

## Treasury Report: Data on Poverty in New Zealand

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<b>Date:</b>	13 January 2012	<b>Report No:</b>	T2012/37
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### Action Sought

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	Action Sought	Deadline
Minister of Finance (Hon Bill English)	<b>Discuss</b> this report with officials	20 January 2012

### Contact for Telephone Discussion (if required)

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Name	Position	Telephone	1st Contact
<i>Withheld under s9(2)(g)(i)</i>			✓
Nic Blakeley	Manager, Education and Skills	917 6898 (wk)	<i>Withheld under s9(2)(a)</i>

### Minister of Finance's Office Actions (if required)

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None.
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**Enclosure: No**

## Treasury Report: Data on Poverty in New Zealand

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### Executive Summary

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Measures of poverty intertwine the concepts of inequality (i.e. those with a *relatively* low level of wellbeing), and hardship (i.e. the proportion of people constrained from achieving a *minimum 'decent' level* of wellbeing). The most robust New Zealand measures use current income and current material wellbeing, however international research has a greater emphasis on broader living standards measures over longer periods of time.

Since 2004 the constant and relative measures of poverty have diverged, with fewer people in poverty using a constant value measure, but levels of relative poverty remaining largely static. This divergence reflects the absolute increase in real incomes for low income households throughout this period. However this has been matched by increases in median incomes, so there is little relative change

The population groups more likely to be in poverty include Maori, sole parents and children. Housing costs have become an increasingly important cost.

Data from the UK and Australia suggest around a half to two thirds of those in poverty experience hardship for more than five years. This drops to around a 33% to 40% over a 10 to 15 year period.

New Zealand does not currently have data which analyses the flows of poverty. A four to six week analysis of the relevant data could probably provide indicative results for the persistence of low income for five years. However, a more robust analysis would take up to year depending on the level of analysis that required from the data

### Recommended Action

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We recommend that you **discuss** this note with officials.

Nic Blakeley  
**Manager, Education and Skills**

Hon Bill English  
**Minister of Finance**

## Treasury Report: Data on Poverty in New Zealand

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### Purpose

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1. You have requested data outlining the flows in and out of poverty, for the last one year and five years, using several different measures of the poverty line. This note provides you with the currently available data in this space.
2. Other data could be produced that might be useful in responding to your query, as well as the needs of the Ministerial Committee on Poverty. We have included information on this as part of this note.

### Background – Measures of Poverty

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3. Measures of poverty intertwine two overlapping but distinct concepts:<sup>1</sup>
  - Level of Inequality – the proportion of the population with a *relatively* low level of material wellbeing. This is measured by surveys of income that include information on the household (e.g. Household Economic Survey).
  - Level of Hardship – the proportion of people constrained by their material circumstances from achieving a *minimum ‘decent’ level* of wellbeing. This is measured by surveys of wellbeing that include questions about material deprivation (e.g. Living Standards Survey).
4. In practice, actual measures of inequality and hardship include some element of both relative income and decency concepts. Further, those with a relatively low income are more likely to be in hardship (see table 6.1, Perry 2011), though the overlap is only about 50%.<sup>2</sup> That is, half the people measured as in poverty using an inequality measure are not classified as in poverty using a measure of hardship, and vice versa. This is further complicated by the issue of the “working poor”, those in low paid and insecure work whose living standard may still put them below the decent level of wellbeing.
5. All measures generate a spectrum, so hardship is defined by designating some point on the spectrum as ‘below what is decent’. The measures used are:
  - *Equivalised income below 50% or 60% of the median income.* This measure needs to be adjusted for accommodation costs because it is a large, fixed cost, but one that is addressed in different ways at different points in the life cycle (e.g. older people are more likely to own their own house, so need less current income to maintain a higher living standard.)<sup>3</sup>
  - *Population reporting an enforced lack of basic items.* The Living Standards survey is based on an internationally developed approach that asks people whether they have been forced to do without or delay purchase of food items, clothing, heating or medical services that are deemed to be necessities. The level of material hardship or deprivation is determined by the number of answers showing an enforced lack of items. For Perry 2009 (research undertaken at the Ministry of Social Development), an enforced lack of four or more out of 14 items indicated hardship.

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<sup>1</sup> Annex 1 provides more information on the issues and different measures.

<sup>2</sup> Perry (2002) ‘The mismatch between income measures and direct outcome measures of poverty’ *Social Policy Journal of New Zealand*, (19), 101-127.

<sup>3</sup> Equivalisation adjusts for the number of people supported by the household income.

6. Along with income and hardship measures of poverty, many economies including Australia and New Zealand consider it increasingly important to take into account a wider view of the elements which contribute to an individual's living standards. This includes material determinants, but also non-material factors such as human capital (skills and health), social capital (institutions and trust) and natural capital (climate, biodiversity and water)<sup>4</sup>. While recognising the importance of this more holistic view of living standards, this note focuses largely on income and material deprivation measures of poverty as we understand this is your main area of interest, at this point. Treasury's Fiscal Incidence work also provides another perspective on poverty as it includes expenditure on government services and tax/transfers in its analysis of income.

