided non-cash benefits, recipients might not always chose to allocate their resources to these items (pension, health insurance, etc.) if they were given cash instead. For example, an employee might prefer to spend now than save for the future in the form of a pension. The value of the benefit to the employee may then actually be lower than the cost of providing it, in which case our calculations may over-estimate the value of both State and employer non-cash transfers. In contrast, the absence of information on

¹⁴ Childcare is likely to be financially important to those receiving it, but so few had access to this benefit in 1994 that its overall impact was small.

other fringe benefits such as company cars and luncheon vouchers may bias our estimates downwards.

Occupational Pensions

In assigning a value to an occupational pension as a non-cash benefit, we confine our attention to the contributions made by the employer. Research by Hughes and Whelan (1996) suggests that the mean level of employer pension contributions for non-executive employees in Ireland is around 10% of pay, while for executives the employers' contribution is more generous- between 15 and 19% depending on the size of the scheme. Here we impute a value of 10% of gross weekly pay to employees with an occupational pension as a conservative estimate of its cash-value. Table 15 shows that among the individuals who benefit from employer pension contributions the mean value attributed is just under £37 per week, and the median value is slightly lower at £33.50 per week. These individual payments are then aggregated to calculate the level of benefit within each household. Just over 30% of Irish households benefited from employer pension contributions in 1994 and the mean imputed value of these contributions for those who received them was £43 per household.

Table 15: Incidence and Imputed Weekly Value of Pension Contributions from Employers, 1994

	<i>Individuals</i>	<i>Households</i>
% without Pension ¹	83.1%	69.6%
% with Pension	16.9%	30.4%
Mean Value ²	£36.88	£43.41
Median Value	£33.50	£37.91
Modal Value	£40.00	£35.00
Min. Value	£2.11	£9.18
Max. Value	£250.00	£250.00

¹ Includes all individuals who are not employees.

² These values relate only to those in receipt of pension contributions

A valuation of 10% of pay may under-estimate the value the contributions received by higher-level employees, so as a sensitivity test we recalculated the pension values attributing a value of 15% of gross weekly pay to those in the top three ISCO occupational groups – legislators, senior officials & managers; professionals; and technicians and associated professionals. Using this revised estimate the mean value for individuals in receipt of pension contributions is £47 per week (median £40). The mean for all households is £17, or £55 for households in receipt of pension

contributions (i.e. excluding zero values). In the analysis below we will calculate poverty levels using the two estimates of pension contribution values to provide an insight into the possible range of their effect.

Health Insurance

The next most common employee benefit is health insurance. Once again no information was collected on the cash value of this benefit in the Living in Ireland survey so one must be imputed. We use as a proxy the cost of VHI coverage under Plan E (group rate). The annual charge in 1994 was £299 per child and £733 per adult. We have chosen the most expensive policy on the basis that employers providing this reward to employees are unlikely to buy at the bottom of the range. The value of employer-provided health insurance was adjusted by the household status, on the assumption that a beneficiary's spouse and any children under 18 would also be covered. The vast majority of households (90%) are not in receipt of this benefit in kind. For the 10% of households who do benefit, the imputed value ranges from £12 to £55 per week.

Almost eight% of households benefit from employer-provided sports or leisure facilities. We have attributed an annual value of £200 to this benefit, which amounts to £3.84 per week. It is assumed that membership applies to the employee only and in nearly all cases only one household member reported receipt of this benefit.

In 1994 less than 2% of Irish households were in receipt of the remaining employer benefits-in-kind: child-care and housing. Regardless of the value attributed to these benefits, their influence on mean household income and on relative income poverty rates will thus be minimal. Employer-provided housing or housing subsidy was given a value of £200 per month¹⁵ and child-care was attributed a value of £40 per week.

The imputed values for all five employer-provided non-cash benefits were then added to the net weekly income of any employee that received them, and the income of the household was recalculated. Because of the relative importance of pension contributions we estimate the effect of employer benefits on household income and

¹⁵ The mean unweighted private monthly rent in the 1994 survey was £198.

poverty both with and without pensions. Table 16 shows the impact of including various state and employer non-cash benefits on the mean equivalised household income for the sample.

