

# DISTRIBUTIONS AND DISPARITY: New Zealand Household Incomes

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Mary Mowbray  
Information and Analysis Group  
Ministry of Social Policy  
2001

# ACKNOWLEDGEMENTS

Thanks to my colleagues Donald Woolford and Vasantha Krishnan for their help in drafting this report, to Neela Dayal for collaborating in a previous update published in the *Social Policy Journal* (July 1994), to John Jensen, Bryan Perry and the external reviewers Ron Crawford and John Scott for their constructive suggestions, to Ross Mackay for his comments and to Ron Lovell for his help and managerial overview. Other members of the former Social Policy Agency have also given helpful comments and technical assistance, for which I am most grateful.

Mary Mowbray

DISTRIBUTIONS AND DISPARITY:  
New Zealand Household Incomes  
was published by  
The Ministry of Social Policy  
Te Manatū mō ngā Kaupapa Oranga Tangata  
2001

ISBN 0-478-25114-9

Copies of this report can be obtained from:  
Communications Unit  
Ministry of Social Policy  
Private Bag 39993  
Wellington  
New Zealand

Ph: 64-0-4-916 3860  
Fax: 64-0-4-916 3910

or it can be viewed on:  
[www.mosp.govt.nz](http://www.mosp.govt.nz)

Design and print management by Words & Pictures

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## ABSTRACT

This report builds on an earlier report (M. Mowbray, *Incomes Monitoring Report 1981 - 1991*, Social Policy Agency, 1993) on household income distributions, extending the trend series presented in that report through from 1991 to 1998. The updated report also provides a more detailed examination of income trends and relativities for households shown to be disadvantaged in the previous monitoring report and likely to include household members of particular interest to social policymakers - for example, children and young people, superannuitants, Māori or Pacific Islands adults, sole parents or beneficiaries. Comparisons between different household types and examination of changes in income distribution over time are based on real equivalent incomes (incomes adjusted to take account of changes over time in purchasing power and differences in household size and composition). A range of other material which might inform debate about income levels is also presented.

## EXECUTIVE SUMMARY

### Coverage

*Distributions and Disparity* reports on trends in household incomes through the 1980s and 1990s up to 1998. Data from Statistics New Zealand's Household Economic Survey are used to track real incomes over this period for different household compositions that are of interest to policymakers. Households that raise children, those that rely on superannuation and those that are home to beneficiaries are among others that are examined. Hours of work, changes in different forms of state support, changes in housing assistance and changes in the tax system form a backdrop to the patterns that emerge.

*Distributions and Disparity* also examines some of the implications of adopting different measures for examining whether the income position of households has improved or deteriorated over time.

### Overall Trends

In 1998 dollar terms, household incomes fell through the 1980s to reach a low point between 1992 and 1994. From then through to 1998 they have recovered, but not to the levels they were at in the '80s. As this recovery has unfolded, the gap between low-income households and high-income households has widened. This widening has occurred because incomes at the top of the income distribution have recovered more strongly than incomes at the bottom of the distribution. The pattern holds regardless of whether before tax or after tax income is considered and regardless of whether or not adjustments are made for household size.

### Particular Groups

Comparisons between different sorts of households have been simplified by adjusting household incomes to take account of differences in size and composition (since an identical dollar income would have different implications for a household of five than it would for a two-person one).

#### Beneficiaries

More than 40% of households with a beneficiary member had disposable incomes that placed them in the bottom fifth of the income distribution in 1998. Throughout the '90s the incomes of these households have been less than 60% of the average income for all households. Before the 1991 benefit cuts, average incomes for such households were generally more than two-thirds of the average for all households.

#### Children

Households with children and dependent young people among their members have tended to cluster in the bottom two-fifths of the income distribution over the period covered by the report. This clustering was particularly marked in the 1992-94 period. High proportions of the child population lived in the bottom fifth of households in the mid-'90s (33%). While this proportion had dropped back to the level of the late '80s by 1998 (24%), the overall pattern remained unchanged. Growth in sole parent numbers has contributed to this development, along with lifecycle and opportunity effects. Children tend to be in households with younger adults, who tend to earn less than older adults. The presence of children and the need for their care can also reduce opportunities for adults with children to earn income.

#### Māori

Households with adult Māori members tended to have below average incomes throughout the period covered by the report. Such households tended to suffer a particularly large fall in income through from the late 1980s to the low point for incomes observed between 1992



and 1994 and to become increasingly over-represented at the bottom of the income distribution at that time. This effect appears to be strongly related to levels of unemployment experienced by a younger population that is much more reliant on income from paid work than some other groups. The position of these households has improved again through to 1998, with a return to income levels nearing those of the late '80s. A key factor in this improvement has been an increase in the overall household hours worked. However, hours worked by households with Māori adult members tend to yield a lower income than equivalent hours worked by other households.

#### Renters

Housing rentals imposed an increasing burden on low-income households. Although renters only made up a quarter of all households in 1998, over 40% of the households in the lowest fifth of the income distribution were renters. An increasing proportion of households in the lowest fifth paid more than 30% of their income on rent (17% in 1988, 44% in 1998).

#### Superannuitants

Although incomes of households with beneficiary members fell in the early '90s, average incomes of superannuitant households did not. New Zealand Superannuation was not affected by rate cuts in 1991, and the introduction of living alone allowances in 1992 lifted incomes for some. Beneficiary households consequently displaced many superannuitant households from the lowest fifth of the income distribution as the relative income position of beneficiary households deteriorated. In 1988, nearly half of the households in the lowest fifth of the income distribution comprised one or two adults receiving New Zealand Superannuation. By 1998 this proportion had dropped to less than a third. Average incomes for superannuitant households slowly dropped in relation to the average for all households toward the end of the study period in 1998, but it is likely that this trend will have been reversed by the rise in New Zealand Superannuation rates announced by the Government in January 2000<sup>1</sup>.

#### Women

Average incomes for households in which all the adults were women were consistently lower than the average incomes of households in which all the adults were men, and lower than households with mixed adult gender, regardless of whether there were children or dependent young people in the household. This gap widened during the '90s.

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<sup>1</sup> Hon. Michael Cullen, 'Pensions to Rise as Super Wage Floor Restored', released 27 January 2000 can be seen on the website <http://www.executive.govt.nz/speech.cfm>

# 1 INTRODUCTION

## 1.1 Background

The previous volume in this series<sup>2</sup> reported on the incomes of households over the decade from 1981 to 1991 using data from Statistics New Zealand's Household Expenditure and Income Survey. It was planned as the first volume in a series similar to the British publications that focused on households below average income<sup>3</sup>. The first volume provided a picture of movements in the average incomes of households of different types, including those with and without children, those consisting of people living alone or with other adults, and those receiving superannuation. Movements over the decade in the incomes of households dependent on income from different sources, such as salaries and wages, self-employment, and social welfare benefits and pensions, were also illustrated. This report is an update of the 1981 to 1991 volume, using data from the now renamed Household Economic Survey (HES), and covers information about household incomes up to the year ending March 1998.

While this report was in preparation, a number of developments occurred. The HES was changed from a continuous survey to a three-yearly one, making the 1997-98 year the end of an annual series. A number of income studies have also been published. For example, Statistics New Zealand's *Incomes* volume in the *New Zealand Now* series (published 1999), contains an international context, an analysis of census data and of HES data to 1996. The volume profiles personal and household incomes by household characteristics of different stages of life, and by the gender, age and ethnicity of household members. Podder and Chattergee's paper 'Sharing the National Cake in Post-Reform New Zealand' (1998) analyses factors associated with income source that underlie income inequality using pre-tax incomes, and comments that there are aspects of the issue for which disposable income would be more useful. Des O'Dea, in the Treasury working paper 'The Changes in New Zealand's Income Distribution' (2000)<sup>4</sup>, covers individual and household incomes between 1981 and 1996, examines both static and dynamic trends and focuses on the causes of inequality.

These studies all demonstrate an extended period of decline in overall incomes, followed by an upturn to 1996. This report adds to the content of the above studies by presenting time-series data on household incomes, from 1981 to 1998, adjusted to the dollar value of the final year. Compared to the previous *Incomes Monitoring* volume, it includes considerably expanded coverage of population sub-groups likely to be of interest to those concerned with social policy, and shows the degree to which they are over-represented in households with low income. This report also shows that the 1996 upturn identified in previous studies has been sustained over the next two years but that its benefits have not been spread equally across all sections of New Zealand society.

## 1.2 Report Structure

The report opens with a brief explanation of the data source it draws upon, and the concepts and definitions of the measures that are used in the text. Technical detail and the fuller tables underpinning the discussion in the body of the report have been kept to appendices as far as possible. The overview section sets the scene and, together with the following two sections on trends in household incomes and factors related to household incomes, provides an account of changes over time in:

<sup>2</sup> M. Mowbray, *Incomes Monitoring Report, 1981 – 1991*, Social Policy Agency, 1993.

<sup>3</sup> *Households Below Average Income*, Dept. of Social Security, London HMSO, (1991, 1993 & 1995).

<sup>4</sup> Based in part on Hyslop & Maré, 'Understanding Changes in the Distribution of Household Incomes in New Zealand Between 1983-86 and 1995-98', published as Working paper No. 24, Center for Labor Economics, University of California Berkeley, July 2000.

- household incomes and the household income distribution;
- household size and composition;
- income distributions before and after tax, and distribution of equivalent incomes;
- the components of household income; and
- the main source of household incomes.

These sections present data from the full time-period, and so do most of the tables in the appendix. For most of the report from section 5 onwards, the emphasis is on the more recent years 1987-88 onwards. These sections examine:

- the incomes of households in which women, children and dependent young people, Māori adults, Pacific Islands adults, sole parents, beneficiaries and superannuitants live;
- accommodation cost as a proportion of disposable incomes for different households;
- the characteristics of households with the lowest incomes; and
- household incomes in relation to different benchmarks.

### 1.3 Data

Income data - restricted to cash income - are collected in the HES for all respondents, that is all adult household members aged 15 years and over. The sample for the HES each year is different, giving cross-sectional data not longitudinal. The amount of income received from different sources (for example wages and salaries, self-employment, superannuation, benefits and other income such as dividends or interest) is recorded separately for each respondent. The income figures from all respondents in the household are then added together to give sub-totals for each income source and an overall total household income. The use of household as the unit of analysis maintains continuity with the previous volume, but its use may need to be re-examined for future reports. The likelihood that a household equates to a single family unit is diminishing, and this raises questions about income sharing and the application of current methods of equivalising household income.

Household income, rounded to the nearest dollar, is used in all the tables in this report. Percentages are also mostly rounded to the nearest whole percentage point, so that sometimes the columns do not add to 100%. There is a varying likelihood of error from the use of survey data, as a result both of sampling and other factors. Sampling error can be quite high for small sub-groups (see Tables A1 and A2), and results reported about these should be read with due caution. Error rates are discussed in Appendix 1 and confidence intervals provided in Appendix 2.

