

THE EFFECTIVENESS OF THE TRANSFER AND TAX SYSTEM IN REDUCING POVERTY IN 1998

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Abstract

The paper analyses the incidence and severity of poverty, measured by income inadequacy, for the year to April 1998. Using various ways of categorising households based on Statistics New Zealand's Household Economic Survey, the paper shows which household groups are most likely to have inadequate incomes, the extent to which those households fall below three different low-income thresholds, and the effectiveness of net social security transfer payments in reducing the incidence and severity of poverty. The initial level of the income adequacy threshold was calculated through focus group discussion. The thresholds and poverty measures have been analysed on the basis of disposable income, adjusted for family size and composition, and after adjusting disposable income for relative housing costs.

INTRODUCTION

The social security system in New Zealand stems from a social and political desire to alleviate poverty and hardship. From the original inception of the Pensions Act in 1898, categories of people likely to be in need have been gradually added to the social security network. The tax-financed, flat rate benefit system was based on a male

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breadwinner perception of society. Full employment achieved through protectionist and government-based employment policies, combined with a minimum wage set at an adequate level for a husband with two children, meant that the social security system was only designed to deal with the residual pockets of hardship which existed after the operation of the wage/employment system (Castles 1985). The breakdown of this system led to new policy initiatives to offset emerging causes of hardship: the mass unemployment of the 1930s resulted in the unemployment benefit, and the introduction of in-work benefits in the 1980s and 1990s was a consequence of wages being set on economic rather than social considerations.

The social security system has more objectives than poverty relief. McClure (1998) indicates that the Social Security Act 1938, and the subsequent provision of universal family benefits, cheap housing, free education and subsidised health care, were based on notions of equal rights for all citizens. Labour market incentives have affected political decision-making, as have issues of inter-generational equity and fiscal costs. The relative weight given to these objectives has oscillated over the past century, based on economic circumstances and prevailing social attitudes. The real benefit level has fluctuated between a "minimalist safety net" and a "belonging and participating" notion of poverty relief. Policies have also swung between universalist and selectivist phases, and between views on the degree of independence that families should have from the state or from the labour force.

Between 1984 and 1999, fiscal savings dominated poverty relief, with a shift to selectivist policies, encouragement of work and independence from the state, user pays and declining real levels of assistance. This cold climate for social policy brought a clamour from welfare and community groups about increasing poverty and social exclusion, while professional groups indicated downstream effects on health and education attainments. Elliot et al. (1999) developed a 66-page annotated bibliography about poverty in New Zealand, and Waldegrave et al. (1997) a 46-page review of issues in the poverty debate. From the political arena came concerns over inter-generational welfare dependency, but a denial of the existence of poverty. Both the community groups and government recognised that the social policy changes were not the only influence: slow economic growth, increasing unemployment with its spillover effects into other benefit categories, and social and demographic change from increasing numbers in the most vulnerable age groups and social categories, such as sole parents and older people, had equal impacts on living standards.

The start of the new millennium and the election of a Labour/Alliance Government may indicate a thaw in the social policy climate. A return to the generous 1970s is

unlikely: the number of beneficiaries, constraints on tax levels due to globalisation, the recognition of (relatively small) incentive effects from high tax rates and benefit levels, and the impact of social attitudes towards the poor will ensure that the thaw is gradual. But if the new government is committed to improving the economic and social position of the poorest in society, then it needs information that can help determine to whom resources should be directed, the level of those resources, whether the resources should be in cash or in kind, and the resultant fiscal cost. Policies need to be developed which provide both a short-term amelioration from hardship as well as longer-term solutions to wider concerns of social exclusion.

The objective of this paper is to provide policy makers with information that will enable a cost-effective alleviation of hardship. The paper starts with a description of the methodology used to establish a standard of income adequacy suitable for contemporary New Zealand economic conditions, demographic structure and policy parameters. A framework to analyse the effectiveness of transfer programmes to alleviate poverty follows, before using that framework to describe which household groups are poor, the extent of their hardship and the impact of net social security expenditure in reducing that hardship. The analysis uses poverty thresholds based on disposable income, adjusted for household size and composition, and disposable income after taking account of relative housing costs.

METHODOLOGICAL ISSUES

There are a variety of ways of conceptualising poverty and a plethora of techniques for measuring each concept, as well as a series of linked steps in the process of poverty measurement (Atkinson 1989, Stephens 1988). The choice of technique is important: Hagenaars and de Vos (1988) and Bradshaw (1993) show that there is no consistency between the techniques for determining the extent of poverty and which groups are most likely to be poor. Hagenaars and de Vos concluded from European data that the budget standard and the subjective poverty measure were best able to identify sub-groups of the population with a high risk of poverty. Bradshaw argued that the United Kingdom supplementary benefit level (an "official" poverty line), and 50% and 60% of median equivalent household disposable income, before and after adjusting for housing costs, were best able to identify who was poor.

The measurement technique should be related to the objective for establishing a poverty measure. The major objective of this research was to provide policy makers and politicians with information on who is poor, the dimensions of their poverty and its causes (whether due to low employment earnings, inadequate benefit income, high

housing costs, large family size, etc.), in order to see how effective existing interventions are in the alleviation of poverty. A second objective was to monitor the impact of economic and social policy reform between 1984 and 1998 on the least advantaged groups in society. The third objective was to develop a method for determining the adequacy of social security benefit levels.

These objectives led to several requirements for a poverty measure. First, the measure had to be set relative to current standards of living in New Zealand, and to policy parameters such as the extent of user pays, targeting of government services, and the impact of direct and indirect taxation. The measure also had to be absolute, in the sense that failure to achieve that standard of living resulted in either adverse social outcomes in the form of deprivation, poor health status and lower educational attainment, or required stigmatising behaviour such as application for means-tested special benefits or food parcels from charitable organisations. Second, the measure had to be operationalised for each year between 1984 and 1998: this meant recourse to official statistics, with the annual Household Economic Survey (HES) providing the only consistent data source. Third, given that the major policy variable is the level of government financial assistance to households, the appropriate concept of poverty was the “right to a minimum level of resources”, leading to an income (or input) measure, rather than an outcome (or standard of living) measure based on consumption or degree of relative deprivation (Atkinson 1989).

A consistent input measure of poverty has been developed based on a consensual measurement of income adequacy using focus groups (Stephens et al. 1995 and Waldegrave et al. 1996 provide the justification for the focus group methodology and the initial results). The first set of focus groups, based in Wellington in 1993, provided a fairly uniform estimate of the level of income required to sustain expenditure that would enable the household to pay for its own food, clothing, utilities and rent, without either going into debt or taking out special benefits or food parcels. Despite a varying proportion of one- and two-parent households, income levels, ethnic groupings, housing tenure arrangements, age of oldest householder and income sources, the estimates for two adults and three children varied between \$442 and \$491 per week, with housing costs being the major source of variation in the level of required expenditure.