## Current Data on Poverty in New Zealand

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### Static Data

7. The following static results are from the annual *Household Incomes Report* (Perry 2011), based on Statistics New Zealand's Household Economic Survey (HES), and various living standards reports (e.g. Perry 2009), based on MSD's Living Standards Surveys (LSS). This is based on data that has been collected every two or three years to give a repeated static analysis of the level of hardship.
8. Two approaches are used. One approach sets the decent level of income each year as a proportion of the median income, in the results below 50% and 60% of median income are used based on international standard measures and focus group work on the minimum income needed.<sup>5</sup> The second uses the 'decent' level of income in a reference year (1998 is used below) and then inflation adjusts that income to provide a 'constant value' level of income to assess the level of hardship.

### *Changes in relative income in New Zealand 1982 to 2012*

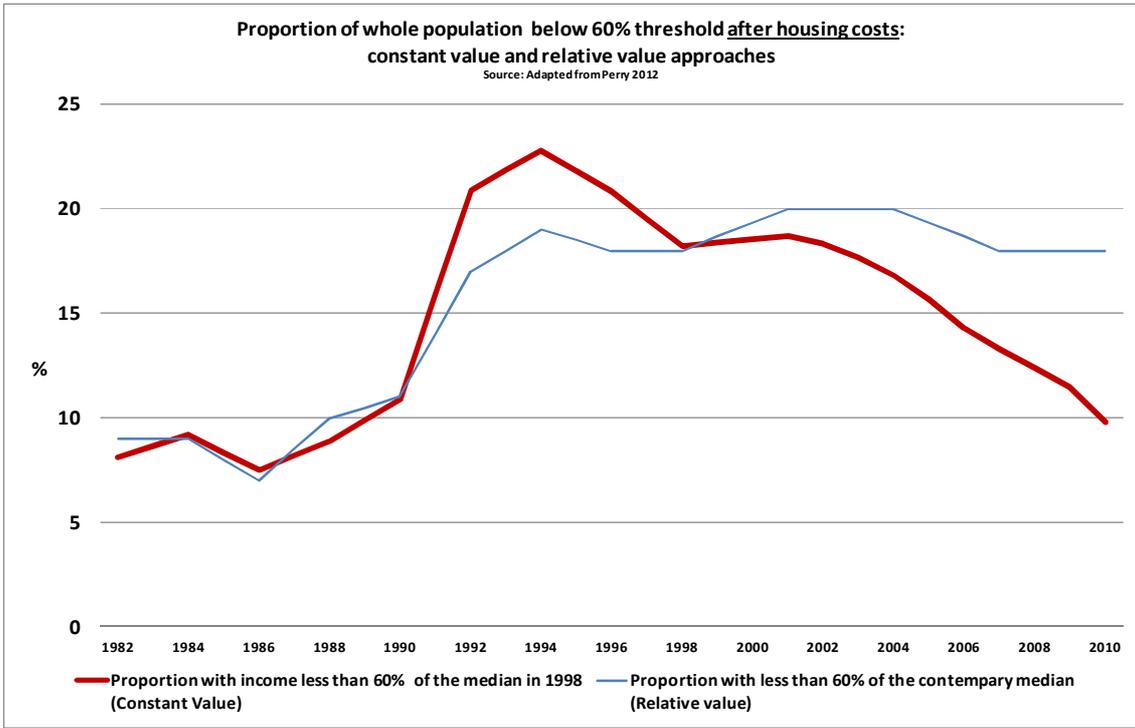
9. Using the 60% threshold, since 2004 the constant and relative measures have continued to diverge, with fewer people in poverty using a constant value measure but levels of relative poverty remaining largely static. This divergence reflects the absolute increase in real incomes for low income households throughout this period. However this has been matched by increases in median incomes, so there has been little relative change.<sup>6</sup>

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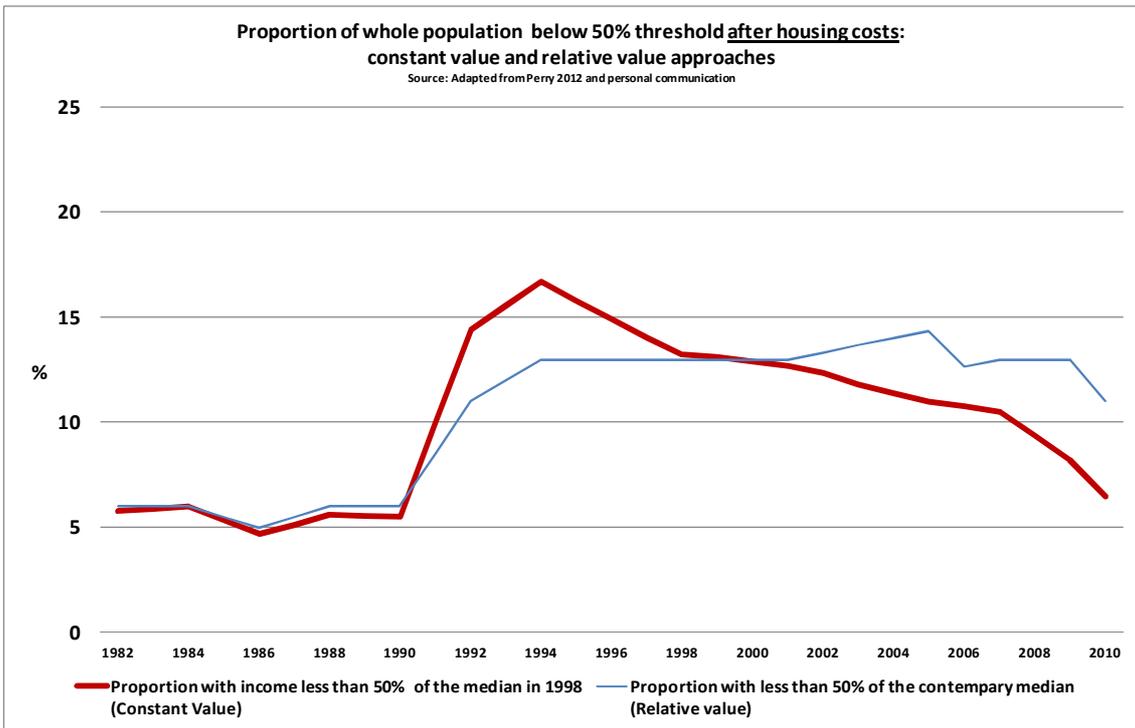
<sup>4</sup> Working Towards Higher Living Standards for New Zealanders (Treasury, 2011).