### 1.4 Concepts And Definitions

Several different measures of income are used. Total pre-tax income is the sum of incomes from all sources before tax or tax credits. Market income comprises all regular income except public superannuation<sup>5</sup> and benefits, bursaries or student allowances. Disposable income is total income after tax, and includes the effects of both tax liability and tax credits such as Family Support. Incomes used are as reported by respondents (even when they are negative, indicating losses); tax liability and tax credits, however, are imputed. This means that tax avoidance is not taken into account, nor is failure to apply for Family Support. It is likely that this has resulted in a slight overstatement of income values for lower-income households and a slight understatement for those with higher incomes.

Since 1982, prices as measured by the Consumers Price Index (CPI) have increased by 165% - that is, to March 1998, they were nearly two and two-thirds times as high as during the

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<sup>5</sup> Variously called National Superannuation, Guaranteed Retirement Income, and New Zealand Superannuation during the time covered by this report.

1982 year. To compare incomes over that period, therefore, incomes have been adjusted for each year's mean change in the CPI so that all are standardised to 1998 dollars<sup>6</sup>. This means that household incomes have been adjusted for consumer price movements to the average of the year to March 1998 so that incomes for all years are on the same basis.

Incomes are also adjusted using an equivalence scale that takes into account the number of adults and the number and ages of children in the household. This is done on the premise that households of different compositions will require different amounts of income to achieve a similar level of material well-being. The adjustment is to a two-adult standard; that is, it converts the household's actual income into a notional figure, which represents a level of income that would provide a household comprising two adults only, with an equivalent level of material well-being. The equivalent household income may be regarded as a measure of the relative standard of living that can be attained by each household, given its income. To the extent that equivalent income is a useful indicator of material well-being, it also gives a fairer indication of changes in living standards over time, especially during a period of significant changes in household composition in the population.

This adjustment has been carried out using the Revised Jensen Scale (RJS). This scale, applied to the data from 1988<sup>7</sup>, allows for both the number and ages of children although it makes a lower allowance for children than some other scales. For the most part, equivalent disposable income (that is income equivalised after tax and tax credits) is used to compare households with different characteristics, including those with particular types of residents, over time. In the overview and at a few other places, the median income is presented, but for most of the report and particularly when comparing sub-groups, the mean or arithmetic average is the measure used.

In this report, as in the previous *Incomes Monitoring Report*, the relative position of Māori is represented by households in which any adult respondent in the survey reported being of Māori ethnic origin. The same applies to those households in which any adult respondent reported being of Pacific Islands ethnic origin<sup>8</sup>. This is in contrast to the approach commonly taken in earlier studies, where the ethnicity of the householder (or head of household) was taken to typify the household's ethnicity, or where analysis was based on the ethnicity of individual respondents within households. The discussion is also in similar vein regarding other types of residents (such as children, superannuitants, sole parents) 'included' in households.

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<sup>6</sup> Some economists argue that it is not appropriate to use the CPI to adjust trends in pre-tax income over the period covering the introduction of GST (see note on p. 92 of D. O'Dea 'The Changes in NZ's Income Distribution', NZ Treasury 2000). For this purpose, O'Dea and others use a CPI excluding GST calculated by the Reserve Bank. This was noted too late to be considered for this report.

<sup>7</sup> For the earlier years 1981-82, 1983-84 and 1985-86 only the number of children was used since their ages were not available. The RJS does not make allowance for costs associated with employment (in contrast to some other scales). Making allowance for such costs can alter the position of groups comprising predominantly people in paid work relative to those not employed, such as superannuitants and beneficiaries.

<sup>8</sup> Adult respondent is defined in Appendix 1. The terms 'Māori adult' and 'Pacific Islands adult' are used as abbreviations for 'Māori adult respondent' and 'Pacific Islands adult respondent' in the text.

## 2 OVERVIEW

### 2.1 Setting The Scene

Between 1981 and 1998 there have been major changes in the economy, in the labour market, in population composition and in income support programmes. These form an influential backdrop to the income trends that are discussed in this report.

In the late 1970s and early 1980s New Zealand's economy was highly regulated and there was heavy state involvement in major utilities. Government controls were in place over imports, interest rates and, for a time, wages and prices. The state provided housing for low-income people and subsidised some staple foods. Subsidies were also used across the economy to stabilise price fluctuations in commodity markets.

Changes to the economy initiated in 1984 saw trade liberalisation, removal of direct market controls on prices and wages, the abolition of subsidies and the introduction of financial sector reforms. From the mid-1980s onwards monetary policy was directed towards reducing inflation and maintaining price stability. Forceful monetary restraint was applied by the Reserve Bank between 1984 and 1991 to lower inflation, and subsequently to maintain it at lower levels. Inflation had risen through the '70s from historically low levels so that by the late '70s the March annual average had reached over 15%. It remained at that level (with three exceptions, the March years 1979 at 11%, 1984 at 5% and 1985 at 9%) until after 1988, when it began to reduce. Since the year to March 1992 it has varied between 1% and 2.5%.

Major changes to the tax system saw the top tax rate reduced from 66% to 48% in 1986 and then to 33% in 1988. The middle rate of 28% was further reduced in 1996, to 24%.

A consumption tax (the Goods and Services Tax) was introduced in 1986, superseding other indirect taxes such as sales tax. Compensating rises were made to levels of benefit and pension payments. User charges were introduced or raised substantially in health, education and other government services, and targeted subsidies were put in place to assist low-income earners. In December 1990 the Government of the day announced expenditure cuts. Measures were also introduced to facilitate flexibility in the labour market. The 1993 year saw a turning point in the business cycle, with GDP trending upwards from the end of 1992 through to 1996. There was, however, a temporary downturn in the economy after 1996.

Structural reforms and the state of the economy combined to produce high levels of unemployment. Until the late 1980s the annual unemployment rate was below or around 4%, but rose to 8.4% by 1991 and reached 10.6% in 1992. As economic performance improved, unemployment levels fell back to 6.2% in 1996 and 1997<sup>9</sup>. The last year of the period covered by the report saw the annual unemployment rate rise back to 6.8%. From very low levels before the start of the period covered by this report, the number of people on Unemployment Benefit increased to 33,000 in 1982. Unemployment beneficiary numbers peaked at over 170,000 in 1992 and 1993, then began to fall as the economy expanded and as participation rates increased, dropping below 140,000 in 1995 and 1996. Unemployment beneficiary numbers rose again to over 150,000 in 1998 and the quarterly unemployment rate to 7.2% in the March quarter of that year.

The composition of the population also changed over the period. At the Census of 1981, the starting year of this report's coverage, the population was just over 3 million in 1 million households, and 84% of people lived in urban areas. By 1996 New Zealand had half a

<sup>9</sup> Statistics New Zealand, *Household Labour Force Survey* INFOS Time Series output (annual rates for year to March).

million more people (3,618,300, with just under 3,500,000 resident in private households) in a quarter-million more households (1,276,332 private and 7,662 non-private dwellings). Urban population proportions were little changed. The number of residents per private household dropped from 3.0 in 1981 to 2.8 in 1996. The population also aged during that time, with the numbers of those under 20 reducing from 1,153,233 (37%) in 1981 to 1,095,057 (30%) in 1996, while those aged over 60 increased from 436,140 (14%) to 557,900 (15%). Since over 55% of this older age group were female, the overall female proportion of the population rose to 51%. The population's ethnic composition also changed. The proportion of the population identifying as Māori rose from 12.3% (385,224) in 1981 to 14% (506,850) in 1996, while the proportion identifying with Pacific Islands ethnic groups rose from less than 4% to 5.6%. The proportion identifying with Asian groups rose from around 1% to almost 5% over the same period.

A number of key changes to the income support system have occurred over the period covered by the report. Between 1984 and 1991, New Zealand moved from a fully universal to a fully targeted system of family assistance. Until 1984 this assistance was delivered through the Family Benefit payable in respect of all children and dependent young people<sup>10</sup> at a uniform rate (\$6 per week in 1984). Between 1984 and 1991, delivery was through a mix of targeted and universal measures. By 1991, the Family Benefit had been disestablished and family assistance was delivered through a targeted tax credit, known as Family Support, which was payable to low-income families at the rate of \$42 per week for the first child and \$22 per week for subsequent children. These rates were refined according to the ages of the children, and increased over time, so that by 1998 the amount for the first child started at \$47 and for subsequent children at \$32 and both rates ranged to \$60.

New family law provisions meant that divorce was now obtainable on the single ground of irreconcilable breakdown plus two years of living apart. The Family Court was set up and regulations ensured that on separation of families with children, 'liable parents' made contributions either to the state to help offset any welfare benefit paid to custodial parents, or to those custodial parents who received no benefit.

National Superannuation began as a universal benefit available without income test from age 60. Superannuitants became subject, from 1985, to a tax surcharge on income other than New Zealand Superannuation. The rates of the surcharge varied over time, and it was abolished from April 1998, immediately after the final year covered by this report. In 1992, the age of eligibility began to rise in steps. At the end of March 1998 the qualifying age was 63, and it will reach 65 by the year 2001.

Benefits were adjusted by less than the rate of inflation for one-child sole-parent beneficiaries in 1989. Actual cuts in most benefits were announced in December 1990 and implemented in 1991: youth rates for Unemployment and Sickness Benefits were extended to age 24 and, with the exception of the Invalids Benefit, rate reductions were put in place in other benefits. The reductions were greater for single beneficiaries (in the order of 10% to 25% or \$14 to \$35 per week) than for couples with children (between 3% and 11% or \$9 to \$27 per week)<sup>11</sup>.

Accommodation assistance changed during 1993. Prior to the change, the housing assistance regime involved provision of state housing at subsidised rentals for people on low incomes, and subsidised mortgage rates for low-income homeowners. An Accommodation Benefit was

<sup>10</sup> Dependent young people are those under 15 years, & up to below age 19 if in full-time schooling (see Appendix 1). This definition is used throughout this report.

<sup>11</sup> Hon. J.B. Bolger, Hon. Ruth Richardson, Hon. W.F. Birch 'Economic and Social Initiative', December 1990 Statements to the House of Representatives.

paid to low-income people accessing neither of these provisions. The Accommodation Benefit was replaced in 1993 by the Accommodation Supplement, which was available to all low-income households and which made allowance for regional differences in accommodation costs. From this date, subsidies were gradually removed from government rentals and mortgages, which rose to match market rates.

In response to levels of hardship, foodbanks grew in number and busyness throughout the country, particularly in the early '90s. During the '90s there have been calls to reduce income disparities from the churches, Māori organisations, charity groups, and a range of social commentators.