For poverty measurement, the average focus group estimate of \$471 per week was related (with inflation adjustment) to the 1991 HES from Statistics New Zealand. This estimate of a minimum adequate income approximated 60% of median equivalent

household disposable income². It is recognised that not all households below this threshold are poor: the asset-rich/income-poor and the “low-income by choice” groups cannot be addressed by an income-based poverty measure. Furthermore, an investigation into the database showed that some low-income households had substantial expenditures, with many of these household members being self-employed. Households declaring self-employed losses or with an expenditure three times their income were omitted, as there is doubt as to whether their income level correctly indicates their standard of living. In 1991, this omission reduced the database by 4.4 percentage points, and lowered the overall poverty incidence in that year by three percentage points³.

An underestimation of the poverty count may occur as Census 1996 indicates that 2.3% of the population do not normally reside in private dwellings and are thus outside of the HES sample – many of the excluded live in boarding homes and motor camps where the poverty risk is considered to be very high. On the other hand, HES over-represents low-income households compared to the census, with a greater proportion of older people and fewer people of working age. Stratifying the HES results to the census enumeration for 1991 and 1996 made little difference to the overall poverty level, although it did alter the structure of poverty, giving more workers and family groups, and fewer beneficiaries⁴.

When the 1993 HES results came out, the decline in median income since 1991 resulted in the average 1993 focus group threshold being 66% of median equivalent household disposable income. Recent Auckland-based focus groups have indicated that 66% is a reasonable estimate of the minimum adequate expenditure required to avoid poverty in that city, whereas rural North Island focus groups provided estimates under 60%,

² Using the revised Jensen (1988) equivalence scales to adjust each household's income for household size and composition. Children over 11 years were given heavier weighting as the focus groups indicated that older children were significantly more expensive to clothe and feed, and for low-income families there was no offsetting reduction in expenditures on household durables. Compared to the Luxembourg Income Study (LIS) scale, used extensively in internationally comparative poverty research, the Jensen scale provides a lower weight for single people and for additional children. Statistics New Zealand (1998a) indicates the Jensen scale gives a considerably lower estimate of poverty among households than LIS: in 1996, using Jensen, 12% of households were poor at 60% of median equivalent household disposable income, compared with 16% using LIS. The difference was smaller in terms of number of individuals, implying that most of the extra poor households under LIS were small, probably single older people. The same discrepancy between the scales may not apply for 1998.

³ This procedure is not normally undertaken in overseas poverty research. If international comparisons of poverty rates are made using this information, this caveat has to be remembered.

⁴ This conclusion is supported by the analysis undertaken by Statistics New Zealand (1998a) in their publication on Incomes. The result may not hold for 1998, when more older people were found to be below the 60% poverty threshold.

and Wellington estimates were consistently at 60%. Both the 60% and 66% levels have been developed as relative poverty measures, along with a lower, “minimal safety net” level, set at 50% of median equivalent household disposable income. This lower level provides an alternative measure of the severity of poverty, as well as relating to the far less generous conception of benefit adequacy underpinning the 1991 benefit cuts^{5,6}.

The level of household income after subtracting each household’s expenditure on housing is regarded as an alternative measure of standard of living and thus poverty standard (Bradshaw 1993, Department of Social Security 1992). Housing costs vary independently of the condition and size of the dwelling: those who have a mortgage-free dwelling or who purchased prior to the 1980s inflationary spiral will have relatively low housing costs for roughly similar housing standards compared to those who have bought recently or who rent on the open market. Measuring poverty after adjusting for relative housing costs⁷ allows an assessment to be made on living standards of the move to market rentals for state housing and the introduction of the Accommodation Supplement.

POVERTY ALLEVIATION

This paper extends the framework developed by Beckerman (1979) to investigate the effectiveness of social security transfers in alleviating the incidence and severity of

⁵ Stephens et al. (2000) show that in 1998 New Zealand Superannuation payments for both a single person (living alone) and a couple are almost identical to the 60% poverty threshold for those family types. The Invalids Benefit level falls midway between the 50% and 60% threshold for most family types. The DPB for a sole parent with two children is identical to the 50% threshold, while the unemployment benefit for couples, with and without children, is below the 50% threshold. However, the poverty thresholds incorporate an allowance for housing costs, and most beneficiaries are eligible for the Accommodation Supplement paid in addition to the benefit. Maximum payments for the Accommodation Supplement are \$150 in Auckland, \$100 in Wellington and \$75 elsewhere, with an average payment of \$47 per week.

⁶ Ideally, the focus groups would establish a separate poverty line for each year. This poverty level would alter in response to changes in economic conditions or policy parameters that impinge on the achieved standard of living – a rise in GST rates, or an increase in health charges, would alter the required minimum expenditure, and thus poverty threshold, irrespective of changes in income. However, regional variations in focus group results and the large number of policy changes, as well as time lags between focus group results and HES data availability, have meant that the original focus group threshold has been adjusted by changes in average living standards, giving a relative concept of poverty. Stephens et al. (2000) also provide results on trends in poverty using an absolute poverty standard by adjusting the focus group standard for inflation.

⁷ The equivalence scale has not been adjusted, as McClements’s (1978) commodity-specific scales in the United Kingdom showed that the exclusion of housing only had a significant impact on the equivalence scale for a single person, lowering it from 0.65 to 0.59. If this result held in New Zealand, there would be a slight over-estimation of poverty after housing costs for single people. Housing costs, obtained from the HES database, are rent, mortgage payments, payments to local authorities, property and water rates, mortgage repayment insurance and insurance on buildings.

poverty by including the negative impact of personal income tax levied on those near or below the poverty threshold. The incidence of poverty is the proportion of the population (or sub-group) who are below the poverty threshold. The severity of poverty refers to the extent to which householders fall below the poverty threshold. The poverty gap is the most common measure of severity⁸, and may be calculated either in aggregate terms (\$m) or as a proportion of the poverty threshold. The incidence and severity of poverty reduction measures are undertaken at several stages in the income generation process:

- based on market income (wages, salaries, rents, dividends, interest, and occupational pensions), before the operation of the tax and transfer systems;
- using total income, which is market income plus receipt of gross social security benefits (New Zealand Superannuation, Invalids Benefit, Community Wage, Family Support tax credit and the Accommodation Supplement) – the benefit effect;
- based on disposable income, or total income less personal income tax, including income tax levied on social security benefits and superannuation – the tax effect; and
- based on the comparison between market and disposable income poverty rates – the net effect, or poverty reduction effectiveness (PRE) measure.

If poverty alleviation was the single objective of a tax-transfer system, then a totally effective net transfer system would ensure that no individual or household would have a disposable income below the poverty threshold, and would broach the difference between market income and disposable income at least fiscal cost. One way of ensuring this would be a guaranteed household income equal to the poverty threshold, and then a 100% effective marginal tax rate (EMTR) until the break-even point with market earnings. This is the argument underpinning targeting. The claim is that, by concentrating expenditures on those in greatest need, more resources can be devoted to the poor, thereby maximising the reduction in the incidence and severity of poverty and/or fewer fiscal resources are required to achieve the same poverty reduction outcome. However, even from the perspective of poverty reduction – let alone other legitimate programme objectives, such as income smoothing over the lifecycle, redistribution to families with children and securing household independence – targeting will not necessarily achieve its goals⁹ for the following reasons:

⁸ There are a variety of more complex measures, giving greater weighting to the severity of poverty the further people are from the poverty threshold. The poverty gap gives each dollar difference the same weight (see Atkinson 1989 and Stephens 1988 for further discussion).