<sup>5</sup> See Annex 6 of Perry (2011).

<sup>6</sup> The data reported in 2010 records incomes in the years 2008 to 2010, so most was collected prior to the increase in unemployment from the global economic crisis.



10. If a 50% threshold is used instead, poverty levels are, by definition, lower but the pattern is largely same. The main difference is that the increase in poverty starts after 1990 and there is a slight drop in relative poverty in 2010.



11. Aside from looking at the entire population there are a number of different ways you can cut the above data (graphs of these areas can be found in annex 2 of this report):

	Difference from overall population data
Before housing costs	This shows a more rapid fall in income poverty to around two thirds of its level in the mid-1980s because housing costs now take up a greater proportion of household costs.
Children	Households with children have tended to be poorer, so more children are in houses with a lower equivalised income.
Age	More over 65 year olds are in poverty due to the increase in the number of people over 65 who do not own their own homes. Increasing numbers of 18 to 24 olds are studying and delaying starting their working life, thus more are in households with lower incomes.
Type of household	The proportion of people in poverty by household has changed markedly, with persistently fewer couples with children in poverty largely because of a change in working patterns.
Geographic	We do not have specific data on the geographic concentration of poverty, however we do have data indicating concentrations of deprivation which is a reasonable proxy for poverty (as discussed earlier). Areas with significant concentrations of deprivation <sup>7</sup> include the East Coast/Poverty Bay region of the North Island, Northland and South Auckland.
Gender	Approximately 1% to 3% more women in poverty over the last 20 years because most sole parents are women.
Ethnicity	There is no time variation data on Maori or Pasifika, though the numbers of Maori in poverty are roughly double the Pakeha rate.

*Comparisons of living standards (adapted from Perry 2009)*

12. The table below gives the percentage of the population in different population groups who are restricted by material circumstance in four or more ways in 2004 and 2008. The last column indicates if any change is evidence for a change in poverty level. Sample sizes for these groups are small so the only changes likely to be statistically significant are the increased hardship for children, and hence for the under 65 population as a whole, and for single people not on a benefit income.

**Changes in material hardship (4+ %), 2004 to 2008: whole population**

	2004	2008
<b>Population</b>		
mean	1.49	1.47
Whole population	15	15
<b>Age group</b>		
0-17	26	23
18-24	12	15
25-44	15	16
45-64	11	13
65+	4	4
<b>Family type</b>		
65+ single	5	5
65+ couple	3	2
<65 single	13	16
<65 couple	5	9
<65 SP with depts	44	43
<65 2P with depts	16	15
<b>Income source for under 65s</b>		
Benefit, with dependent children	56	57
Benefit, no dependent children	27	42
Market, with dependent children	15	14
Market, no dependent children	7	10

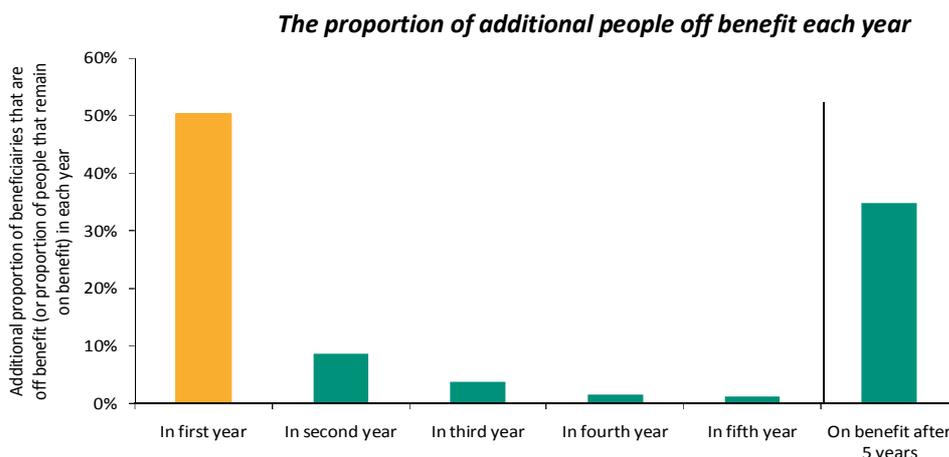
<sup>7</sup> Where over 20% of the working age population are receiving a main benefit.