## 2.2 Overall Household Incomes

In real terms, overall household incomes declined through the '80s to the mid-'90s, then increased again. Both the drop and the rise were steeper for incomes before tax than after, since the after-tax or disposable income figure includes the effect of tax credits (such as Family Support). In 1998 dollars, median household incomes (an income level such that half of all households have incomes below it and half above) showed a drop to 1993<sup>12</sup>, then rose from then to 1998, but only about half-way back to the 1988 level (see Table 1). Between 1982 and 1993 the median pre-tax income reduced by 24% and the median disposable income by 21%. Despite the growth between 1993 and 1998, incomes in 1998 were still below those in 1982, by 17% for the pre-tax median and 11% for the disposable median.

Table 1: Median Incomes In 1998 Dollars, Selected Years

|            | 1982   | 1988   | 1993   | 1998   |
|------------|--------|--------|--------|--------|
| Before tax | 46,676 | 41,170 | 35,297 | 38,888 |
| After tax  | 35,326 | 32,594 | 27,911 | 31,470 |

Incomes above the median lost ground less than those below the median: as Figures 1 & 2 show, in 1998 the total pre-tax income at the 90th percentile (marking the income which is exceeded by only 10% of households) was almost at the 1982 level. Disposable incomes at the 90th percentile<sup>13</sup> rose to above that of 1982, while all the rest were lower (see Tables A3 & A4).

Figure 1: Total Pre-Tax Income Percentiles, 1982 -1998

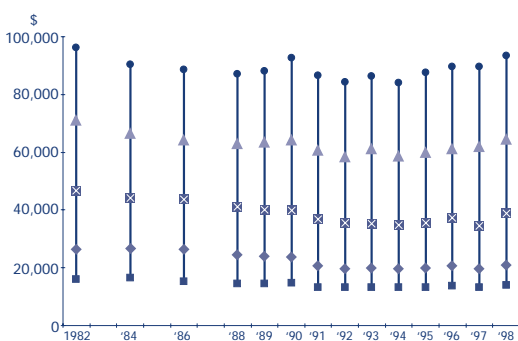
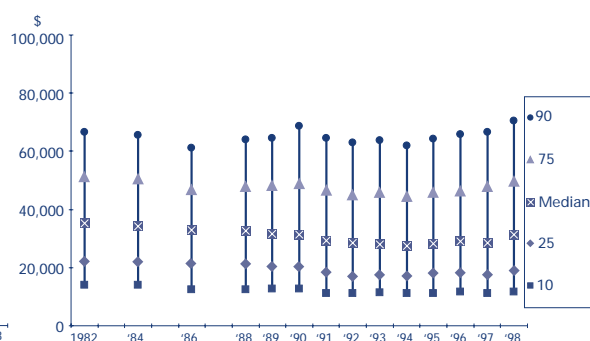


Figure 2: Disposable Income Percentiles, 1982 - 1998



<sup>12</sup> All years of data refer to March years, and cover parts of two calendar years. For convenience, full references to data years such as the 'year to March 1996' and the '1997-98 year' have been simplified and are expressed as 1996 and 1998 respectively for the rest of this report. Similarly '1998 dollars' means 'dollars adjusted to the mean of the year to March 1998'.

<sup>13</sup> Percentile marks the income level below which a specified percentage of household incomes is found. For example, 90% of households have incomes below the 90th percentile. The median is the 50th percentile.

### 2.3 Changes In Household Size And Composition

Between 1981 and 1991 there was a reduction in the average number of both adults and children per household. This resulted in an average reduction in household size of approximately 10%, from 3.0 to 2.7 persons per household. Since 1991 household size has changed little.

The number of households that included children under 15 years of age or dependent young people (aged under 19 years and in full-time schooling) dropped from 46% to 40% of all households between 1982 and 1990 and has fluctuated since then (see Table A2). Between 88% and 85% of the total group of children and dependent young people were children under 15, and 12% to 15% were young people aged 15 years and over<sup>14</sup>. These fluctuations are affected not just by changes in the numbers of people in these age groups and schooling stage, but also by changes in their living situation – in particular the proportions of young adults, irrespective of whether they are fully dependent or not, living with their parents.

Households that included a Māori adult and those that included a Pacific Islands adult were, on average, larger than other households. In 1998, for example, the average size of households which included a Māori adult was 3.4 members, compared with 4 members for households including a Pacific Islands adult, and 2.5 members for all other households. Households with a Māori or Pacific Islands adult were much more likely to include children (around 60% for Māori and 75% for Pacific Islands, compared with around 40% for all households). This is at least partly because Māori and Pacific Islands adults tended to be in the younger age-groups. In those households where there were some children and young people, their average number was only slightly higher among households that included a Māori or Pacific Islands adult (in 1998, 2.3 for Māori and 2.4 for Pacific Islands compared to 2.1 for the total). The combination of higher overall average numbers of children with a somewhat higher average number of adults raised the overall average size of the households with a Māori or Pacific Islands adult.

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<sup>14</sup> For the rest of the report the term 'children' will be used to refer to those under the age of 15, and 'dependent young people' or 'dyp' those 15 years and over who were dependent according to the above definition.



### 3 GENERAL TRENDS IN HOUSEHOLD INCOMES

#### 3.1 Income Trends Before And After Tax

As shown in Section 2.2, median household incomes had dropped both before and after tax between 1982 and 1993, after allowing for the effects of inflation. Average household size also reduced. As can be seen in Figure 3, however, the trends in household after-tax (disposable) incomes are not paralleled by the changes in household size. Adjusting for household size by the use of equivalent incomes in most of this report minimises the distortions introduced by these household size changes. The number of earners per household - people with more than half their annual income from market sources - has remained reasonably steady around a mean of two throughout the period (see section 4.4).

Figure 3: Mean And Median Household Disposable Income And Number Of Residents, 1982 - 1998<sup>15</sup>

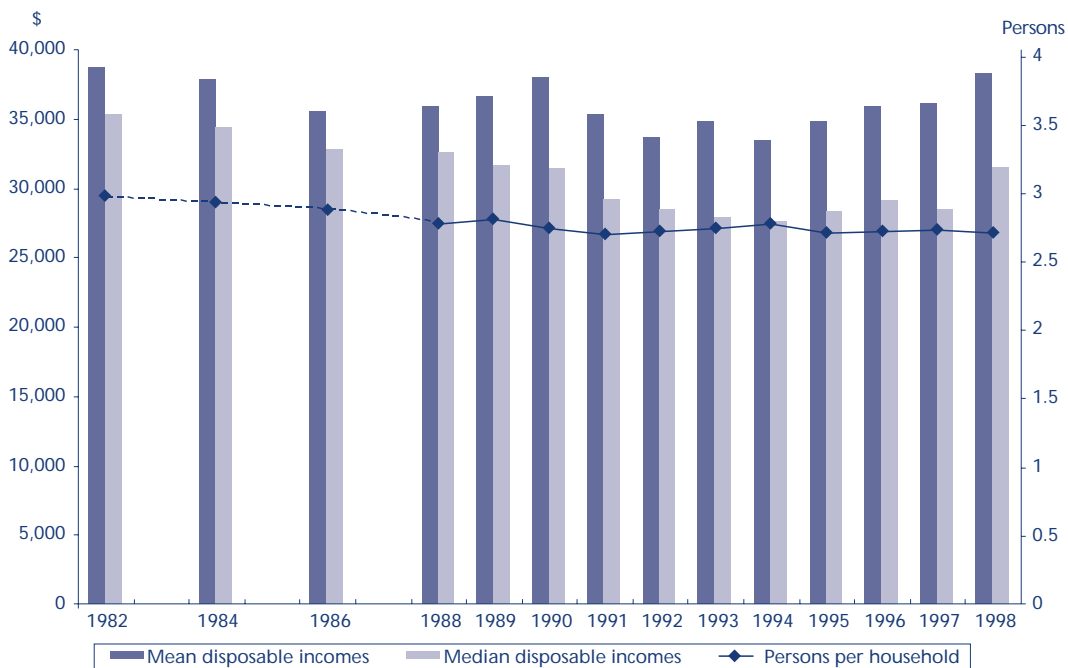


Table 2 shows the changes in the median and other selected percentiles of pre-tax and disposable incomes at approximately even intervals in the time covered by this report. Substantial decreases in the first two periods were followed by increases in the last five years. The pre-tax median decreased by 12% and the disposable median by 8% in the six years to 1988. This was followed by a slightly larger drop in the pre-tax median and a much larger drop in the disposable median to 1993 (14% each). The turnaround in the next five years is shown in the increases of 10% and 13% in the pre-tax and disposable medians respectively. All percentiles showed the same pattern. Most percentage decreases and rises were less than those for the median. The exceptions were the 10th percentile of disposable income between 1982 and 1988, and the 25th percentile of both pre-tax and disposable income from 1988 to 1993. This latter percentile showed a much greater drop than any of the others. The 25th percentile also rose less in the final five years than the higher percentiles, at 6% in before-tax and 10% in after-tax incomes. In that same period the 10th percentile rose least of all the percentiles shown in the table, at 4% for both pre- and post-tax incomes.

<sup>15</sup> Dotted lines in the graphs join years that are not consecutive.

Table 2: Percentage Change In Total Pre-Tax And Disposable Incomes, Selected Years And 1982 – 1998

| Pre-tax Percentiles           | Percentage change |             |             | Overall 1982 - 1998 |
|-------------------------------|-------------------|-------------|-------------|---------------------|
|                               | 1982 - 1988       | 1988 - 1993 | 1993 - 1998 |                     |
| 90                            | -9.2              | -1.1        | 8.3         | -2.8                |
| 75                            | -11.7             | -2.8        | 5.4         | -9.5                |
| Median 50                     | -11.8             | -14.3       | 10.2        | -16.7               |
| 25                            | -7.4              | -18.9       | 5.8         | -20.5               |
| 10                            | -9.6              | -7.4        | 4.2         | -12.8               |
| <b>Disposable Percentiles</b> |                   |             |             |                     |
| 90                            | -3.9              | -0.5        | 10.8        | 6.0                 |
| 75                            | -6.9              | -10.7       | 15.9        | -3.5                |
| Median 50                     | -7.7              | -14.4       | 12.7        | -10.9               |
| 25                            | -4.9              | -18.0       | 10.1        | -14.1               |
| 10                            | -10.5             | -9.7        | 4.4         | -15.7               |