Table 16: Mean Equivalised Household Income when Various Non-cash benefits are Included, 1994

	Mean Equivalised Household Income
Cash Income	£130.92
+ Free schemes	£132.34
+ Medical card	£134.65
+ Employer BIK	£136.33
+ Pension contributions (10%)	£142.51
+ Pension contributions (15%)	£144.23

8. Relative Income Poverty in 1994 when Employer and State Non-cash Benefits are Included

We now assess the impact on relative income poverty rates of adding to household income values for both employer-provided benefits in kind and State non-cash transfers. When the estimated values for all employer benefits except pension contributions are added to household income, Table 17 shows that this increases the proportion of households under relative income poverty lines, but relative income poverty rates still remain significantly lower than those measured using cash income alone. When a conservative estimate of the value of pension contributions is also added, however, we see that relative income poverty levels rise to levels much closer to those based on cash income alone. When the assumed value of pension contributions is increased for higher-occupation employees, relative income poverty levels are marginally higher, and are now very similar to those based on cash income alone at the 40 and 50% lines, though still lower with the 60% line. Employer non-cash benefits thus offset much of the impact of State non-cash transfers on relative income poverty rates.

Table 17: % of Households Living Below Poverty Lines Adjusting Income for State & Employer Non-cash Benefits

	Cash Income	+ State Non- cash Benefits	+ Employer non-cash (except pension)	+ pension (10%)	+ pension (15% for top 3 occupational groups)
	% of households falling below				
40% Line	5.0	3.9	4.1	5.3	5.6
50% Line	19.1	14.5	15.2	18.2	18.8
60% Line	34.6	27.0	27.8	31.5	32.6

The Distribution of Employer Non-cash Benefits

Of all the income sources investigated here, employer non-cash benefits are the most heavily concentrated towards the top of the income distribution. Taking employer pension contributions first, we see from Table 18 that the bottom 20% of the income distribution receive less than one% of this benefit, and households in the bottom half of the distribution command only 7%. Conversely, the top two income deciles receive over 50%. Other employer benefits in kind (health insurance, creche, sports facilities, and housing) are slightly less concentrated among the top income deciles, but the top two deciles still receive 45% of the total. The very low levels of non-cash market income among the bottom income deciles in part reflects the fact that relatively few of this group are in employment. For example, only 8% of households in the bottom income decile are headed by an employee¹⁶ compared to 68% of households in the top income decile.

Table 18: Distribution of Imputed Income from Employer Non-cash Benefits Across Equivalised Income Deciles, 1994

Decile (equivalised cash income)	% of Pension Contrib. Income ¹	% of other Employer BIK ²	% of All Employer BIK
1 (bottom)	0.3	0.2	0.3
2	0.4	0.8	0.4
3	0.8	1.4	1.0
4	1.4	2.3	1.6
5	4.2	6.5	4.7
6	8.4	9.1	8.5
7	12.0	17.6	13.2
8	18.7	17.5	18.4
9	22.2	21.7	22.1
10 (top)	31.6	22.9	29.7

¹ Employer pension contribution calculated at 10% of earnings.

² Employer provided childcare, sports/leisure, health insurance, and housing.

³ All figures calculated on weighted data.

¹⁶ A further 22% are farmers or self employed and so do not receive benefits from an employer.

9. Non-Cash Benefits and Combined Measures of Poverty and Deprivation

So far, we have focused on measures of poverty based on household income, relative to other incomes: the analysis has sought to assess whether relative income poverty rates look very different when – necessarily somewhat tentative – valuations for State and employer non-cash benefits are incorporated into an expanded household income concept. Relative income thresholds are not of course the only way to measure poverty, and previous studies based on ESRI household surveys have shown that they can usefully be complemented by measures incorporating in addition direct indicators of deprivation. A measure of poverty employing both relatively low income and basic deprivation has proved particularly useful: its development and underlying rationale are discussed in detail in Callan, Nolan and Whelan (1993) and Nolan and Whelan (1996). Results on that basis have been produced from the ESRI surveys for 1987, 1994 and 1997 (see Callan *et al* 1996, 1999). The National Anti Poverty Strategy (NAPS) has framed its global poverty reduction target in terms of this combined measure of what it terms “consistent” poverty. It is therefore particularly important to be able to assess how explicitly taking non-cash benefits into account affects this measure of poverty.