⁹ Boston and St. John (1999) and Boston (2000), and references therein, have an extended discussion on the pros and cons of targeting versus universality, as well as data on the complex targeting regime in New Zealand, and the resultant high and varied effective marginal tax rates.

- Targeting reduces the number of people receiving social security benefits and thus the degree of political support for income maintenance programmes. International comparisons indicate that countries with targeted welfare systems tend to spend less in total and less on the poor than countries with universalist benefits, resulting in lower overall poverty reduction (Saunders 1994).
- The transfer system is only effective against poverty if people entitled to claim benefits actually receive them. Targeted schemes tend to have lower take-up rates than universal, although using categorical benefits increases the take-up rate compared to means-tested special benefits. There is little New Zealand evidence on take-up rates. Almost all older people receive the universal New Zealand superannuation, while only 65% of eligible households receive the targeted Accommodation Supplement. Also, the figure for Accommodation Supplement varies significantly between the relatively high take-up rates of beneficiaries and state house tenants, and the very low take-up rates of workers and private renters and owners (Ministry of Housing 1996). Low take-up rates allow a government the appearance of assisting the poor, while minimising fiscal expenditure. Take-up rates are higher on an expenditure basis than per person eligible, indicating that for many with a small entitlement, the stigma and transaction costs of applying for a targeted benefit are not worthwhile (Craig 1991). Non-take-up is also influenced by benefit design and administration. Furthermore, once people have gone through the threshold of applying for one benefit, then they are more likely to take up other related benefits.
- Targeting (and universal provision) may adversely affect the level of poverty based on market income. This is the incentive effect – high EMTRs on additional earnings may reduce labour force participation and thus lower market income. While recent empirical evidence suggests that the effect of high EMTRs and high benefit replacement rates may be relatively small for males as they enter the labour market, the effect on females can be substantial and thus needs to be considered in the evaluation of targeting (Osberg and Phipps 1993, Triest 1996). Equally, the public provision of an old-age pension will affect individual willingness to save for their own retirement. Targeting of pensions will have opposing effects on savings, with low- and possibly middle-income earners not saving due to the abatement of the public pension whereas high-income earners may increase savings in order to retire on more than the state pension.

- Adverse labour market effects may also impact on long-term solutions to poverty due to the atrophying of work skills, the signals that benefit receipt give to future employers, and the possibility of long-term benefit dependence.
- Perfect targeting requires alignment of individual needs with benefit payments. This tends to develop a very complex benefit system with high administration costs, and because it is obtrusive on individuals, take-up rates tend to be low.

Where transfer payments abate against additional earned household income, the difference between market and disposable income declines as household earnings increase. Net government assistance to low-income households ceases when income tax payments equal transfer payments. After the receipt of transfer payments, some households will still be below the poverty threshold, while other households who were poor on the basis of market income will now have a disposable income above the threshold. Households who were not poor on the basis of market income may have also received net transfer payments. Income tax on market income may have pushed other households with adequate market income below the poverty threshold. These give the following effectiveness measures:

- **Target effectiveness, which is measured by the extent to which expenditure on benefits is targeted on the poor**
This is the proportion of total net transfers paid that are received by households who were poor on the basis of market income, and which do not spill over or raise them above the poverty line. Income taxes, which force people into poverty, are regarded as an offset. Target effectiveness of 100% can be achieved if all transfer income is concentrated on the poor and none spills over to the non-poor, and no income tax makes anyone poor who was non-poor on the basis of market income.
- **Poverty reduction effectiveness (PRE), which is measured by the ratio of benefits going to the target group to the total benefits needed by that group**
Using poverty gaps, the comparison is between the market and disposable income poverty gaps. The same comparison can be based on the incidence of poverty. Again, allowance needs to be made for any negative tax effects on the incidence and severity of poverty. Perfect PRE occurs when no household remains poor after the operation of the tax and transfer system.

- **The take-up rate of income-tested benefits**

The take-up rate can be measured by the proportion of benefits households actually receive compared to the amount that they are entitled to receive under the transfer system.

If the abatement rate (or effective marginal tax rate) remains constant, there is a trade-off between the benefit level (poverty alleviation), target effectiveness and poverty reduction effectiveness of the net transfer system. It is possible to increase the poverty reduction effectiveness of the system to 100% by raising the basic benefit level to the poverty threshold. With the constant abatement rate, target effectiveness declines because of greater spillover of benefits to the non-poor. On the other hand, if the benefit level is reduced, poverty reduction effectiveness falls due to the larger incidence and poverty gap, even though target effectiveness may rise to 100% if there is no spillover of benefits to the non-poor. Both 100% target and poverty reduction effectiveness can be achieved by raising the benefit level to the poverty threshold, and having an effective marginal tax rate on additional earnings of 100%. The result is a poverty trap, with major work disincentives for those in poverty before transfers.

THE INCIDENCE AND SEVERITY OF POVERTY IN 1998

The overall incidence and severity of poverty, and the effectiveness of net social security payments in reducing poverty for the year to April 1998, is shown in Table 1. At the focus-group-determined poverty level (60% of median equivalent household disposable income), some 15.4% of the population were poor on the basis of disposable income (i.e. market income after the operation of the tax and transfer system). Based on market income, just under a third of the population would have had an inadequate income. However, on the basis of total income (market income plus gross social security benefits) only 4.9% were poor. Poverty reduction effectiveness is made up of a social security effect reducing the incidence of poverty by 84.8% and an offsetting tax effect, on both market earnings and social security benefits, of 32.5%, giving an overall PRE of 52.3%¹⁰.

¹⁰ The formula is $(m - d) / m$, where m is the incidence (or severity) of poverty based on market income and d is the incidence (or severity) of poverty based on disposable income.

Table 1 Incidence, Severity of Poverty and Poverty Reduction Effectiveness, 1998**a) Incidence, by Number of Households**

Poverty Level	Incidence of Poverty			Poverty Reduction Effectiveness		
	Market (%)	Total (%)	Disposable (%)	Social Security	Tax	Net Effect
50%	29.3	2.3	4.1	92.1	-6.1	86.0
60%	32.3	4.9	15.4	84.8	-32.5	52.3
66%	34.0	7.8	23.8	77.1	-47.1	30.0

b) Poverty Gaps

Poverty Level	Poverty Gap \$m			Poverty Reduction Effectiveness		
	Market	Total	Disposable	Social Security	Tax	Net Effect
50%	3,708.6	106.7	146.1	97.1	-1.1	96.0
60%	4,749.7	224.2	400.6	95.3	-3.7	91.6
66%	5,399.8	344.3	788.4	93.6	-8.2	85.4

Source: Derived from Poverty Measurement Project database.

The level of need, as expressed by the market income poverty rate, is an important influence on the effectiveness of the net social security system. Based on market income, there is relatively little variation in the incidence of poverty between the three thresholds. This indicates that there are relatively few additional people who are in the full-time labour force between these income ranges. However, there is a substantial difference in the incidence of poverty based on disposable income between the thresholds, giving a far lower net effectiveness impact with higher thresholds. Most of this fall in net PRE is due to the offsetting tax effect. Some of the net tax effect is of an accounting nature, as only net social security benefits are paid out, and gross benefits included in total income. Some is due to the absence of any tax threshold or personal tax rebate: Stephens (1993) shows, by comparison with other OECD countries (which all minimise tax liabilities for low-income individuals), the high average tax rate that low-income earners pay in New Zealand.