**Dynamic Data**

13. Static data effectively shows the “stock” of poverty in New Zealand without providing a sense of whether poverty is persistent (i.e. the same people are living in poverty year after year, or if different people are moving in and out of poverty). There is no readily available “dynamic” data which directly captures people flows in and out of poverty, however measured. We understand that New Zealand is unique among western OECD countries in not having this analysis.
14. Although dynamic data is not available in New Zealand, the level of income inequity in New Zealand is similar to the UK and Australia. So data from those countries can be used as a guide to what we would expect to be true in New Zealand.
15. In the absence of New Zealand-specific data, we have therefore provided the following data which gives you with a sense of the dynamics of poverty in New Zealand:
  - Data on benefit receipt in New Zealand, as a proxy for poverty, and
  - Data from Australia and the UK which provides information about persistence.
16. We would also highlight the lack of New Zealand analysis in this space as a key gap which could be addressed, as discussed later in this note.

*Benefit Receipt Dynamic Data*

17. Analysis has shown that around one third of those who receive a welfare payment are still on a benefit after five years.



Source: WWG from Ministry of Social Development Benefit Dynamics Dataset (1993-1998 cohort).

*UK data<sup>8</sup>*

18. The UK has an ongoing longitudinal survey (British Household Panel Survey) that collects a variety of information on approximately 10 000 people. Their analysis divides income by quintile (after housing costs) and compares an individual’s position in 1991 with 2008. The data suggests that around a third of people in the bottom income quintile in 1991 are also there in 2008. Just under a quarter of those in the bottom quintile in 1991 had moved into the top two quintiles.

<sup>8</sup> DWP (2010) *Low Income Dynamics 1991-2008 (Great Britain)*.

Table 4.1 (AHC): Position of individuals in the income distribution by quintile in 2008 in relation to 1991

Percentage of individuals	Source: BHPS 1991-2008				
	Position in 1991				
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile
<b>Position in 2008</b>					
Bottom quintile	33	23	20	12	12
Second quintile	24	22	24	17	13
Third quintile	20	25	19	22	15
Fourth quintile	16	17	20	22	25
Top quintile	7	14	17	26	35
Total	100	100	100	100	100

19. Analysis of the time spent in the bottom quintile shows 40% spent at least 10 years in the bottom quintile, though very few (2%) spent all of their time in the lowest quintile.

Table 3.1 (AHC): Where in the income distribution individuals spent the majority of their time relative to 1991, over the period 1991-2008

	Source: BHPS 1991-2008					
	Bottom Quintile	Second Quintile	Original position in 1991		Top Quintile	All individuals
			Third Quintile	Fourth Quintile		
All years in the same quintile as 1991	2	0	0	0	7	2
Majority of years in same quintile as 1991	40	17	12	18	36	25
Majority of years above 1991 quintile	53	43	27	15	...	28
Majority of years below 1991 quintile	...	10	31	39	52	26
None of the above	5	29	30	27	5	19
All individuals	100	100	100	100	100	100

**Notes:**

1. The "Majority of years in same quintile as 1991" row means ten or more years out of eighteen in the same quintile as 1991 but does not include those in the "All years in same quintile" row.
2. "None of the above" implies that the individual has neither remained in the same quintile as the original, nor been in a higher or lower quintile for ten of the eighteen BHPS years. For example, a possible combination matching this criteria for respondents over the eighteen years is (7, 6, 5) in any order for (lower quintile, original quintile, higher quintile). When there are an odd number of BHPS years, 'none of the above' is impossible for the top and bottom quintiles.

20. For population groups:
- Sole parents were persistently among those with lowest income
  - Those in households without work or where no adult had a qualification were also most likely to have persistent low income, and
  - As with New Zealand, more women had low income.

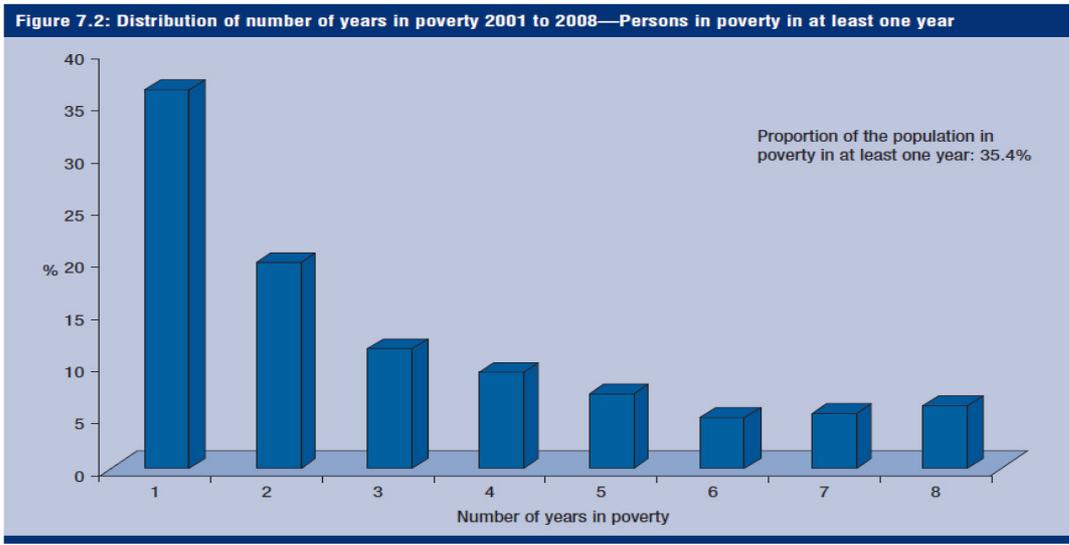
*Australian data*<sup>9</sup>

21. The data for Australia is provided by the HILDA survey. This is a panel of approximately 13 000 people interviewed annually since 2001. The table below analyses income by quintile. Over the eight year period 58.4% of people were still in the lowest quintile by income, though this increased to 63.9% if income was averaged over a two year period.