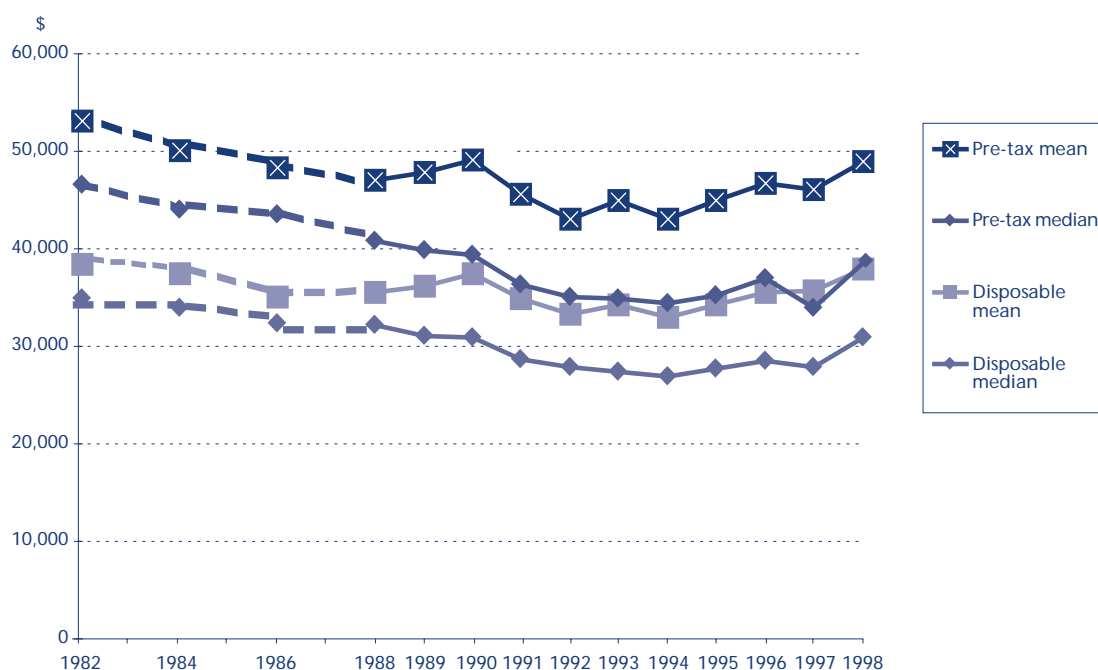
Overall from 1982 to 1998, there was a decrease in both pre-tax and after-tax incomes. The greatest percentage drop (24%) in pre-tax median income was from 1982 to 1993. The 25th percentile decreased by 25% in the same period, and by 26% to 1992, its lowest point (calculated from Table A3). Over the full period, the median decreased by 17%, the 25th percentile by 21% and the 10th percentile by 13%. The reduction in pre-tax incomes at the 75th and 90th percentiles over the period was considerably lower, at 10% and 3% respectively (see Table 2 and Table A3).

After-tax incomes showed a similar pattern, with the median decreasing to 1993 by 21% and the 25th percentile by 22%. This illustrates the substantially greater drop in the incomes of the lower half of the household income distribution up to that year than in the top half. Coupled with the smaller rise, between 1993 and 1998, at the 25th percentile than at the higher income levels, this means that low-income groups have fared much worse than those higher in the income distribution. The gap between the bottom 10% and the bottom 25% of income levels also narrowed over the period to 1992, as can be clearly seen in Figures 1 and 2. However, the 25th percentile gives a better indication of movement among lower-income groups than the 10th percentile because changes at this level are distorted by outliers and people in special circumstances, especially those reporting income losses. It is noticeable, nevertheless, that over the whole period the incomes at the 10th percentile decreased less before tax than after. The reduction in incomes at this level was evidently not compensated for over the period (see Table A4). It should be noted that neither the households below the 10th percentile nor the individuals comprising them are static from year to year.

Over the whole period, the median, the 25th and the 10th percentiles showed drops of 11%, 14% and 16% respectively. In contrast, the higher income levels have fared less badly. The top quarter of the distribution of pre-tax income decreased by a greater percentage between 1982 and 1988 than the lower half. Tax changes cushioned this decrease for all but the 10th percentile, so that the decreases in disposable incomes were not as great. However, the top quarter of the after-tax distribution decreased very much less between 1988 and 1993 than the lower half, which dropped by quite a substantial amount. In the most recent period, from 1993 to 1998, the higher income percentiles had bigger pre-tax increases than the

lower ones but there was a more equal spread of increases in disposable income. The overall decrease from 1982 to 1998 at the 75th percentile was only 4% while the 90th percentile was the only one of the selected percentiles to show an overall rise, of 6%. This illustrates that tax changes have advantaged those with the highest incomes over the whole period.

Figure 4: Means And Medians Of Household Incomes Before And After Tax, 1982 - 1998



Mean incomes decreased steadily in the 1980s, rose from 1988 to 1990, then fluctuated from 1991 to 1994, with a final upturn from 1995 to 1998 (see Figure 4). The overall decrease in mean incomes from 1982 to 1998 was lower (at 8% and 1% for pre-tax and disposable incomes respectively) than that observed for median incomes (17% and 11%). The upturn in mean income from 1993 to 1998 was also lower at 9% and 10% compared with 10% and 13% for the median income. For total pre-tax, market and disposable incomes, the means were all higher than the medians (see Table A5). This is because the inclusion of particularly high incomes in the calculation inflates the means.

### 3.2 Incomes Of Household Types

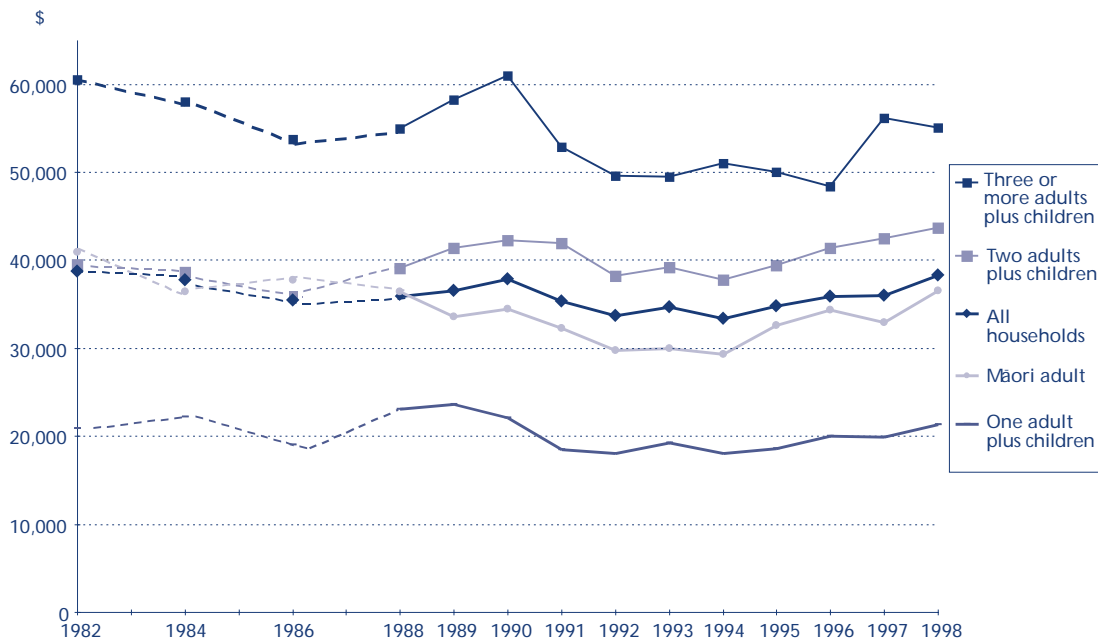
In this report, as in the previous volume, the term 'household type' refers to the 10 standard household types used by Statistics New Zealand to classify the total population of households in the survey (see Appendix 1 and Table A6). The classification is based on the number of adults and children in the household, regardless of their relationship. The use of this classification makes it possible to line up the figures with the household types as published in the Statistics publications from the survey. One difference is that households comprising one or two adults (who may or may not be a 'couple') are subdivided according to superannuation status, not by whether they are in paid work.

The general trend of a gradual reduction in incomes followed by a rise after 1993 occurred for all but three household types. Households comprising a single superannuitant, two adults with three or more children and three or more adults with children, showed a decrease in the mean of both pre-tax and disposable incomes in 1998. Households comprising three or more adults without children had the highest mean incomes before and after tax. The adults in these households might be independent offspring or other related or non-related adults, who would add to the earning capacity of the household. For most years, households with children had lower mean incomes both before and after tax than otherwise similar households without children. Household types consisting of a single superannuitant among

childless households and those comprising a one-parent family among households with children had, on average, the lowest incomes throughout the whole period (see Tables A6 and A7).

The mean disposable income of households for the household types comprising varying numbers of adults and children was compared with the mean for all households and is shown in Figure 5. The mean disposable income of households with two adults and children was very similar to the mean for all households up to 1988, but exceeded the overall mean after that. Households with three or more adults and children, where there might be more earners, had mean disposable incomes nearly half as high again. One-parent family households, on the other hand, had mean disposable incomes that were around half those for all households. The introduction of Family Support in October 1986, which delivered increased assistance to low-income families with children to compensate for the effects of GST, shows up in the rise in incomes for families with children between 1986 and 1990. Personal income tax changes during that time may also have benefited families with children. The increase in Family Support that occurred when Family Benefit was abolished in April 1991 made little difference to the decreasing real incomes of households with children. On the other hand, adjustments in rates of Family Support in October 1993 and 1994 and July 1996 and 1997 did allow the mean disposable income of families with children to keep relativity with that for all households over the period 1994 to 1998. In the last three years of the period, the mean disposable incomes of one-adult households with children recovered slightly more and that of two-adult households with children substantially more than the overall mean, so that they were above the corresponding 1982 mean in 1998. In contrast, the mean disposable income of households with three or more adults and children, and that of all households, remained below the overall 1982 mean (see Figure 5 and Table A7).

Figure 5: Mean Disposable Household Income, Households With Maori Adults And With Children, 1982 - 1998



For convenience, the mean disposable income of households including at least one Māori adult is also compared with the mean for all households on the same graph (Figure 5 and Table A12)<sup>16</sup>. Over most of the period, the mean disposable income of households with a Māori adult followed the same pattern as those with two adults and children. Instead of rising above the mean for all households after 1988, however, their mean income remained below it. The rise in the mean disposable income of these households from the low point of 1994 was the steepest of those shown in the graph. Nevertheless, by 1998 the mean disposable income of households that included at least one Māori adult was still below the 1982 level and also below the 1998 mean for all households.