The data for poverty gaps indicate the net transfer system eliminated most of the poverty. At the 60% level, the net PRE is 91.6%, with a reduction in the poverty gap from \$4,749m based on market income to \$400m based on disposable income. The offsetting tax effect is relatively small, indicating that many of those below the poverty line on the basis of disposable income are just below it. The growth in the disposable income poverty gap estimate between thresholds is largely a function of moving to higher thresholds.

The degree of target effectiveness can also be roughly calculated. As the estimates of taxation on social security benefits in HES is designed to provide the correct disposable income figure rather than correct tax figure, estimates of target effectiveness have only been made using net social security benefits, and only for aggregate expenditures. At the 50% poverty threshold, 62.8% of net social security benefits are used to alleviate poverty, giving a spillover of 37.2% to the non-poor. As opposed to PRE, target effectiveness increases with higher poverty thresholds as a greater proportion of social security expenditure goes to poverty alleviation. At the 60% threshold, target effectiveness rises to 77.3%, with a very small reduction occurring from tax on benefits and earnings pushing people below the poverty line.

Impact of Housing Costs

Table 2 considers the effects of housing costs on the incidence of poverty. The 50% and 60% standards use the methodology set out in Stephens et al. (1995) – the average housing cost in HES is subtracted from the poverty line to give an after-housing poverty threshold and this is then compared with each householder's disposable income net of their housing costs. For a household, after-housing-cost poverty is a combination of low income and higher-than-average housing costs. If a low-income household owns a home with no mortgage payments, their income may then be more than sufficient to meet the "minimum adequate household expenditure" criteria established for focus groups.

The 66% poverty threshold uses a method suggested by Treasury – subtract from the focus group minimum adequate expenditure estimate the housing cost element, and set that as the after-housing-cost threshold. This threshold is then compared with each household's net-of-housing-expenditure disposable income. After-housing-cost poverty will then require housing costs greater than the focus group estimate as well as low income.

Table 2 Incidence, Severity of Poverty and Poverty Reduction Effectiveness after Adjusting for Housing Costs, 1998**a) Incidence, by Number of Households**

Poverty Level	Incidence of Poverty			Poverty Reduction Effectiveness		
	Market (%)	Total (%)	Disposable (%)	Social Security	Tax	Net Effect
50%	31.1	6.5	12.4	79.1	-19.0	60.1
60%	33.8	10.3	19.3	69.5	-26.6	42.9
66%*	31.4	7.2	14.0	77.0	-21.6	55.4

b) Poverty Gaps

Poverty Level	Poverty Gap \$m			Poverty Reduction Effectiveness		
	Market	Total	Disposable	Social Security	Tax	Net Effect
50%	4,270.6	306.1	572.3	92.8	-6.2	86.6
60%	5,158.6	539.3	1,010.0	89.5	-9.1	80.4
66%*	4,430.7	438.1	639.5	90.1	-4.5	85.6

Source: Derived from Poverty Measurement Project database.

See text for explanation of the alternative method for calculating the housing cost impact.

Comparisons between Tables 1 and 2 indicate very little difference in market income poverty rates at each income level, but a substantial difference in the level and severity of poverty based on disposable income. At the 60% level, the poverty incidence rises from 15.4% on the basis of income to 19.3% after adjustments are made to disposable income for relative housing costs, indicating that many low-income people have above-average housing expenditures. It is the paucity of after-housing-cost income that has led to the increase in hardship arguments from community and welfare organisations following the move to market rentals for state housing.

At the 60% level, the total poverty gap increased to \$1,010m. This poverty gap is equivalent to 1% of GDP, and represents the costs to the government of reducing poverty, if resources could be perfectly targeted on those in need, as well as the dimensions of their need: \$400m in cash social security and the remaining \$610m on housing cost relief. Using the Treasury methodology, the 66% level shows a decrease in poverty incidence and severity after adjusting for housing expenditures. Many low-

income households spend less than the focus group estimate on housing costs, and thus are removed from poverty on after-housing-cost basis¹¹.

WHO WAS POOR IN 1998

This section considers the incidence and severity of poverty in 1998 on the basis of disposable income, using some of the combinations of household types which can be derived from HES¹². The analysis shows the danger of considering just the aggregate poverty rates due to the large variations in poverty between household types. The section starts by using the normal household-type analysis, for the three poverty thresholds, without making any adjustments for housing costs. Analysis is then done by stage of lifecycle before considering number of dependent children and then employment and ethnic status.

By Household Type

Sole parents have the highest incidence of poverty, using either market income or disposable income, irrespective of poverty threshold. At the focus group threshold (60%), Table 3b shows that on the basis of market income, almost four-fifths of sole parents were poor. The social security system was only moderately effective at reducing their incidence of poverty, with a net PRE of 43%, resulting in 45% of sole parents being in poverty on the basis of disposable income. Even at the 50% threshold (Table 3a), over three-quarters of sole parents were poor on the basis of market income, reinforcing the evidence on low employment rates among sole parents (Goodger 1998). The structure of poverty indicates that sole parents account for under a fifth of total poor households and a quarter of poor people, but their poverty gap was relatively small.

¹¹ There are several reasons for not using the Treasury suggestion. First, the intention of this project was to investigate the impact of the gradual introduction of market rentals for state housing and the 1993 development of the Accommodation Supplement. This analysis requires comparing changes in housing costs for low-income households with average housing costs. Second, the focus group estimate on housing costs was undertaken after the shift to market rents, and could not be used to calculate the pre-1991 housing costs element of the minimum adequate expenditure.

¹² Due to the small sample size (approximately 3,000 households), and the resulting small numbers in many of the cells, cross tabulations can not be developed. While the sampling error is relatively large, especially at the 50% poverty threshold, the consistency of the data for each household type over the 1984-1998 period gives a reasonable degree of consistency in the detailed results. To keep tables manageable, not all of the information contained in the dataset will be provided for each table. Interested readers can contact Mr Stephens for further information.

Single adult households comprise older people and younger people of working age. The pension is just below the 60% threshold, so that pensioners with no additional income fall below that threshold. This explains the jump in the disposable income poverty rate from 3.9% at the 50% threshold (Table 3a) to almost 22% in Table 3b, with the consequential fall in PRE. While single adults make up some 30% of poor households at the focus group threshold, they only comprise 11.6% of poor people.