This measure identifies as poor those falling below relative income poverty thresholds and experiencing generalised deprivation. Up to the present, the indicators of generalised deprivation employed for this purpose relate to the enforced lack of a number of basic items, set out in Table 19. (For most of the items, households doing without the item are asked directly whether this is because they cannot afford it.) Households reporting deprivation of one or more of these items due to lack of resources and with cash income below the different relative income poverty lines may then be identified as poor. The levels of poverty produced by this combined poverty measure are significantly lower than those based on relative income poverty lines alone, with that gap widening from 1994 to 1997. The set of indicators used to capture generalised deprivation will need to expand over time in order to continue to reflect societal views about minimum standards: the issues which arise in seeking to do so have been discussed in Callan *et al* (1999).

Table 19: Indicators of Basic Deprivation in the 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
Had day in the last 2 weeks without a substantial meal
Had to go without heating during the last year through lack of money
Experienced debt problems arising from ordinary living expenses or availed of charity

The income element of these combined low income and deprivation poverty measures could be expanded to incorporate the values for State and employer non-cash benefits discussed in previous sections. When we combine this expanded income measure with the basic deprivation indicators, the numbers then identified as being on low income and experiencing basic deprivation are shown in Table 20. When compared with the corresponding results using cash income and basic deprivation, we see that including both State and employer non-cash benefits leads to very little change in the percentage of households both falling below the relative lines and experiencing basic deprivation.¹⁷

Table 20: Percentage of Households Below Relative Income Lines and Experiencing Basic Deprivation, 1994

	Cash income	Income including non-cash benefits
% of households below line and experiencing basic deprivation		
40% Line	2.3	2.4
50% Line	9.2	9.2
60% Line	14.9	14.2

10. State Non-Cash Benefits in 1997

The principle objective of this study has been to assess the impact of including an estimated value for non-cash transfers on the level and distribution of poverty across Irish households, and one would expect the same general pattern to hold over time. However, there have been some policy changes in relation to several of the non-cash social welfare benefits since 1994, and it is worth checking whether the relationship between these non-cash benefits and poverty appears to have changed, or the

¹⁷ These figures differ slightly from those produced in Callan *et al* (1999) due to further revisions to the data and weights.

distribution of these benefits to have altered, since then. We therefore look in this section at some key results updated to 1997: we concentrate for this purpose on State non-cash transfers, which are the primary focus of the study.

Changes in policy and pricing have altered the number of recipients and the value of a number of the non-cash benefits. Between 1994 and 1997 the number of people receiving free travel increased from 462,000 to 504,000,¹⁸ free TV licences increased from 180,000 to 206,000, free electricity/gas increased from 202,000 to 219,000, and free telephone rental rose from 130,000 to 165,000. These increases in coverage are largely due to administrative changes over the time period. Firstly, in 1994 all of the free schemes were extended to widows/widowers between the ages of 60-65 whose late spouse had been in receipt of the non-cash benefit. Secondly, in 1996 the electricity/gas scheme, free TV licence and the telephone rental allowance were extended to non-social welfare pensioners satisfying a means test. Thirdly, in 1997 the telephone rental scheme was extended to all those aged over 75 regardless of their household composition (see Quinn, 2000, Appendix 1 for an overview of changes to the free schemes since their introduction). The rising number of recipients is also likely to have been influenced by an increase in the numbers in the population aged over 65.

We calculate the imputed value of these non-cash benefits as before, on the basis of the cost to the State per recipient. The 1997 values of the TV licence, telephone rental, travel-pass and electricity/gas allowance thus reflect changes in the costs of these products over the three-year period (see Table 21). It is interesting that although the subsidy from to CIE in respect of travel passes is adjusted to take account of changes in the number of recipients and fares, the cost per person dropped slightly between 1994 and 1997.¹⁹ The cost and hence imputed value of natural gas also declined marginally. The nominal value of the fuel allowance and smokeless fuel allowance did not change between 1994 and 1997 (the fuel allowance has not changed since 1985) so the real value to recipients has decreased. During 1997 the number of butter

¹⁸ Refers to the number of passes issued, however, as mentioned in section 4 above the numbers may be over stated.