<sup>9</sup> Melbourne Institute (2011) *Families Income and Jobs, volume 6: A statistical Report on Waves 1 to 8 of the HILDA Survey* University of Melbourne.

Table 6.6: Income mobility between 2001 and 2008						
<b>A1. Percentile in 2001 and 2008</b>						
	Mean absolute change	Percentage going up more than 20 percentiles	Percentage going up 0–20 percentiles	Percentage going down 0–20 percentiles	Percentage going down more than 20 percentiles	
	19.49	24.7	27.6	28.6	18.8	
<b>A2. Quintile in 2001 and 2008</b>						
	Q1 in 2008	Q2 in 2008	Q3 in 2008	Q4 in 2008	Q5 in 2008	Total
Q1 in 2001	58.4	22.6	10.0	5.3	3.7	100.0
Q2 in 2001	26.6	32.5	20.7	14.5	5.7	100.0
Q3 in 2001	13.5	21.4	29.7	22.8	12.6	100.0
Q4 in 2001	8.7	12.3	21.0	34.0	24.0	100.0
Q5 in 2001	4.3	8.0	14.8	22.2	50.6	100.0
<b>B1. Percentile in 2001–2002 and 2007–2008</b>						
	Mean absolute change	Percentage going up more than 20 percentiles	Percentage going up 0–20 percentiles	Percentage going down 0–20 percentiles	Percentage going down more than 20 percentiles	
	17.27	20.3	31.1	31.3	17.1	
<b>B2. Quintile in 2001–2002 and 2007–2008</b>						
	Q1 in 2007–2008	Q2 in 2007–2008	Q3 in 2007–2008	Q4 in 2007–2008	Q5 in 2007–2008	Total
Q1 in 2001–2002	63.9	22.7	7.5	3.8	2.1	100.0
Q2 in 2001–2002	29.5	33.2	20.8	12.0	4.5	100.0
Q3 in 2001–2002	10.5	24.8	29.3	24.8	10.7	100.0
Q4 in 2001–2002	5.7	10.4	24.4	35.9	23.5	100.0
Q5 in 2001–2002	3.7	6.1	13.2	21.2	55.8	100.0
<i>Note: Percentages may not add up to 100 due to rounding.</i>						

22. There is also an analysis of the persistence of income poverty (defined as 50% of median income before housing costs). It showed that approximately one third of people spent more than three of the eight years in poverty.



What data could New Zealand produce and by when?

23. Depending on the role and focus of the new Ministerial Committee on Poverty, getting a New Zealand-specific sense of the dynamic poverty data could be a useful first place to start. We understand from our enquiries that Survey of Family Income and Expenditure (SoFIE) data could be analysed to produce a better estimate of individual income changes, though there is some disagreement about how quickly results could be produced.

*Over the next four to six weeks...*

24. Those using the data<sup>10</sup> believe we could produce a very rough dynamic analysis within two to three weeks. However, there is some risk attached to this timeframe as the SoFIE dataset has had a number of problems in the past. Since this would be the first time it has been used for this type of analysis there may need to be some allowance made for resolving any further problems.
25. Producing data any faster than this may include the following issues:
  - The data is likely to have a number of flaws including not being able to take into account things like housing costs. This would mean that, for example, superannuitants would appear as a significant group in poverty because no adjustment was made for the fact that most own their own housing already.
  - Some adjustments for these misleading elements could be made. However, this would be an indicative analysis and we would not have time to have the essential review of the analysis.
26. Although results would be indicative only at this point, they may provide the Committee with somewhere to start in terms of setting overarching goals and objectives.
27. The Department of Labour or potentially Statistics New Zealand is probably best placed to undertake this work. Treasury would look to be involved in a supporting role.

*Within three to six months...*

28. A more in-depth dynamic analysis which accounted for the issues outlined above would likely require a timeframe of between three and six months. This is due to the complexity of the data being utilised as well as the fact that dynamic analysis has not been produced before and would therefore require a thorough review process.

*Within six months or a year...*

29. If the Committee was interested in understanding poverty (both dynamic and static) in New Zealand in a more meaningful way, it may wish to commission a more detailed piece of work. This project would potentially last somewhere between six months and a year, depending on the scope and depth that the Committee wanted from this project. Depending on the role and objectives of the Committee, a longer term project based on SoFIE could provide a solid evidence base for the Committee to proceed on.
30. In both of these longer term projects, Treasury would probably look to be more involved than just in a supporting role. The Ministry of Social Development, the Department of Labour and Statistics New Zealand would also need to be involved to varying degrees.