Table 3 Incidence and Severity of Poverty, by Household Type

a) 50% Poverty Threshold, before adjusting for Housing Costs

Household Type	Incidence of Poverty			Structure of Poverty		
	Market (%)	Disposable (%)	Net PRE*	Household (%)	People (%)	Poverty Gap (\$m)
One Adult (A)	49.8	3.9	92.2	19.9	6.5	28.5
1A+children	77.7	13.2	83.0	19.4	24.8	19.8
2Adults	27.1	3.1	88.6	23.4	15.3	51.7
2A+1child	13.6	4.4	67.6	7.6	7.5	10.6
2A+2children	11.2	3.9	65.2	9.2	12.0	6.8
2A+3children	16.6	5.8	65.1	10.4	19.8	12.2
3+Adults	11.4	1.9	83.3	4.6	4.6	9.3
3A+children	15.4	3.4	77.9	5.5	9.5	7.2
TOTAL	29.3	4.1	86.0	100.0	100.0	146.1

b) 60% Poverty Threshold, before adjusting for Housing Costs

Household Type	Incidence of Poverty			Structure of Poverty		
	Market (%)	Disposable (%)	Net PRE*	Household (%)	People (%)	Poverty Gap (\$m)
One Adult (A)	52.4	21.9	58.2	30.3	11.6	86.6
1A+children	79.0	45.0	43.0	17.7	22.0	77.3
2Adults	29.4	11.7	60.2	23.9	18.4	99.4
2A+1child	14.5	10.2	29.7	4.8	5.5	26.0
2A+2children	17.0	12.4	27.1	7.8	12.0	31.0
2A+3children	21.6	17.5	19.0	8.5	18.6	40.2
3+Adults	14.3	5.2	63.6	3.5	4.4	20.4
3A+children	20.4	8.3	59.3	3.6	7.5	9.6
TOTAL	32.2	15.4	52.3	100.0	100.0	400.6

Table continues page 92

c) 66% Poverty Threshold, based on Disposable Income

Household Type	Incidence of Poverty		Structure of Poverty		Poverty Gap	
	Disposable (%)	Household (%)	People (%)	(\$m)	\$ per Household	Structure
One Adult (A)	34.1	30.3	11.7	210.7	2,676	26.7
1A+children	62.3	15.9	19.3	141.7	3,449	18.0
2Adults	18.0	23.8	18.4	193.1	3,119	24.5
2A+1child	17.3	5.3	6.1	44.5	3,259	5.6
2A+2children	20.8	8.4	13.0	60.2	2,749	7.6
2A+3children	28.2	8.8	18.8	71.9	3,139	9.2
3+Adults	8.1	3.5	4.4	33.0	3,653	4.2
3A+children	14.3	4.0	8.3	33.3	3,180	4.2
TOTAL	23.8	100.0	100.0	788.4	3,036	100.0

Source: Derived from the database of the Poverty Measurement project.

* PRE – Poverty Reduction Effectiveness

The market poverty rate for couples¹³, and especially couples with children, is relatively low, indicating reasonably high attachment to the labour market. Given that there is relatively little assistance given to families with dependent children who are in paid work (Stephens and Bradshaw 1995), the low PRE is an expected outcome, leading to a moderately high disposable income poverty rate at the focus group threshold¹⁴. As the level of assistance to families with dependent children falls with the number of children, PRE falls and the poverty rate rises as family size increases. Couples with dependent children comprise 36% of poor people, though only 21% of poor households, and make up a quarter of the poverty gap. The PRE by poverty gap is much lower for families (at about 80%) compared to over 90% for other household types.

Effectiveness measures have not been calculated for the 66% threshold. Table 3c shows that an increasing proportion of each household group is poor. The structure of poverty by household and by poverty gap are reasonably similar. The average poverty gap is \$3,036 per annum, or \$58 per week, ranging from \$51 per week for single adults to \$70

¹³ This group comprises a significant number of pensioner couples who would have a high market and disposable income poverty rate, and working-age couples where the poverty rate is likely to be very low.

¹⁴ The subsequent introduction of the Independent Family Tax Credit, worth \$15 per week per dependent child, should have a small impact on reducing the incidence and severity of poverty for families in paid work.

per week for families with three or more adults (either flats or “adult” children still living at home).

Stage of Lifecycle

Table 4 considers the incidence and structure of poverty for children, working-age adults and older people, based on number of people rather than households. At the focus-group-determined threshold (60% of median equivalent household disposable income), there are significant variations in the incidence of poverty, with 20.4% of children being poor, 11.2% of adults and 20.2% of older people. Children account for 38% of people below this threshold, working-age adults 46% and older people 15%. Only older people, and near older people, have a sizeable PRE.

Children in two-parent households have poverty rates close to the average for all households, but account for 23% of poor people. Over half of children in sole-parent families are below the 60% threshold, although they only account for 15% of the total poor population. This high poverty incidence can be explained by the low employment rate for sole parents, with only 36% employed and only just over half of these employed full-time, relatively low earnings due to lack of education and training, a benefit level less than the poverty threshold, and low levels of financial assistance for dependent children.

The concern about this high poverty rate is that it will have long-term adverse impacts on the children, leading to cycles of dependency or inter-generational poverty – the jury is still out on the debate as to whether the inter-generational transmission mechanism problem is one of benefit dependence or poverty. However, in reviews of the relevant literature, both Corcoran and Boggess (2000) and Smithies and Stephens (forthcoming) argue that the weight of evidence falls on poverty as the transmission mechanism. Poor children have, on average, lower health status partly as a consequence of lower-quality housing, resulting in lower educational achievements and, thus, lower wages when adults and higher risks of unemployment. If the problem is poverty, then the solution is increased benefit levels and more training in order to obtain employment at adequate wages. If the problem is benefit dependence, the solution is to make benefits less attractive and force people into employment, irrespective of wage levels.

Table 4 Incidence and Structure of Poverty, by People and Lifecycle, 1998

Stage of Lifecycle	Incidence			Structure		PRE	
	Disposable Income			50%	60%	50%	60%
Children	7.4	20.4	30.7	43.7	38.2	71.5	34.2
1 parent	19.5	50.9	68.6	25.3	15.2	76.2	38.5
2 parents	5.1	14.8	23.6	18.4	23.0	67.1	28.5
All adults	4.0	11.2	16.5	52.8	46.3	73.0	37.4
15-24	7.5	14.7	19.2	6.8	4.3	60.5	36.4
25-29	2.2	7.8	15.6	2.7	3.0	78.0	51.6
30-39	4.2	12.0	18.7	15.4	13.8	73.4	35.1
40-49	2.8	9.2	14.1	10.5	11.0	75.0	34.3
50-59	5.3	10.9	13.4	13.4	8.8	50.9	13.5
60-64	3.8	16.9	23.4	3.9	5.4	89.6	58.0
Older 65+	1.4	20.2	37.5	3.5	15.5	98.0	72.9
All people	4.7	14.7	22.8	100.0	100.0	86.0	52.3

Source: Derived from Poverty Measurement project database.

The poverty rates for adults demonstrate lifecycle effects on the risk of poverty. The higher rates for the 15-24 year olds is a product of their higher unemployment rates, lower youth benefit rates, students living away from home and, for some, the presence of dependent children. The market income poverty rate is 23.1% at the 60% threshold, and the low PRE results in the high disposable income incidence of 14.7%. The market income poverty rate drops for the 25-29 age group to 16.1%: employment rates are higher and, with the delayed age of first child (and marriage), there are often two earners per household (but the high PRE is difficult to explain).

The rise in the disposable income poverty incidence for the 30-39 age group indicates the extra cost of children and reduced paid-work participation by one spouse, with the market poverty rate rising to 18.5%. In the next age group, both spouses are often in paid work and the normal lifecycle of earnings has raised disposable income, giving low market poverty rates and low PRE. Reduced workforce participation probably explains the next two age groups, though the trend is hardly uniform between the thresholds.