¹⁹ See Quinn (2000) for a discussion of the rather hap-hazard way in which this subsidy is established.

vouchers was cut from two to one per person and the face value of the voucher fell from 61p in 1994 to 48p in 1997.²⁰

Table 21: Imputed Values of State Non-Cash Benefits in 1997

	Yearly value £	Weekly Value £
Free TV License	69.21	1.33
Free Telephone Rent	164.08	3.16
Free Travel	64.23	1.24
Free Electricity Allow	137.63	2.65
Free Natural Gas	115.00	2.21
Free Bottled Gas	163.37	3.14
Fuel Allowance ¹	130.00	2.50
Smokeless Fuel	78.00	1.50
Butter vouchers (p.p)	11.44	.22

Medical card coverage decreased somewhat from 1994 to 1997, from 1.29 million to 1.22 million. Over the same time period there have been changes in the value of the medical card. Between 1994 and 1997 the cost of the GMS per person increased from £182 to £228, an increase of 25%. The increase in the cost of delivering the service to each recipient is likely to reflect both price increases and extensions in provision, for example the introduction of the Dental Treatment Services Scheme in November 1994. The total cost/value per person was adjusted by age as described above for the 1994 figures, but the age weights are slightly different because they are based on 1997 figures for differences in pharmaceutical costs by age.

Table 22: Imputed Value for Medical Card by Age 1997

	% of National Average ¹	GMS Value	Hospital Value	Total Yearly Value	Weekly Value
Under 5	23.4	£53.35	£19.54	£72.89	£1.40
5-15yrs	19.3	£44.01	£20.08	£64.09	£1.23
16-44yrs	63.6	£145.01	£28.70	£173.71	£3.33
45-64yrs	144.7	£329.93	£36.20	£366.13	£7.02
65plus	195.6	£445.99	£64.80	£510.79	£9.80
All	100.0	£228.01	£34.42	£262.43	£5.03

¹ Figures based on the percentage of pharmaceutical costs spent on each age group.

²⁰ The value of the travel pass to holders may have been increased by the extension of the scheme to cover cross-border travel in 1995, but we have made no attempt to adjust the value for this change.

This change in weights results in a slightly lower value being attributed to children's medical card cover in 1997 despite the overall increase in costs. The public hospital in-patient charge was the same in 1997 as in 1994 so the value of getting this service free via the medical card had decreased in real terms. The total annual imputed value of the medical card in 1997 ranges from £64 for children aged 5-15 to £511 for those aged over 65.

To see how much the overall pattern has changed since 1994, we add these valuations of State non-cash state benefits to household income and recalculate relative income poverty lines and rates for 1997 as before. The results for 1994 and 1997 are compared in Table 23. As Callan *et al* (1999) noted, using cash incomes the percentage falling below 40% and 50% of mean equivalised household income increased marginally between 1994 and 1997. When State non-cash benefits are added to income the percentages below the lines fall as in 1994. However, there are some differences in the magnitude of the decrease compared to 1994. With the 50% line State non-cash benefits have a greater impact than in 1994, leading to a decrease of 35% compared to 24%. At the 60% poverty line, on the other hand, State non-cash benefits have a significantly smaller effect in 1997 than in 1994, reducing the numbers falling below the line by 13% rather than 22%. Adding employer-provided benefits in kind would of course push these relative income poverty rates back up, as we saw for 1994.

Table 23: Percentage of Households Below Relative Income Poverty Lines Including State Non-cash Benefits, 1994 and 1997

	1994			1997		
	Cash Income	Income & free schemes	Income, free schemes & medical card	Cash Income	Income & free schemes	Income, free schemes & medical card
	% of households falling below line					
40% line	5.0	4.9	3.9	6.3	5.8	4.7
50% line	19.1	16.8	14.5	22.7	17.8	14.7
60% line	34.6	31.2	27.0	34.5	34.0	29.9

The analysis for 1994 showed that the impact of adjusting income for State non-cash benefits was most pronounced among households headed by someone aged over 65. Repeating this analysis for 1997, relative income poverty rates using cash incomes were significantly higher for elderly households than in 1994, as discussed in detail in Callan *et al* (1999). For example, the proportion of elderly households living on less

than 50% of mean household income increased from 13% in 1994 to 35% in 1997. In terms of the impact of State non-cash benefits, the overall pattern of results by age is similar to that found in 1994, with a much more substantial impact on the elderly than the middle-aged and little effect on those under 45. (A similar picture of the impact on the elderly of State non-cash benefits other than the medical card was presented by Layte, Fahey and Whelan 1999 drawing on the same data set: we see here that the medical card has a further significant impact for this group). Once again, the further addition of employer-provided benefits in kind would raise mean income and thus increase these relative income poverty rates.