## Next Steps

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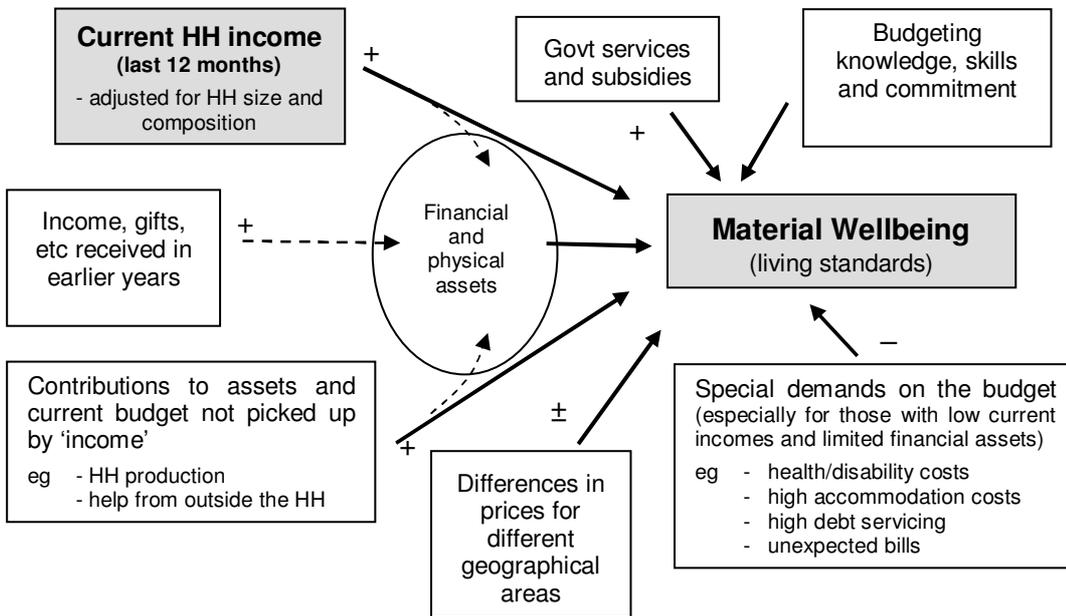
31. We suggest that you discuss the content of this note with officials. We will look to progress any work further after having discussed this note with you.

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<sup>10</sup> The Department of Labour, in particular.

**Annex 1 – Measuring Poverty**

Current income is only one of a number of inputs into living standards. The diagram below shows how living standards may alter even when income remains unchanged

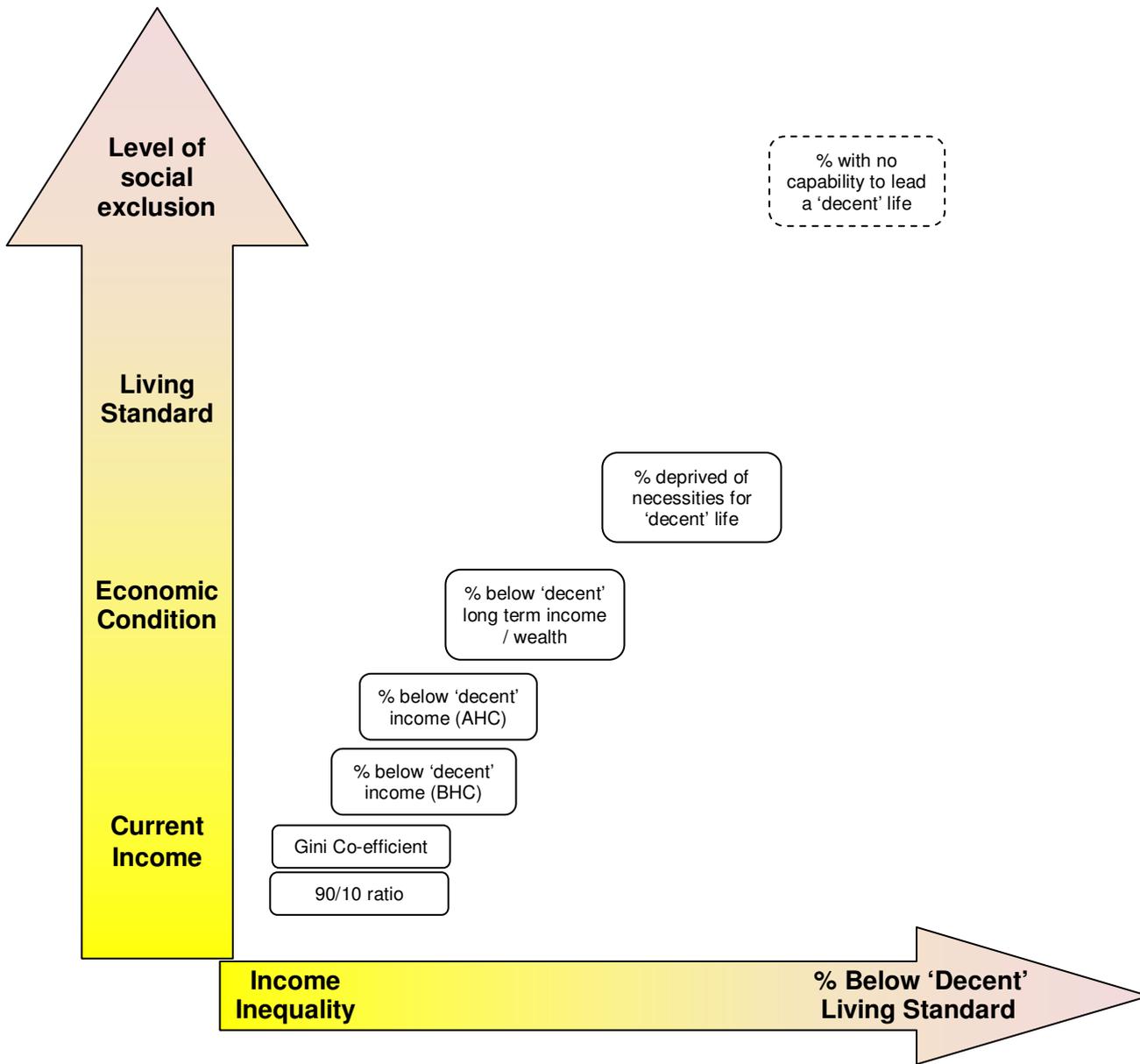


Recent years have seen greater focus on these non-monetary elements for understanding poverty, with a corresponding expansion in the way poverty is measured. The Treasury Living Standards work<sup>11</sup> is an example of work that looks at a broader range of influences on well-being. Work that focuses on those with lower well being is based on the framework created by Amartya Sen. This focuses on capabilities (such as education) and lack of physical and social assets that lead to social exclusion. In that sense low productivity and the low income that result are only one outcome of poverty.<sup>12</sup>