At the 50% threshold, very few older people are poor, though the poverty rate based on market income was over 70%. As New Zealand Superannuation benefit level is above this threshold, the poverty incidence either represents people not eligible for the benefit due to residency requirements, the presence of dependent children, or

misreporting of income. At the 60% threshold, the poverty rate for older people, at 20.2%, is relatively high. This is because the New Zealand Superannuation rate has just fallen below the poverty level as a consequence of adjusting the benefit in line with consumer price movements at a time when real median disposable income increased by 6.8% between 1997 and 1998¹⁵.

Number of Dependent Children

The previous analysis indicated high poverty incidences for children, especially those living in sole-parent households. This section further analyses poverty among dependent children, this time using the number of children in the household. The analysis is based on the 60% poverty threshold, although the incidence of disposable income poverty at the 50% threshold is shown in Table 5.

Table 5 Incidence and Severity of Poverty, by Number of Dependent Children in Households, 1998

Number of Children	Incidence 50% Disposable	Incidence 60% Market	Incidence 60% Disposable	PRE Incidence	Structure 60%	Poverty Gap \$m 60%	PRE Poverty Gap
0	3.1	34.7	11.6	59.4	57.6	206.4	93.8
1	4.3	25.5	13.2	48.2	11.7	56.3	88.7
2	4.6	28.5	18.1	36.5	15.8	64.9	87.1
3	5.8	25.6	18.1	29.3	8.5	35.4	85.3
4	17.3	39.2	27.5	29.8	3.9	23.7	81.2
5+	22.1	65.0	54.2	16.6	2.5	13.9	75.1
Total	4.1	32.3	15.4	52.3	100.0	400.6	91.6

Source: Derived from Poverty Measurement project database.

Households without children, mainly comprising households of the young and of older people, have a relatively low incidence of poverty, although the prevalence of older people in this group gives a high market poverty rate. The prevalence of older people in this group means that the PRE is relatively high on both the incidence and poverty gap measures. The structure of poverty indicates that households without children comprise 57.6% of poor households (though only a third of poor people), but slightly less in terms of poverty gaps, indicating a lower poverty gap per household.

¹⁵ New Zealand Superannuation was raised by \$21 per week in April 2000, in excess of the CPI adjustment. This should ensure that New Zealand Superannuation payments are again above the 60% poverty threshold, resulting in a reduction in the overall poverty incidence.

The incidence of poverty increases with the number of dependent children, with an especially large jump for larger families with four or more children. These larger families only comprise 6.4% of the total poor households, but 15.9% of poor people, and have an above-average poverty gap per household. Several reasons can be postulated for the incidence and severity of population increasing with number of dependent children:

- Given the high market income poverty rates for this group, they have a combination of low labour force participation rates and low earnings levels;
- Many large families are Māori and Pacific people, whose unemployment rates are higher than average, as well as having low skill and earnings levels when in work; and
- The relative degree of assistance to families with dependent children falls as the number of children increases (Stephens and Bradshaw 1995). The comparatively high PRE for families with one child is a product of family support payments being significantly higher for the first than second and subsequent children.

Employment Status

Employment is normally seen as the major escape route from poverty (OECD 1993). However, recent international comparisons have shown a lack of correspondence between high employment rates and low poverty rates for sole parents (Stephens 2000). Moreover, the provision of in-work benefits such as the earned income tax credit in the United States, the working families' tax credit in the United Kingdom and the family tax credit in New Zealand are all indications that wage levels may not be sufficient to remove families from the problems of hardship. The issue of labour market transitions is important for determining the duration of poverty while in employment (Wilson 1996). If the normal transition is from low-waged entry-level jobs to better-paid permanent jobs, then any poverty is of limited duration. But if people stay in low-paying, marginal jobs with the prospect of repeat unemployment spells, the risk of recurring poverty spells is likely¹⁶.

The data in Table 6 only allow an investigation into the static relationship between paid work and poverty. There are a few caveats: income is normally recorded on an annual basis whereas employment status is recorded for the two-week HES period and part-

¹⁶ Ashworth et al. (1994), using United States longitudinal data, indicate that over a period of 15 years, half the poverty spells were of a year's duration. However, the other half of children in poverty faced recurring and even permanent poverty due to unstable employment, personal circumstances and family restructuring.

time paid work may be recorded in either the employed or non-working status. The non-working group comprises older people and those of working age receiving either an income-tested benefit or studying. Over a third of non-workers are below the 60% threshold on the basis of disposable income, with older people having a household poverty rate of 22.8% while working-age households who were out of the paid work force had a poverty rate of 62.4%. On the basis of market income the vast majority of non-workers were poor, although some 65-years-and-older pensioners have an adequate market income. The net PRE is made up of the benefit effect, which reduced the incidence by 90%, offset by the negative tax effect of 30%: the tax on benefits is never paid out, though there will be some tax on part-time earnings included here. Non-workers make up almost 70% of the poor population, but only 51% of the poverty gap. The tax effect on poverty gaps was very small, and the PRE shows that most of the market-based poverty gap was eliminated.

Table 6 Incidence and Severity of Poverty, by Employment Status, 1998

Employment Status*	Incidence			Structure PRE	Poverty Gap \$m	Poverty Gap	
	50% Disposable	60% Market	60% Disposable			60%	60%
Non-workers	7.4	89.4	35.8	60.0	68.4	205.9	95.3
Employed 1	3.9	16.3	10.2	37.4	17.2	86.5	68.8
Employed 2	1.9	3.9	4.9	-25.6	11.5	85.1	4.1
Total	4.1	32.3	15.4	52.3	100.0	400.6	91.6

Source: Derived from Poverty Measurement project database.

*There are few households with three employees and a small category "other" not recorded here.

For one-person-employed households, the poverty incidence of 10.2% seems to be related to low market wages (16.3% are poor on the basis of market income), as well as the imposition of personal income tax. The result is a low PRE for one-person-employed households, made up of a benefit effect of 73% offset by a negative 35% tax effect. For two-persons-employed households, where the disposable income poverty incidence is greater than the market income poverty rate, the negative tax effect dominates the PRE, putting more people into poverty after the operation of the tax and transfer system than prior to its operation. However, there is a very small reduction in the poverty gap. Even at the 50% threshold, some 3.9% of households with one person employed are below it compared to 7.4% for those not working. The non-workers are predominantly of working age, with very few older poor at this threshold.

Ethnic Status

The results of the 1996 Census showed that those reporting Māori and Pacific status had above-average unemployment rates, a greater proportion of sole-parent families, larger average family size, lower market earnings and have a younger age structure (Statistics New Zealand 1998a, Te Puni Kōkiri 2000). All of these factors have been associated with higher poverty incidence; this section provides confirming evidence. Table 7 shows the results for the 60% poverty threshold, separating out poverty rates for adults and children (no effectiveness measures have been calculated).

The "Other" category relates mainly to recent Asian immigrants and refugees. As can be seen from the results on the structure of poverty, they represent almost a tenth of the poor population, and have by far the highest poverty incidence. This far from homogeneous group probably needs to be closely monitored by policy makers to ensure that they do not fall further behind the average New Zealander.