Table 24: Percentage of Households Below Relative Income Poverty Lines by Age of Household Head, 1997

	<i>Unadjusted</i>			<i>Adjusted for Non-cash exc. Med. Card</i>			<i>Adjusted for all Non-cash Benefits</i>		
	<i>40%</i>	<i>50%</i>	<i>60%</i>	<i>40%</i>	<i>50%</i>	<i>60%</i>	<i>40%</i>	<i>50%</i>	<i>60%</i>
	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>
Under 45	8.2	17.5	23.8	7.8	17.7	24.0	6.5	17.3	23.6
45-64	6.4	20.7	32.3	6.1	20.5	32.5	4.4	16.9	30.5
65 plus	2.7	34.9	57.0	2.0	13.9	54.4	1.8	7.0	40.4

We can also examine how state non-cash benefits are distributed across income deciles in 1997. Table 25 shows that the share of State non-cash benefits going to the bottom 30% of households increased from 53% in 1994 to 62% in 1997. This applies equally to the free-schemes and the medical card, despite the fact that in the former category the numbers covered increased while for the medical card it decreased.

Table 25: Distribution of Income Sources Across Equivalised Income Deciles, 1997

<i>Decile (equival ised cash income)</i>	<i>% of Total Non- Equiv. Income</i>	<i>% of Total Equiv. Income</i>	<i>% of Total Non-Cash Income</i>	<i>% Non-cash benefit ex. Med card</i>	<i>% of Med. Card benefit</i>	<i>% of Cash Transfers</i>
	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>	<i>%</i>
1	3.8	3.6	15.7	11.0	17.5	15.4
2	3.6	4.6	21.7	28.1	19.2	16.1
3	5.1	5.2	24.1	25.7	23.5	20.7
4	6.6	6.1	15.1	13.9	15.6	13.4
5	9.0	7.5	9.1	7.6	9.8	11.9
6	10.2	9.0	5.6	4.0	6.2	7.7
7	12.2	10.8	4.8	3.5	5.3	6.9
8	12.8	12.9	2.5	4.7	1.6	3.9
9	14.8	15.9	0.7	1.1	0.6	2.6
10	21.8	24.5	0.6	0.4	0.7	1.5

11. Conclusions and Implications

In addition to cash social welfare transfers, the State also provides a range of benefits in kind aimed at raising the living standards of selected types of households, on the basis of income, social welfare reciprocity or age. Such in-kind support has grown in importance in Ireland in recent years, and includes free electricity/gas, TV licence and telephone rental for some social welfare recipients, free travel for the elderly, and free medical care to all those below an income threshold. As Quinn (2000) brings out, the extension of the scope of such schemes raises major issues not only in terms of administration and complexity for recipients, but also in terms of their rationale and effectiveness in alleviating poverty and social exclusion.

This study has focused on the impact of such non-cash provision on poverty, using data from the 1994 and 1997 Living in Ireland surveys. It has analysed the value of targeted State non-cash benefits to Irish households and how the inclusion of the value of these benefits in income affects the incidence and distribution of relative income poverty. Since non-cash benefits provided by employers also affect command over resources, these also had to be taken into account in assessing relative income poverty using an expanded income measure. The impact on measured poverty of employing broader measures of income, including non-cash benefits, together with non-monetary indicators of deprivation was also addressed.

We began by outlining the complex issues that arise in seeking to go beyond cash incomes to include non-cash benefits in assessing living standards and poverty. We then described the specific State non-cash benefits currently available to Irish households on which this study focused. The data employed and the way valuations for the different State benefits or schemes were attributed to households was then described. In essence, beneficiaries were identified using information obtained in the Living in Ireland Surveys, and average values for attribution to beneficiaries were based on the cost of provision of the benefit or service. In the case of health care, this took into account the variation in use of the services in question by age.

Simply including values for State non-cash benefits was seen to reduce relative income poverty rates in 1994. This reduction was most noticeable among households headed by an elderly or disabled person, while smaller reductions were also seen

among households where the head was unemployed. The eligibility criteria for the free schemes, and the fact that a higher value for the medical card is attributed to older age groups, both contribute to the concentration of these State benefits among the elderly.

In terms of effectiveness in reaching those most in need, State non-cash benefits were seen to be slightly more concentrated towards the bottom of the income distribution than total cash transfers, with non-cash welfare benefits slightly more concentrated there than medical card spending. However, these benefits were also seen to be much more effective in assisting some low-income households rather than others, with the working poor, single parents, large families and the unemployed not benefiting nearly as much as the elderly. Given the difference in the scale of total spending, cash transfers are still likely to be much more important than non-cash in terms of overall impact on income redistribution and poverty.