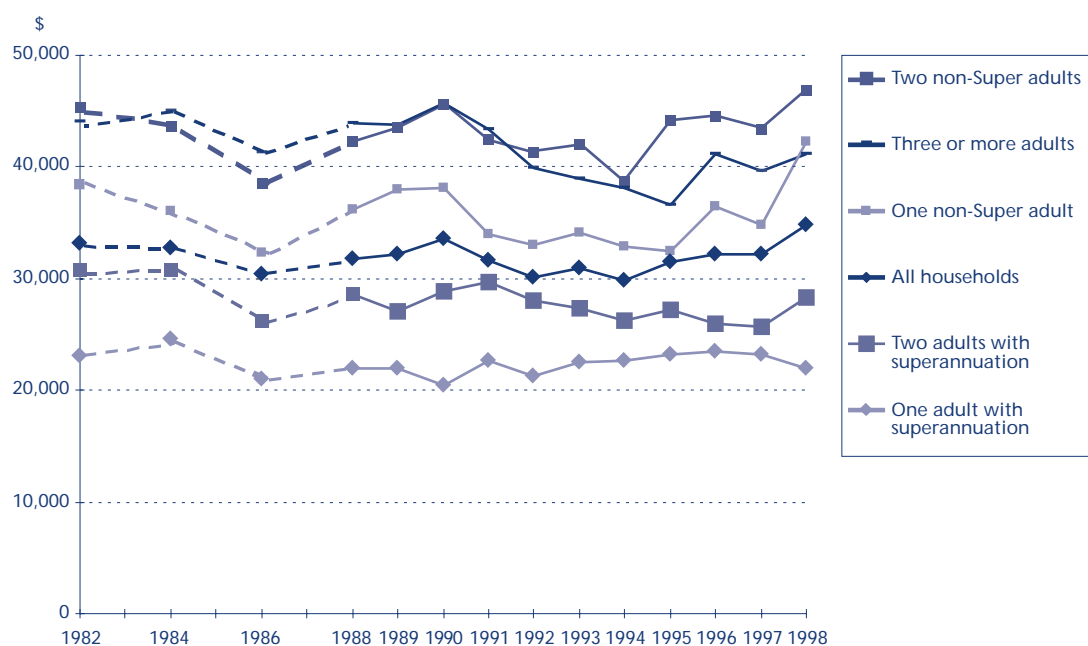
The following sections examine how these patterns change once incomes are adjusted to take account of the size and composition of the household.

### 3.3 Households With And Without Children

From this section forward in the report, equivalent disposable income will be the main measure used for comparisons between different households. Using disposable income ensures that the comparisons are based on how much money households have to provide for their members, after tax and transfers. Equivalent income then places household incomes on a comparable footing by the application of a scale that adjusts the household's income for the number of adults and the number and ages of children in the household.

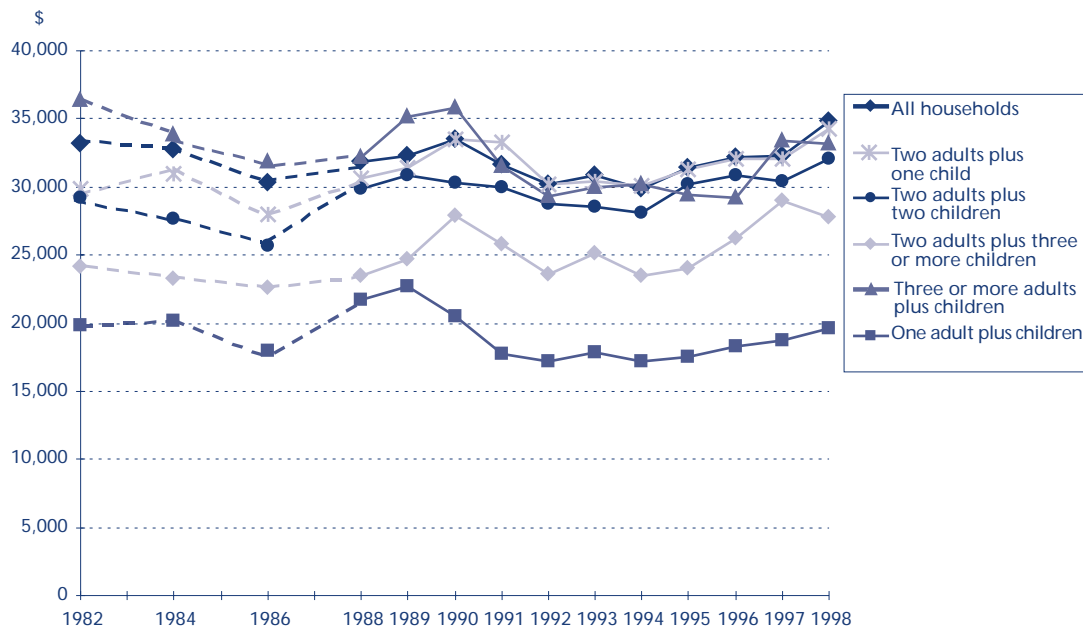
On average, households with children had lower equivalent disposable incomes than those without children, regardless of the number of adults present (see Figures 6 and 7 and Table A8). As well as adding to costs, children limit parents' ability to earn. The mean equivalent disposable income of all households that included children was below the overall mean. The only exception to this pattern since 1982 was in households with children that included more than two adults. The mean equivalent disposable income of these households was higher than the mean for all households up to 1991, and rose above it briefly again in 1997 (see Figure 7).

Figure 6: Mean Equivalent Disposable Income Of Household Types Without Children, 1982 - 1998



<sup>16</sup> Fig. 5 shows the mean disposable income of households without equivalisation. Naturally, households that include children may also include a Māori adult. Fig. 5 shows the mean disposable income of households that included a Māori adult against the mean disposable income of all households, while Table A12 compares the disposable and the equivalent disposable incomes of households that include a Māori adult with households that do not.

Figure 7: Mean Equivalent Disposable Income Of Household Types With Children, 1982 - 1998

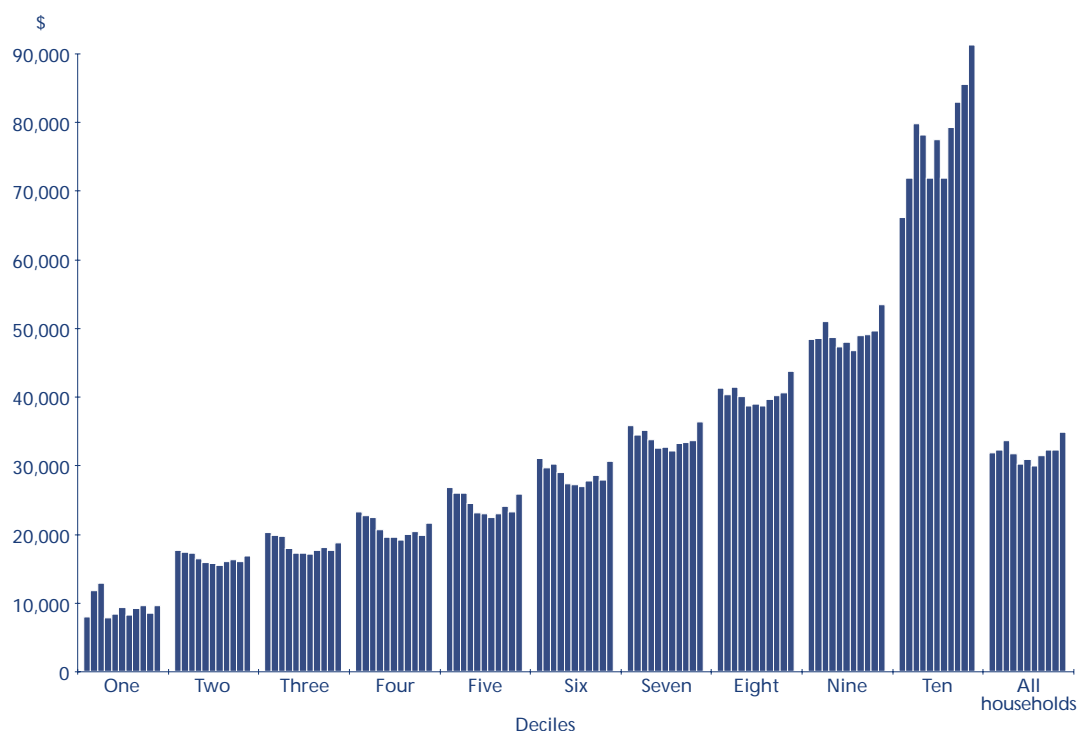


### 3.4 Deciles And Quintiles Of Equivalent Incomes

One way of analysing equivalent incomes is by ranking households on their equivalent income and then dividing the resulting distribution into groups of one-tenth (deciles) or one-fifth (quintiles). Various analyses can then be carried out on these decile and quintile groups. In particular, movements in the mean incomes of each decile and quintile can be compared with each other and with changes in the overall mean. This gives an indication of how the shape of the income distribution is changing and how groups at different income levels are faring relative to one another.

In the 10 years from 1988 to 1998, the overall mean equivalent income rose by 9%. Figure 8 shows the mean of each decile with the overall mean incomes shown to the right. In all column graphs, consecutive years are shown in the same shading, with a simple line separating them, so that the pattern is more apparent. Over the whole period from 1982 to 1998, the overall mean equivalent income increased by only 5%. By comparison, the mean equivalent income in the lowest decile decreased by 17%; in the next four it decreased by between 6% and 10%; in the middle two it decreased by 4% and 2%; in the eighth and ninth it rose by 1% and 6%; and in the top decile it rose by 36%. Most deciles declined gently between 1988 and 1994, then rose again at the end of the period. The two extremes, however, were somewhat volatile. The lowest showed ups and downs, according to the proportion and magnitude of negative incomes reported. This largely reflected the volatility of incomes of the self-employed with business losses. More dramatically, the mean of the highest decile is consistently much higher than all others; since 1995 it has been 1.7 times as high as the mean of the ninth decile. It also shows a much steeper rise at the end of the period. The rise in mean income in the top decile between 1994 and 1998 was 27% compared with the 14% rise in the mean of the ninth decile (see Figure 8 and Table A10).

Figure 8: Means Of Equivalent Disposable Incomes In Deciles, 1988 - 1998



The means of the quintiles, shown in Table 3 for selected years and in Table A10 for all years from 1988 onwards, are less influenced by the extremes both high and low. Hence they show less dramatic movement than the deciles. The mean of the lowest quintile, after rising up to 1990, dropped sharply over the next two years, moved up and down a little in subsequent years, then rose to a value slightly above its 1988 level by 1998. The means of the second and third quintiles fell until 1994, then recovered to reach a little below their 1988 levels by 1998. The mean of the fourth quintile, however, had risen somewhat, and that of the top quintile had risen substantially, above the 1988 levels by 1998. During the recovery over the later part of the period from 1993 to 1998, the mean of the top three quintiles rose by over 10% while those of the lower two quintiles rose by less than that. (See Table 3. Table A10 has the means for all years 1988 to 1998.)