Table 7 Incidence, Structure and Severity of Poverty, by Ethnic Status, 1998, 60% of Median Equivalent Household Disposable Income Threshold

Ethnicity	Incidence (pre-housing)			Structure			Incidence (post-housing)		
	Adult	Child	Total	Adult	Child	Total	Adult	Child	Total
European	11.0	15.6	11.9	71.9	52.2	64.4	12.1	23.6	14.9
Māori	18.0	26.2	22.1	14.0	26.2	18.6	28.4	46.2	36.0
Pacific	18.3	34.9	26.3	5.2	12.1	7.8	38.4	61.3	47.9
Other	27.1	40.8	30.9	8.9	9.5	9.2	42.1	69.6	50.5
Total	12.6	20.4	14.7	100.0	100.0	100.0	15.9	33.0	20.6

Source: Derived from New Zealand Poverty Measurement project database.

Although the incidence of poverty, on the basis of disposable income, is far higher for Māori and Pacific people, the structure of poverty shows that the majority of those poor are still Europeans. This especially applies to adults, with a significant proportion of poor Europeans likely to be older, while Māori and Pacific poor are likely to be families of working age. The higher poverty incidence for Māori and Pacific families is a product of low market incomes, larger family size and large proportion of sole parents. The very high poverty incidence for children among Māori and Pacific people is of significant concern given the links between childhood poverty and adult outcomes in terms of educational attainments, health status and income levels (Smithies and Stephens forthcoming).

After adjusting for housing costs, Europeans, especially adults, have a very small increase in their poverty rates: their greater incidence of home ownership, particularly among older people, means that they have relatively low housing costs. However, younger European families with dependent children who have just purchased a house with high mortgage outgoings, and low-market-income Europeans who are renting, result in an increased child poverty rate, after housing costs.

The really significant increases in poverty rates post-housing come for Pacific people as well as Māori. The housing-cost effect has been more serious on these people partly because of lower home-ownership rates. Statistics New Zealand (1998b) indicates that almost half of Pacific people rent, and two-fifths of Māori, compared to one-fifth of Europeans. Many Māori have iwi-based housing in rural areas, where housing costs are low even if housing conditions are not always adequate.

THE IMPACT OF HOUSING EXPENDITURES ON POVERTY

Housing expenditures are a large component of most households' spending, but housing costs vary significantly by tenure of dwelling, age of householder and family size, as well as income level. Households at the same level of income and dwelling quality, but with different housing costs, will not have the same standard of living. Low-income households, such as pensioners, who have low housing costs through owning their home outright, are likely to escape poverty on after-housing-cost basis. In the short term at least, housing costs are a fixed cost, especially for beneficiaries in state housing who have their rent deducted at source.

Housing Tenure

Table 8a shows that there is a significant difference in the incidence of poverty (using both 50% and 60% of median equivalent household disposable income) by form of housing tenure. Before adjusting for housing costs, those owning their own home generally had a lower incidence of poverty than renters, and mortgage payers had a lower poverty rate than those who owned outright. The contradiction between a high PRE and relatively high poverty level based on disposable income is shown for those owning without a mortgage: many outright owners are older where the pension is slightly below the 60% poverty level. On the other hand, those with mortgages are in full-time employment, and thus have a low market poverty rate. Even with a very low PRE, they still have a low disposable income poverty incidence. Because home ownership is the dominant tenure type (38.1% of households own with a mortgage and 33.4% own without a mortgage), on the basis of disposable income owners still constitute the majority of the poor and the poverty gap.

Table 8 Incidence and Severity of Poverty, 1998, by Housing Tenure

a) Before Adjusting for Housing Costs

Tenure Status	Incidence 50%	Incidence 60%	Net PRE 60%	Structure 60%	Poverty Gap \$m	Net PRE Poverty Gap
<u>Owned</u>						
With mortgage	2.1	8.4	22.9	17.2	69.0	85.1
No mortgage	3.1	15.0	63.1	38.9	139.7	94.0
<u>Rented</u>						
Housing NZ	15.8	36.9	51.3	13.4	66.5	90.8
Employer	1.5	14.9	30.9	2.2	3.5	94.8
Private	5.5	18.1	42.9	17.9	81.2	87.9
Other	8.6	28.5	48.4	10.4	40.7	91.7
Total	4.1	15.4	52.3	100.0	400.6	91.6

b) After Adjusting for Housing Costs

Tenure Status	Incidence 50%	Incidence 60%	Structure 60%	Poverty Gap	
				\$m	per Household \$
<u>Owned</u>					
With mortgage	9.1	17.2	28.0	245.0	4,158
No mortgage	2.6	4.7	9.8	83.2	4,045
<u>Rented</u>					
Housing NZ	59.0	71.9	20.7	254.9	5,849
Employer	12.8	17.3	2.1	18.7	4,262
Private	23.3	32.2	25.4	280.3	5,261
Other	24.6	48.2	14.0	128.0	4,361
Total	12.4	19.3	100.0	1,010.1	4,806

Source: Derived from Poverty Measurement Project database.

After adjusting for housing costs (Table 8b), those who own outright had a substantial reduction in their poverty incidence and poverty gap, while those owning with a mortgage had an increase. Some of this increase represents a deliberate choice in terms of an investment in housing through purchase by mortgage, especially by those in the 25-34 age group buying their first home on the basis of lifecycle rather than current income. All the same, this home purchase may have adverse consequences in terms of adequacy of income for other expenditures, especially for children who have a poverty rate of 26% compared to 14% for adults. The significant increase in house prices relative to wage levels, especially in the Auckland area, partially offset by lower mortgage

interest rates, is a major factor in the more than doubling of the poverty rate between the before- and after-housing-cost poverty measures for owners with a mortgage.

Except for those few renting from employers, renters had a high incidence of poverty before housing costs (Table 8a). Housing New Zealand only operates 6% of the housing stock, which was allocated until 1993 on a points system based on need, using both affordability and accessibility criteria. Even though the need criteria were relaxed when Housing New Zealand was given commercial rather than social objectives with the move to market rentals, Table 8a shows a substantial degree of targeting of the housing stock. Over a third of state tenants were below the 60% threshold prior to adjusting for housing (and one-sixth were below the 50% threshold).

After adjusting for housing costs (Table 8b), most of the increase in poverty is due to renters paying open-market rents. Despite the targeted Accommodation Supplement, over 70% of state tenants and a third of private renters were poor after housing costs. Some 80% of sole parents receive the housing subsidy and 60% of the unemployed, but very few pensioners and low-income workers. While the housing subsidy has reduced the housing outgoings to income ratio substantially, only 28% of recipients of the Accommodation Supplement have a ratio of less than 30%, most being in a 30-39% category and 4% above 60%.