We then incorporated non-cash benefits provided by employers rather than the state, once again tentatively assigning values for these benefits to the beneficiaries in the 1994 Living in Ireland survey. When values for both State and employer-provided non-cash benefits are added to household income, the percentages below 40% and 50% of mean equivalised income in 1994 were seen to be similar to those based on cash income. The percentage of households below 60% of the mean was marginally lower, at 32.6% compared with 34.6%.

We then went beyond relative income poverty to focus on poverty measures incorporating both low income and experience of basic deprivation – the approach currently adopted in the National Anti Poverty Strategy's global poverty reduction target. We examined the impact on these measures of broadening the income element to include estimates values for State and employer non-cash benefits. We saw that in 1994 this reduced the percentage of households both below relative income lines and experiencing basic deprivation. The percentage of households below the 60% relative income line and experiencing basic deprivation with the broader income measure was about 12%, compared with 15% using cash income.

To assess whether the overall impact of State non-cash benefits had changed since 1994, their distributional impact in the 1997 Living in Ireland survey was also analysed. As in 1994, they once again had a significant impact for certain types of household, notably the elderly. The concentration of these benefits towards the bottom of the income distribution was seen to have increased between 1994 and 1997, reflecting primarily the fact that the position of the elderly in that distribution had disimproved.

In conclusion, it has to be re-iterated that attributing a value to non-cash benefits and simply adding that to income remains problematic. Non-cash benefits are not the same as cash income in that the recipient has no choice about their allocation. The value of goods or services provided free of charge might also vary considerable between recipients depending on their preferences and capabilities. The poverty estimates based on income adjusted for non-cash benefits presented here need to be interpreted in this light, and should be seen as a supplement to rather than replacement for figures based on cash income.

APPENDIX 1: Sensitivity of Results to Changes in the Equivalence Scale.

In comparing income levels across households some adjustment must be made to take account of household size and composition. There is no consensus on the size of the adjustment that should be made for additional household members, however, it is generally agreed that simply dividing income by the number of people in the household ignores economies of scale (most obviously in housing costs) and differences in consumption by age. The analyses in this report are based upon an equivalence scale derived from the relativities implicit in Unemployment Assistance/Supplementary Welfare Allowance schemes. The first adult in the household is given a value of 1, each additional adult is given a value of 0.66 and each child a value of 0.33. We call this Scale A. We adopt 14 years as the cut-off distinguishing children from adults, which seems consistent with quantitative and qualitative evidence on the higher costs of providing for teenagers (e.g. Russell & Corcoran, 2000).

Here we test the sensitivity of our findings to the adoption of alternative equivalence scales. Scale B applies a value of one to the first adult, 0.6 for additional adults and 0.4 for each child (under 14 years). This scale has been widely used in British research. Scale C applies an even higher weight to additional household members: 0.7 for additional adults and 0.5 for each child under 14. This is known as the 'old OECD' equivalence scale and has been widely used in comparative studies of poverty. Equivalence scales that give a higher weight to additional household members result in lower equivalent incomes for large households (because the divisor is larger), therefore a higher proportion of large households will be identified as poor. Scales like that used in the main body of the text, which apply a lower weight to other household members are likely to identify greater levels of poverty in single person households, since a high proportion of these households are composed of the over 65s, this may impact upon the non-cash benefit results.

Table A1: Adjusted and Unadjusted Poverty Rates Using Alternative Equivalence Scales 1997

	<i>Scale A (1/0.66/0.33)</i>		<i>Scale B(1/ 0.6/ 0.4)</i>		<i>Scale C (1/ 0.7/ 0.5)</i>	
	<i>Cash Income</i>	<i>Cash + State Non-cash</i>	<i>Cash Income</i>	<i>Cash + State Non-cash</i>	<i>Cash Income</i>	<i>Cash + State Non-cash</i>
<i>40% line</i>	6.3	4.7	6.8	6.1	7.0	6.3
<i>50% line</i>	22.7	14.7	22.3	15.2	20.5	14.6
<i>60% line</i>	34.5	29.9	34.2	30.1	34.4	29.9

The unadjusted poverty levels are very close for scale A and scale B. Scale C produces higher poverty levels at the 40% line and lower levels at the 50% line. However, when we consider the impact of adding State non-cash benefits to cash income we find that the magnitude of the effect is very similar regardless of which equivalence scale is used. The exception to this is at the 40% poverty line where the reduction in poverty levels found when using scale A (-25%) is substantially higher than when the alternative scales are applied (-10%).

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