The diagram on the following page puts these measures in to the framework discussed in the paper. There is currently no robust New Zealand equivalent to the social exclusion framework used in Australia and elsewhere (though *The Social Report* produced by the Ministry of Social Development has some similarities to this work).

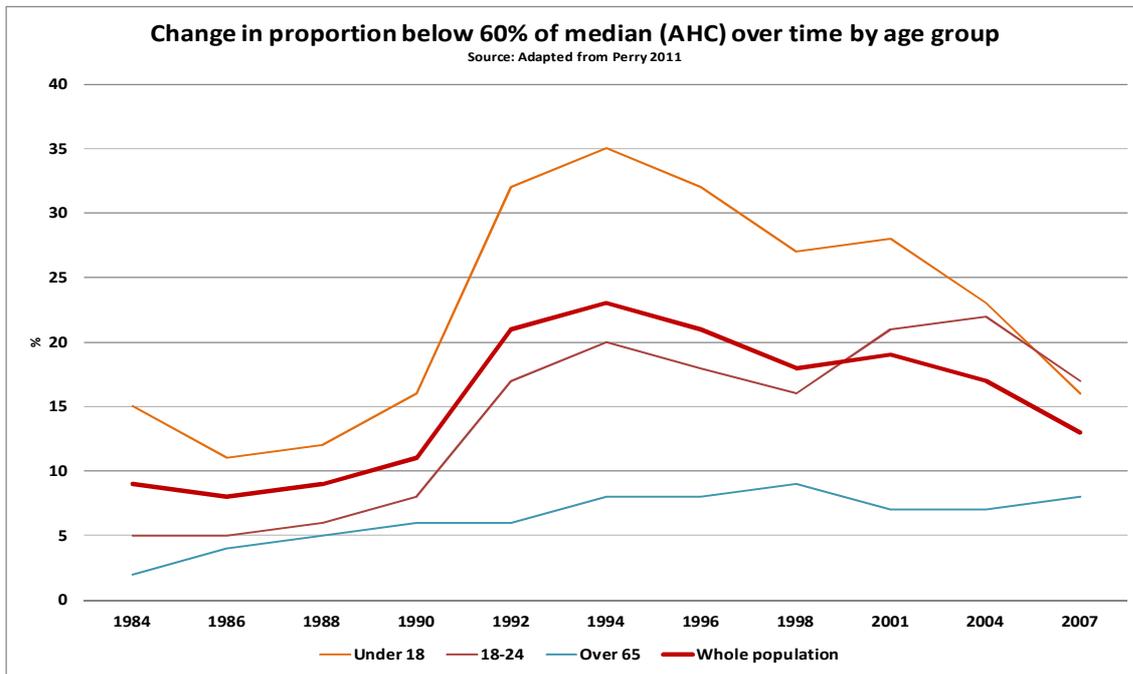
<sup>11</sup> Gleisner, B, Llewellyn-Fowler, M and Mcallister, F (2011) *Working Towards Higher Living Standards for New Zealanders* New Zealand Treasury Paper 11/02.

<sup>12</sup> For examples of different measures see See Hayes, A, Gray, M and Edwards, B *Social Exclusion* Australian Institute of Family Studies for the Department of the Prime Minister and Cabinet.



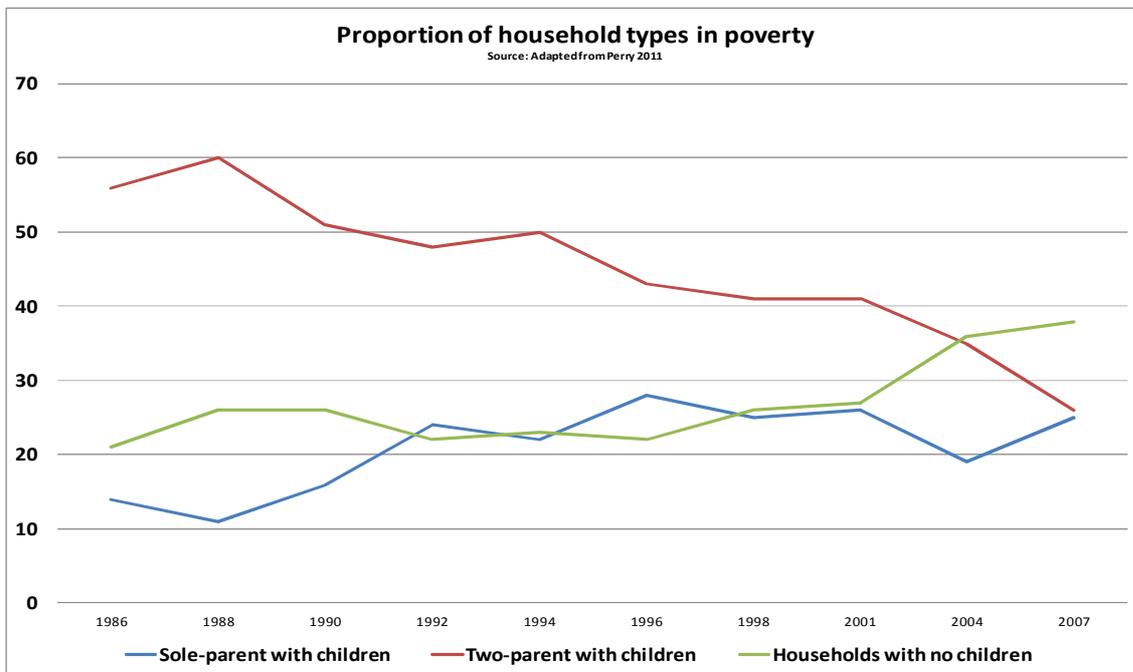
Annex 2 – Further Static Data on Poverty in New Zealand