Policy making to alleviate poverty should not be solely based on the incidence of poverty. Attention must also be given to the absolute numbers, or proportion of the total population, who are poor. Whilst the incidence figures indicated that state housing was well targeted, giving little credence to the policy of moving to general assistance for all forms of tenure status, the data on structure of poverty tell a different story in Table 8a. Only 13% of the poor were in state housing, and another 18% rented privately. When attention is placed on poverty after housing costs, Table 8b shows that only one-fifth of the poor rent from the state, and a quarter rent from private landlords. Some 28% of all poor are home owners with a mortgage, but only 10% of the poor do not have a mortgage. This non-state-housing group requires general cash assistance, as in-kind rent reductions are difficult to organise without a significant spillover going to private sector landlords or higher house prices.

The level of the poverty gap varies by housing tenure. There is a significant increase in the size of the poverty gap after housing costs for those renting from both the public and private sector, and those owning with a mortgage, and a fall for those owning outright. Public and private renters have the largest poverty gaps – over \$100 per week per household.

Household Type

Table 9 considers the effect of housing costs on different household types, linking the analysis back to Table 3. All household types, except single and couple adults, at the 60% threshold, have a significant increase in their poverty incidence. Older people drive the results for one- and two-adult households, where the high home-ownership rate lowers the poverty incidence for adults 65 years and older from 20.2% to 10.9%. This result shows the importance of home ownership as a mechanism for reducing the likelihood of poverty in old age. The 1996 Census indicated a decline in home ownership, especially for younger age groups. If the objective of poverty relief is maintained, declining home ownership in the future for older people indicates that there will either have to be an increase in the general pension level or efforts taken to ensure that older people have a high uptake rate of housing subsidies. Both of these may be expensive options for the state compared to encouragement of home ownership.

Table 9 Incidence and Severity of Poverty, by Household Type, 1998, after Adjusting for Housing Costs

Household Type	Incidence		Structure		Poverty Gap	
	50%	60%	50%	60%	60% \$m	per household \$
1 Adult (A)	12.9	22.2	22.1	24.4	240.5	4,685
1A+Children	61.9	77.0	30.3	24.2	275.3	5,422
2 Adults	5.6	8.3	14.2	13.5	156.2	5,497
2A+1Child	13.9	18.9	8.1	7.1	87.1	5,847
2A+2Children	13.2	24.4	10.3	12.2	98.9	3,858
2A+3Children	13.4	26.6	8.1	10.3	77.5	3,594
3+Adults	4.7	7.4	3.8	3.9	35.8	4,334
3A+Children	5.8	12.6	3.1	4.4	38.7	4,212
Total	12.4	19.3	100.0	100.0	1,010.0	4,806

Source: Derived from the Poverty Measurement project database.

The impact of housing costs on sole-parent households is the most noticeable effect, with the poverty rate jumping to 77%: most sole parents are in rented accommodation paying above-average housing costs. Sole parents account for a quarter of the poor population, and a slightly greater share of the poverty gap. The Accommodation Supplement is not adequate to offset after-housing-cost poverty. The result confirms the community organisations' claims that many on low incomes, especially sole

parents, are paying too high a proportion of their income in rent, and have insufficient income left over after necessary housing expenditures to meet daily needs without resorting to Special Needs Grants or food parcels. Families with children have also faced an increase in the incidence of poverty after housing costs, though much of this is due to mortgage repayments rather than high rents.

One survival strategy to offset high costs of renting has been relocation. Some of this has been a designed policy effect, shifting single people in four-bedroom state housing into one-bedroom units. However, there are insufficient single-bedroom units. Moreover, the policy overlooks the argument that tenure stability and local neighbourhood contacts are important housing objectives. There has also been some relocation either to rural areas or multi-occupancy. Waldegrave and Sawrey (1994) used the Housing Commission's methodology to demonstrate an increase in overcrowding since the move to market rents for state housing. However Statistics New Zealand (1998b) shows a decreasing crowding index. A partial resolution may lie in the increased number of second dwellings, while others are sharing. Anecdotal evidence from community groups certainly supports the overcrowding effect in some locales, and medical evidence has indicated greater risks of ill-health, psychological stress and lower educational attainment from this overcrowding (Howden-Chapman 1998).

There has also been a move from Auckland and Wellington to rural areas where housing costs are lower (Waldegrave and Stuart 1997). The lower housing costs have made it feasible for families to live satisfactorily on the benefit, even though in some circumstances the housing conditions in rural areas are below standard. However, the shift to rural areas has locked many of these families into long-term benefit usage due to the lack of employment opportunities in these areas.

CONCLUSIONS

This article is designed to present to policy makers, and the general public, information on which household groupings are most likely to fall below several income adequacy standards. Three poverty thresholds have been provided and several poverty measures: before and after housing costs, incidence and poverty gap, as well as the effectiveness of the tax and transfer system in reducing poverty. These measures recognise the comments made by Watts (1968) in his review of the United States official poverty measure: "Poverty is not really a discrete condition. One does not immediately acquire or shed the affliction we associate with the notion of poverty by crossing a particular income line."

It is useful to recall the words of Mollie Orshansky (1969), developer of the United States official poverty line:

Counting the poor is an exercise in the art of the possible. For deciding who is poor, prayers are more relevant than calculations because poverty, like beauty, lies in the eyes of the beholder ... when it comes to defining poverty you can only be more subjective or less so.

Policy makers, however, cannot use these difficulties to relax into nihilism. The information provided here consistently argues that those most in need of assistance are single parents, Māori and Pacific people, those out of the paid workforce, renters, large families and older people.

Apart from sole-parent households and large households with four or more children, poverty rates at the 50% of median equivalent household disposable income threshold were very low, and the net tax and transfer system very effective at lowering the incidence of poverty and the size of the poverty gap. At the 60% focus-group-determined threshold, there was a substantial jump in the incidence of poverty for most household types, especially for single older people and sole parents.

Most social security benefit levels in 1997-98 (especially when the Accommodation Supplement is incorporated) lie between the 50% and 60% thresholds, with New Zealand Superannuation only a couple of dollars per week below the 60% threshold. Just over a third of those not employed were poor, with a fifth of old-age pensioners and three-fifths of working-age beneficiaries falling below the 60% threshold. Benefit levels for those of working age were too low to achieve the poverty alleviation objective, even though the net transfer system was effective at removing most of the poverty gap on the basis of market income.

While employment was the major escape route from poverty for the working-age group, almost 30% of the poor were in households where at least one person was employed. Part of the problem for this group related to low market wages, but other contributing factors included the relatively high personal income tax burden falling on low earnings giving a substantial negative tax-effectiveness impact, large family size and the inadequate size of in-work benefits. Raising the minimum wage may have some effect for this group, but a combination of in-work benefits such as the United States's Earned Income Tax Credit to replace the low-value independent family tax credit, and more generous family assistance, is required.

Poverty has an ethnic dimension, with high poverty rates for Māori, Pacific people and the new Asian and refugee population. However, Europeans were still the plurality of the poor, which means that policies need to be related to the general population as well as being specifically directed to ethnic groups.

Above-average housing costs forced many modest-income households to have an inadequate income to meet non-housing expenditures, or to relocate into either overcrowded accommodation with downstream health and educational attainment effects or shift to rural areas with possibility of long-term benefit dependency. A move back to income-related rents is a sensible policy option for state housing tenants, and may spill over into lower private rents. Income-related rents will have limited impact on private renters and owners: for them a more generous Accommodation Supplement is required unless there is a substantial reversal of the rise in real house prices and rental levels.

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