Table 3: Means Of Equivalent Disposable Incomes In Quintiles, Selected Years

| Quintile    | 1988   | 1993   | 1998   | Percentage change |             |             |
|-------------|--------|--------|--------|-------------------|-------------|-------------|
|             |        |        |        | 1988 - 1993       | 1993 - 1998 | 1988 - 1998 |
| One (low)   | 12,798 | 12,513 | 13,181 | -2.2              | 5.3         | 3.0         |
| Two         | 21,740 | 18,367 | 20,129 | -15.5             | 9.6         | -7.4        |
| Three       | 28,880 | 25,071 | 28,215 | -13.2             | 12.5        | -2.3        |
| Four        | 38,515 | 35,825 | 40,007 | -7.0              | 11.7        | 3.9         |
| Five (high) | 57,196 | 62,713 | 72,355 | 9.6               | 15.4        | 26.5        |

## 4 FACTORS RELATED TO HOUSEHOLD INCOME

### 4.1 Components Of Income

As noted earlier, survey respondents reported their income according to source: wages and salaries, self-employment, superannuation, benefits, and other income such as dividends or interest. The individual incomes of all household members in each category were added together to give household sub-totals for each income source. These in turn were then added together to give total household income. The highest income source sub-total is recorded as the main income source of the household. The income amounts reported by survey respondents are used throughout, despite the problems that can arise in relation to income from self-employment (which are described in Appendix 1).

Changes in the composition of household income by source follow the pattern of labour market changes over the period. As employment declined through to the early 1990s, so did incomes, although they rose again following the slight upswing in employment towards 1995. Despite a subsequent rise in unemployment, however, incomes increased again to 1998. Income from market sources, as a proportion of the overall amount of income received, decreased from 87% of the total in 1982 to 83% by 1992. However, it then increased again to 88% by 1998 (68% from wages and salaries, 12% from self-employment and 8% from other sources). Income from superannuation rose from around 9% of overall total household income in 1988-90 to 11% in 1992. With the changes in the age of eligibility this proportion dropped back to 7% by 1998. Income from benefits made up 6% in 1988, rose to 7% in 1990, and then fell back to 5% of total income in 1998. At this time, 11% of households had a benefit as their main income source (shown in Table A2).

### 4.2 Main Income Source

The proportion of households for which wages and salaries were the main sources of household income decreased between 1982 and 1998. In 1982, 64% of households received more of their total annual income from wages and salaries than from any other source, but this proportion had dropped to 53% in 1992, with a rise to 58% of all households in 1998. Similarly, the proportion of households relying on self-employment as their main source of income dropped from just under 10% in 1982 and 1984 to 5% in 1991, recovering to around 6% in the years 1993 to 1996, then to 9% by 1998.

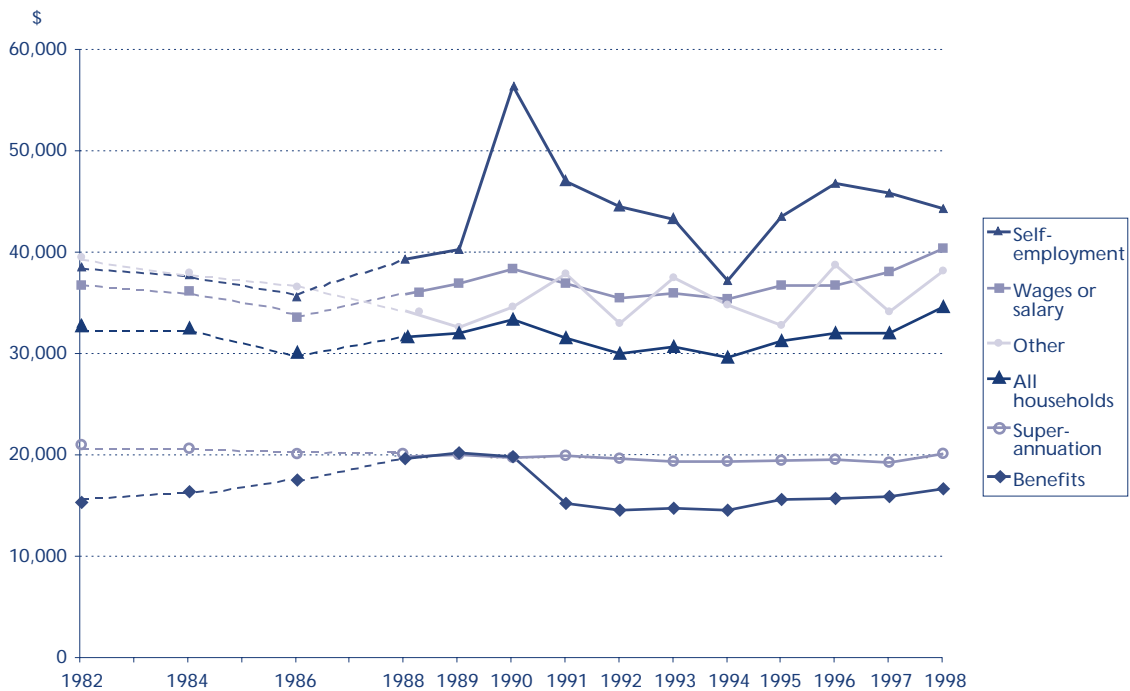
The proportion of households with superannuation as their main income source rose from 18% in 1982 to reach 22% in 1992. The change in age of eligibility then led to a turnaround, so that this proportion had dropped back to 17% by 1998.

Benefits were the main source of income for 6% of all households in 1982. This proportion doubled by 1990 and reached 15% in 1994. It then declined for the rest of the period, reducing to 11% by 1998. Households whose income derived primarily from other sources, such as dividends and investments, remained steady at 4% to 6% of all households over the period (see Table A2).

Households that had self-employment as their main income source had the highest mean income (in both actual and equivalent terms) throughout the period. Mean income was lowest for those relying mainly on a benefit (see Figure 9 and Table A11). A sharp reduction in the real mean equivalent incomes of households with benefit as their main income is apparent from the 1991 year, even before the downward adjustment in benefit rates that occurred in the following year. A number of factors could account for this. Firstly, in April 1989 the benefit rate for sole parents with one child (55% of all sole parents at that time) was increased by less than the rise in inflation. Secondly, there was a decline in employment rates of sole parents between 1986 and 1991, and DPB recipients increased by 55%. Thirdly, with high inflation, the real value of family assistance declined over the late 1980s.



Figure 9: Equivalent Disposable Incomes By Main Income Source, 1982 - 1998



### 4.3 Hours Worked

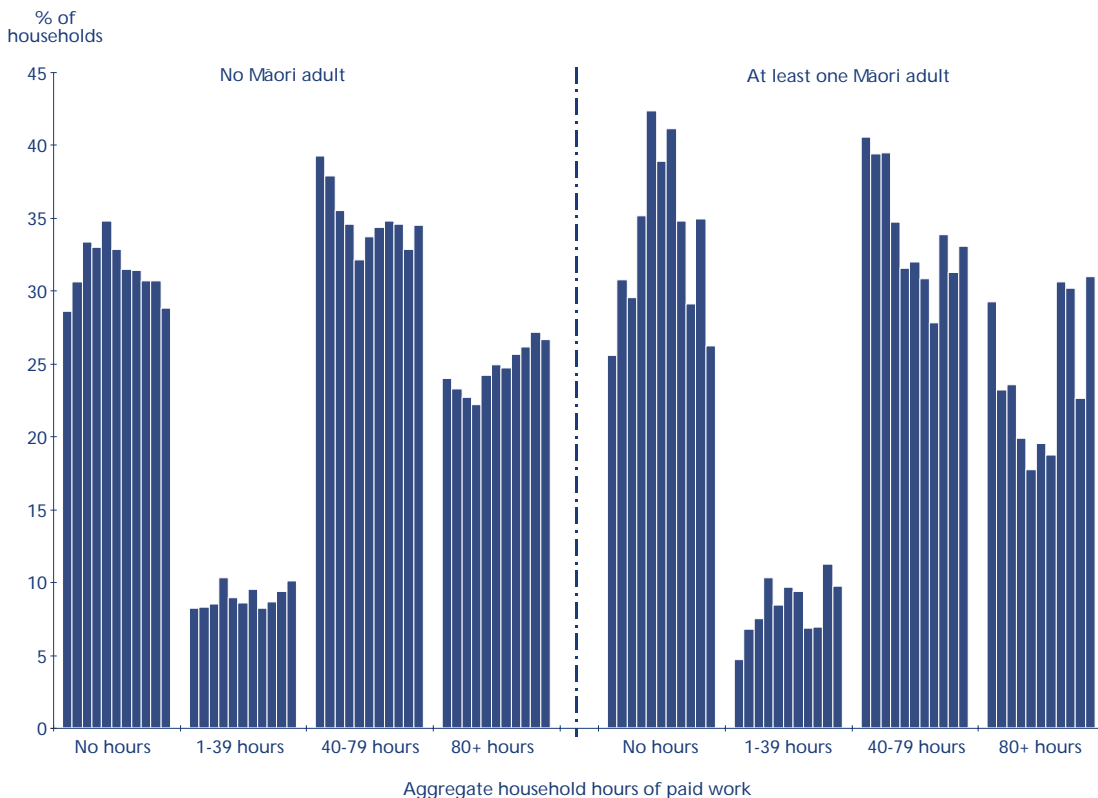
When considering paid employment it would be useful to restrict the discussion to people of working age. The problem, given that this report is on a household basis, is that the 'age' of a household is difficult to represent in an unambiguous way. It can be assumed, however, that the differences shown would be accentuated if working age could be a criterion. One factor influencing the income of a household that can be aggregated on a household basis is the number of paid hours worked by its members (see Table 4). Over the decade from 1981 to 1991, mean aggregate hours of paid work per household reduced, a decline particularly marked in households with a Māori adult. Amongst these households during the downturn, a higher proportion had no hours of paid work, and fewer paid hours even where there were some. At either end of the period, hours of paid work in households where there was a Māori adult were higher on average than among other households, calculated as a percentage of those households that had some work hours.

Table 4: Aggregate Hours Of Work For All Households, Selected Years

| Percent of Households with | 1988 | 1992 | 1996 | 1998 |
|----------------------------|------|------|------|------|
| No work hours              | 28   | 36   | 31   | 28   |
| Up to 79 hours             | 47   | 41   | 43   | 44   |
| 80 hours or over           | 23   | 23   | 27   | 27   |

In three of the last four years in the period, higher proportions of households that included a Māori adult reached over 80 hours of weekly paid work than other households. Despite that, their mean disposable household incomes remained below those of households without a Māori adult. This reflects the lower average personal earnings of Māori. Mean equivalent disposable incomes for households including a Māori adult were substantially lower than for other households. This could be expected given that these households, on average, have lower actual incomes and that they tend to be larger, and especially since more of them include children and dependent young people. These factors taken together produce a significant downward adjustment in equivalising the income figures (see Figure 10 and Table A12).