Poverty by Age Group

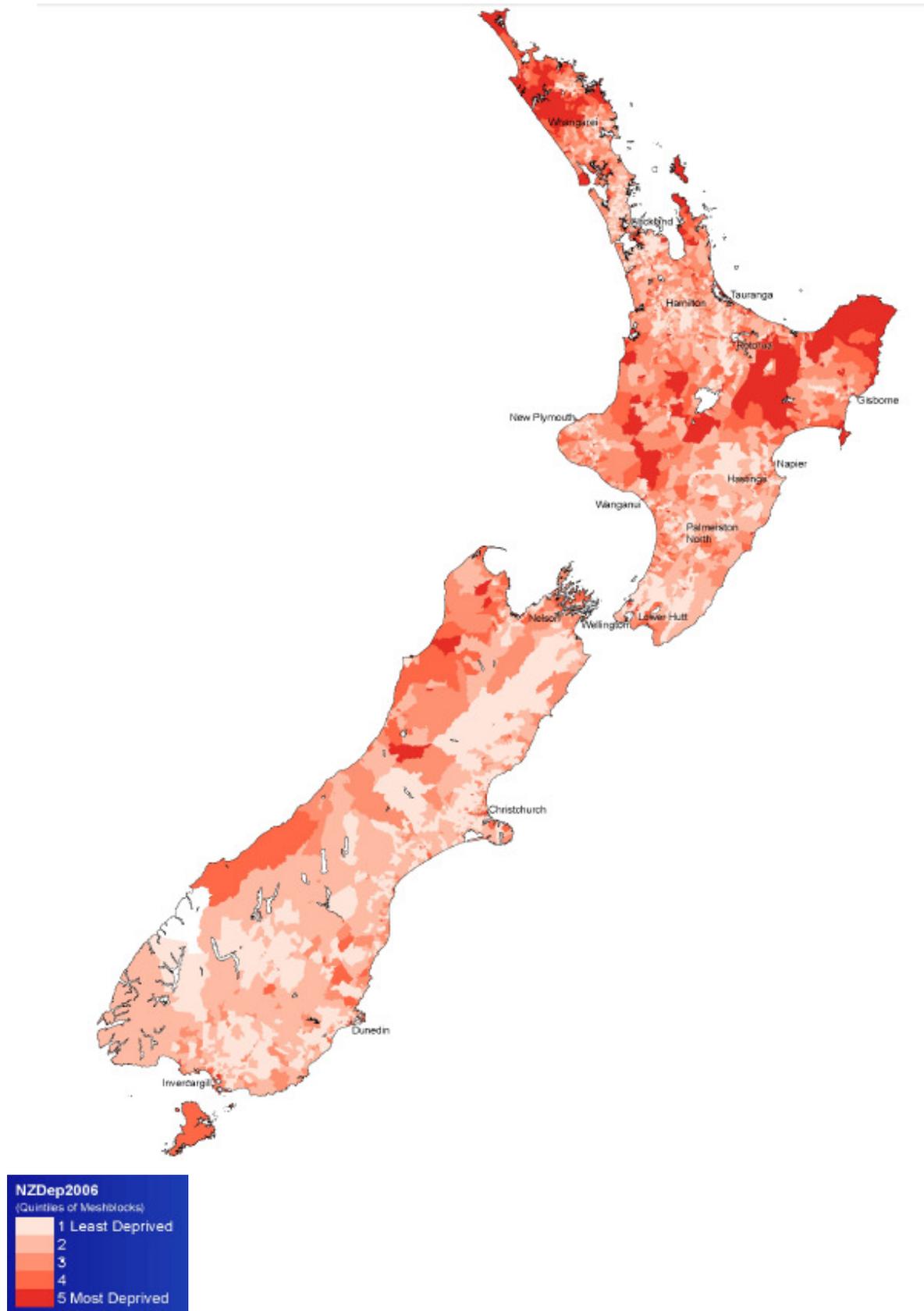


Poverty by Household Type

Alternatively we can analyse trends in the type of household in poverty (note the lines show the proportion *within* the population of those in poverty). The graph below shows how fewer of those in poverty are in two person households, and more are either in sole parent households or households without children.



Atlas of Socioeconomic Deprivation in New Zealand 2006



Source: Ministry of Health, University of Otago and Statistics New Zealand