Figure 10: Aggregate Hours Of Work In Households, 1988 - 1998



#### 4.4 Number Of Earners

Over the period from 1988 to 1998, the proportions of households with one, two, or three or more earners (defined here as household members earning half or more of their annual income in the market) remained reasonably steady<sup>17</sup>. In 1988, 1996 and 1998, about a quarter of households had no adult member earning more than half their annual income from market sources (see Table 5). In 1992, this non-earning proportion rose to almost a third. Households in which one or more of the adults were Māori differed markedly on this measure from other households in the years between 1988 and 1996. At each end of the period, the presence or absence of Māori adults made little difference to the proportion of households without earners, with percentages of households with no earner close to the overall average at 23% and 27%. In 1992 and in 1994, however, in households including a Māori adult the proportion without an earner rose to 38% and 40% respectively, despite the larger average size of these households which would have allowed for more people to be employed. This is because during the economic restructuring of the late 1980s and early 1990s, rising unemployment disproportionately affected Māori.

When equivalent disposable incomes of households are compared, the best-off households were those in which all adult members were earners. The mean equivalent incomes of these households clustered around \$40,000. The worst-off, as would be expected, were those households in which there were no earners, regardless of the number of adult household members present. The average equivalent income of these households was about \$20,000.

Table 5: Households By Number Of Earners, Selected Years

| Percent of households with | 1988 | 1990 | 1992 | 1994 | 1996 | 1998 |
|----------------------------|------|------|------|------|------|------|
| No earner                  | 24   | 28   | 32   | 30   | 27   | 26   |
| One earner                 | 27   | 24   | 22   | 25   | 25   | 25   |
| Two earners                | 36   | 35   | 34   | 34   | 35   | 39   |
| Three or more earners      | 13   | 13   | 12   | 11   | 13   | 11   |

<sup>17</sup> An area of further study would be to define 'earners' differently, or to analyse for households with one- and two-income or multiple earners and combinations of high- or low-income earners.

## 5 SELECTED RESIDENT TYPES

### 5.1 Income Situation Of Resident Types

The following sections examine the income position of households that have residents that make them of interest to policymakers. Resident types that are considered include:

- women;
- children or dependent young people;
- superannuitant;
- Māori adult;
- Pacific Islands adult;
- sole parent; and
- beneficiary.

Once differences in household composition have been taken into account by the use of an equivalence scale, households that included any of the selected resident types were shown to have below average incomes. All-women households are discussed in the next section.

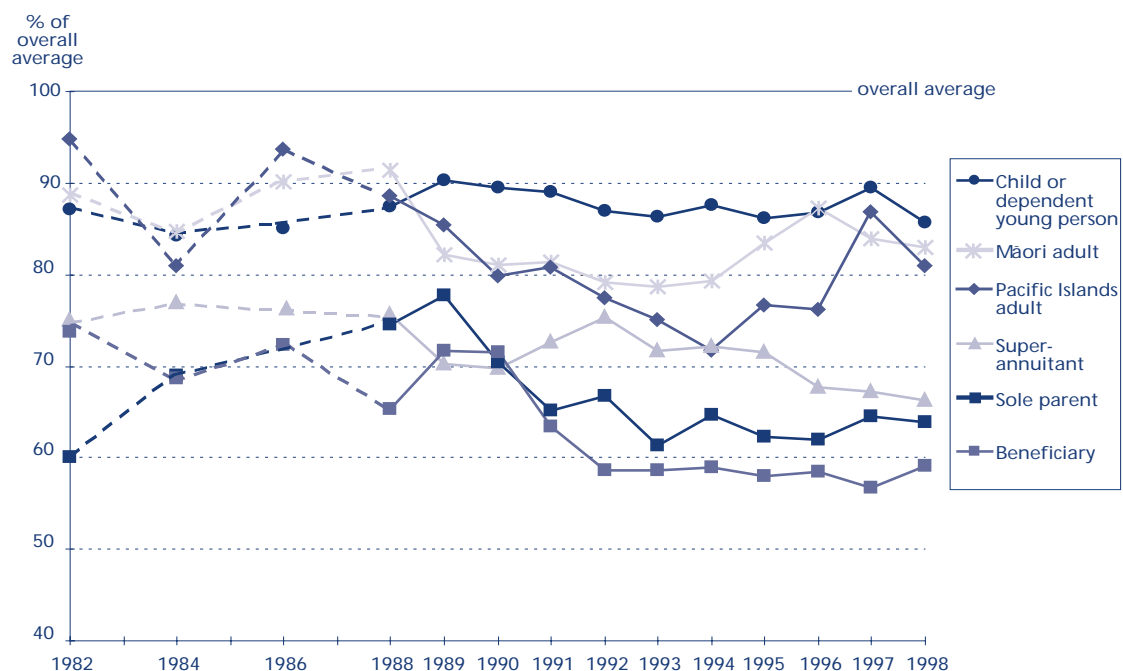
Households with children or dependent young people showed no clear pattern: their income was 87% of the overall mean in 1998 and fluctuated between 86% and 90% during the period.

Households that included a superannuitant had incomes fluctuating above 70% of the overall mean up to 1995, dropping after that to 66% by 1998.

The incomes of households that included a Māori adult showed a notable decline from 89% of the overall mean in 1982 to 79% in the early 1990s. They then rose to 87% in 1996, but dropped back again to 83% in 1998. Households with Pacific Islands adults showed a similar pattern.

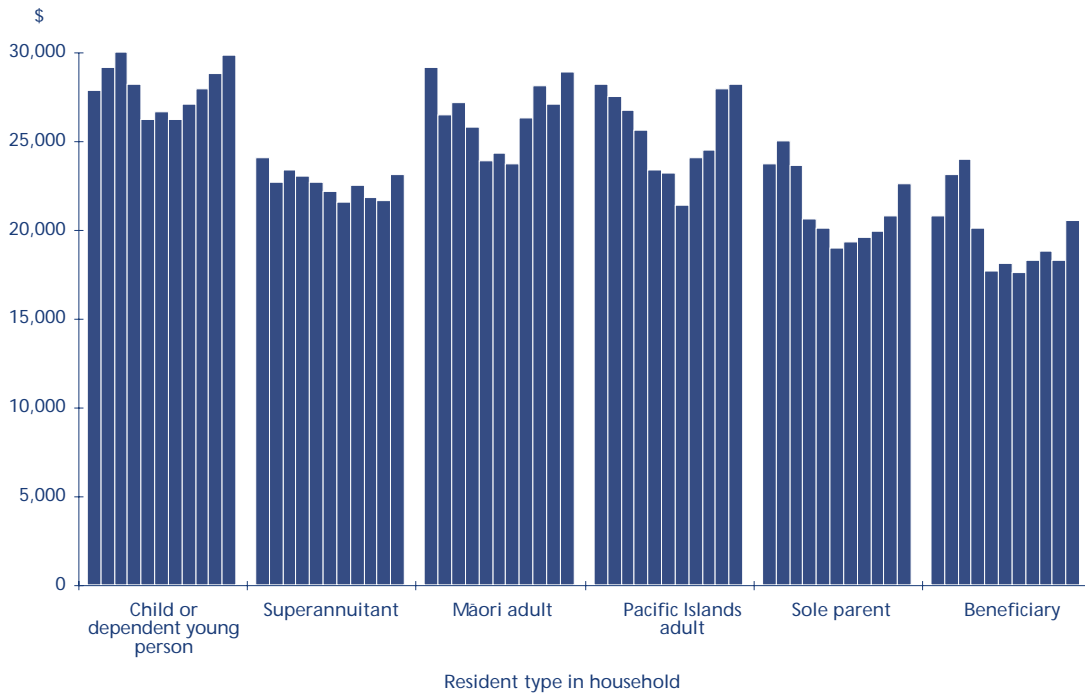
Households with a sole parent had mean incomes above 70% of the overall mean between 1988 and 1990. Mean incomes of households with at least one beneficiary were also above 70% of the overall mean in 1989 and 1990. Since then, the incomes of households with a sole parent fell to 65% and those with a beneficiary to below 60% of the overall mean. Beneficiary households were the only ones, however, to improve their relative position in 1998, from 57% to 59% of the overall mean (Table A9 and Figure 11).

Figure 11: Mean Equivalent Disposable Income Of Households As Percentage Of Overall Mean, By Resident Types, 1982 - 1998



Despite the overall income rises in the last few years of the period, the relative position of the households with any of the resident types considered has remained below average (Figure 11). The fluctuations over time of the mean equivalent incomes of the households with each of the resident types are shown in Figure 12.

Figure 12: Mean Equivalent Incomes Of Households With Different Resident Types, 1988 – 1998



## 5.2 Any Difference Between Women’s And Men’s Incomes?

The gender gap shown in wage statistics has its effect on household incomes. Households in which all the adults were female were more likely to contain children. Since the equivalence scale adjusts for the presence of children, this should not be a differential factor. The mean equivalent incomes of these households were 23% lower than the overall average. The incomes of households in which all the adults were male or of mixed genders were higher than households in which all the adults were female, and between 4% and 7% higher than the mean incomes of all households.

On average, the incomes of women living alone as a proportion of those of men living alone, was 75% in 1988. This rose to 83% by 1993 but had reduced to 80% in the final year. For this group, the income gap seems to decrease when unemployment is high and grow again when employment rises. This is likely to be because women living alone are predominantly superannuitants while the majority of men living alone are not. Households with more than one woman without children, with incomes 83%, 97% and 89% (in 1988, 1993 and 1998 respectively) of the mean incomes of all-adult male households, showed a lower gap but a similar pattern.

When male or female single adults had children or dependent young people living in the household, their mean incomes were closer in 1988 than in later years. In 1988 female lone parents had a mean income of 87% of the male lone parents’ mean income, but the gap widened to a female-to-male income ratio of 57% in 1993 and 62% by 1998 (see Table 6). The increase in the difference was because the incomes of male sole parents rose throughout the period by an overall 17%, while those of female sole parents dropped by a similar amount. Male sole parents were more likely to be employed. Female sole parents, more of whom were on a benefit, were hit harder by the 1990-91 cuts in rates. In other years the

indexation of benefits to prices rather than wages is likely to have exacerbated the difference. The income differences, however, are within the sampling error because male sole-parent households form a very small proportion of the overall sample of households (see Appendix 2). This is despite the fact that among sole parents the proportion of males had increased from 12% in the earlier years to almost 20% in 1998.

Table 6: Mean Equivalent Disposable Incomes By Gender And Living Situation, Selected Years

| Households with           | 1988        |               | 1993        |               | 1998        |               |
|---------------------------|-------------|---------------|-------------|---------------|-------------|---------------|
|                           | No children | With children | No children | With children | No children | With children |
| Lone adult men            | 33,445      | 23,980        | 30,662      | 27,372        | 37,014      | 27,999        |
| Lone adult women          | 25,249      | 20,762        | 25,417      | 15,658        | 29,683      | 17,493        |
| Multi-adult men           | 39,312      | — *           | 35,873      | —             | 38,184      | —             |
| Multi-adult women         | 32,823      | 24,495        | 34,707      | 19,983        | 34,078      | 23,255        |
| Mixed gender: Two adults  | 36,001      | 27,764        | 36,006      | 27,451        | 41,135      | 31,407        |
| Mixed gender: More adults | 44,029      | 30,878        | 39,423      | 30,273        | 42,132      | 33,274        |
| All households            | 34,623      | 27,835        | 33,618      | 26,668        | 38,061      | 29,833        |
| Overall mean              | 31,829      |               | 30,903      |               | 34,789      |               |

\* insufficient numbers for valid comparison

The mean equivalent income of mixed gender households tended to be higher than either all-male or all-female households. In all cases two-adult households had lower mean incomes than those with more adults. The mean incomes of households with children were also substantially less than the corresponding type of household without children.

Access to a vehicle in the household is an indicator of well-being for which information was available from 1990. In most years there was a reasonably consistent 10% to 12% of households overall without access to a car. Among the lowest quintile, however, the proportion of households without access to a vehicle was much higher, even though the proportion reduced from 29% in 1990 to 20% in 1998 (see Table 7). There was a particularly marked gender difference in access to a vehicle in the lowest quintile of households, especially in the early 1990s. In this quintile 59% of all-women households had no access to a motor vehicle in 1990. Even in the latest years, the proportion improved only to 38%, almost twice the incidence within the bottom quintile and four times that in all households. In the second quintile, the proportion of all-female households lacking a vehicle was 35% in 1998, compared to 20% among all households in that quintile. All-women households include women living alone, some of whom may be elderly superannuitants who are no longer driving.

Table 7: Proportion Of Households With No Access To A Vehicle, Selected Years

| Proportion (%) without vehicle | 1990 | 1992 | 1994 | 1996 | 1998 |
|--------------------------------|------|------|------|------|------|
| All households                 | 12   | 12   | 12   | 10   | 10   |
| Lowest income quintile (Q1)    | 29   | 27   | 22   | 23   | 20   |
| All-women households in Q1     | 59   | 51   | 35   | 39   | 38   |

### 5.3 How Do The Children Fare?

Several different approaches have been taken below to illustrate the income situation of children and dependent young people. Different readers will prefer different approaches and may use the figures for different purposes. The mean incomes of households that include children is compared with that of households with other resident types; the quintile position of households with children is considered; and the proportion of households with children

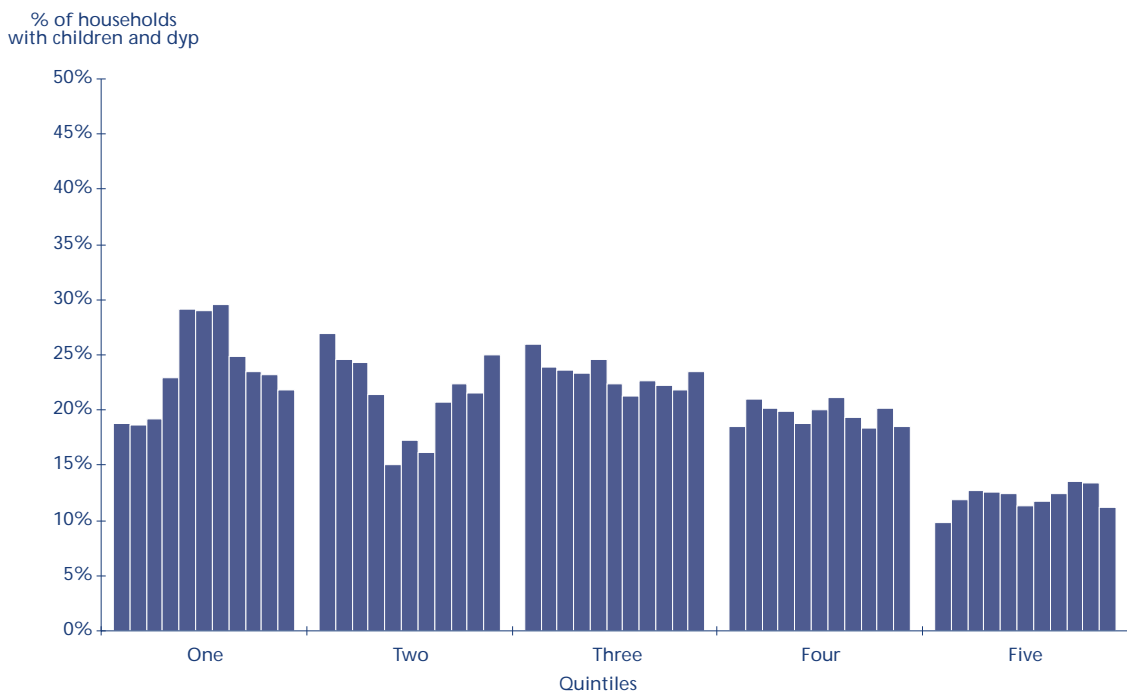
that fall into the bottom income quintile is examined over time. A check is made of whether the number of children and dependent young people present in a household might underlie a household's membership of the lowest income quintile. Finally, the proportion of all children living in households that have incomes placing them in the lowest income quintile is examined.

Mean equivalent incomes of households that include children and dependent young people have remained below the overall mean throughout the period. The relatively low weighting given to children by the scale (as noted in Section 1.4 Concepts and Definitions) means that the equivalent income levels of these households, and especially those that include large families, were possibly overestimated in the equivalisation process. If this is so, it means that the real standard of living in these households could be even lower than the figures indicate. Households with children and dependent young people had equivalent incomes that were 87% of the overall mean at the beginning of the period. Their incomes rose to 90% of the mean in 1989, but had dropped back to 86% of the mean by 1998 (see Figure 11 and Table A9).

Up to 1990, more than a quarter of households with children and dependent young people had incomes that placed them in the second quintile of equivalent income. Around 20% had incomes that placed them in the lowest quintile. Since 1991, these proportions have reversed, as an increasing number and proportion of these households have had incomes that have placed them in the lowest quintile. This proportion rose to 30% of all households with children in the three years to 1994. The same period saw the fewest households with children in the second quintile (around 16%). Between 1994 and 1996, the proportions of households that included children started to equalise between the two lowest quintiles at around 23%. By 1998 there was a shift to the second quintile, in which the proportion of households with children and young people again reached 25%. The middle quintile shows much less variation over the period, at 22% to 23%. In the top two quintiles, there was a slight upward shift in 1995 and 1996 but a downward move in the final year of the period (see Figure 13).

Since the pattern is somewhat different when the numbers of households within quintiles are considered, they are shown in Appendix 3 as Figure A1 (numbers corresponding to the percentages in Figure 13). Figures A2 through A6 give a similar view of the numbers behind Figures 14 to 18.

Figure 13: Percentage Of Households With Children And Dependent Young People In Quintiles, 1988 - 1998



In each year the bottom quintile held a much greater proportion of the larger family households. Households with three, or four or more children were much more likely to be in the lowest quintile than those with one or two children. For example, from 1991 to 1995, nearly half the households with four or more children or young people were in the lowest quintile. Table 8 illustrates the proportion of households by number of children or dependent young people, in alternate years from 1988 to 1998. The larger family households, in both number and proportion, were consistently over-represented in the bottom quintile. Changes in Family Support, which saw higher entitlements for some children and dependent young people in low-income families, contributed to the lower overall proportion of these households in the bottom quintile in the last two years shown in the table.

Table 8: Households In The Lowest Quintile By Number Of Children Or Dependent Young People, Selected Years

| Households by number of children or dependent young people (ch/dyp)                   | 1988                                       | 1990 | 1992 | 1994 | 1996 | 1998 |
|---|--|------|------|------|------|------|
|   | Proportions (%) within the lowest quintile |      |      |      |      |      |
| One-child households  | 11   | 13   | 27   | 22   | 16   | 19   |
| Two-child households  | 16   | 19   | 26   | 30   | 24   | 23   |
| Three-child households  | 27   | 25   | 31   | 36   | 29   | 19   |
| Four or more-child households   | 46   | 42   | 50   | 47   | 39   | 34   |
| Households with any ch/dyp in Q1  | 39   | 38   | 56   | 61   | 48   | 43   |
| Households with any ch/dyp in Q1 as a percentage of all households with ch/dyp        | 19   | 19   | 29   | 30   | 24   | 22   |
| Number of ch/dyp in Q1 as a percentage of the total number of ch/dyp in all quintiles | 24   | 23   | 31   | 33   | 27   | 24   |

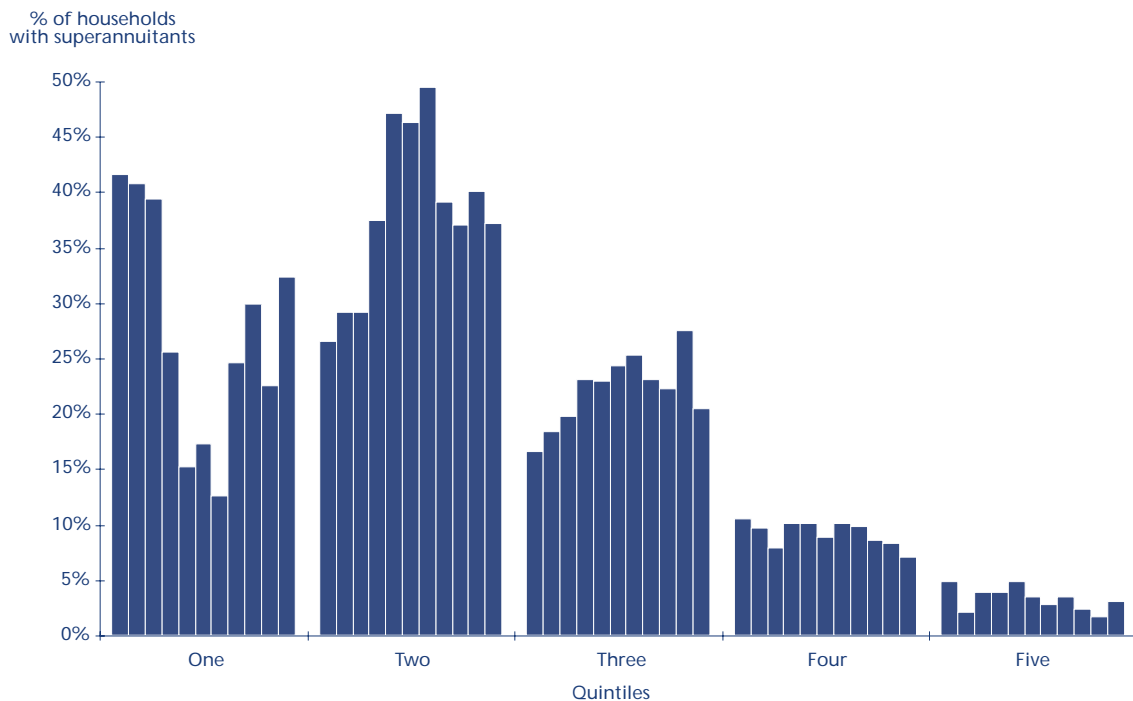
The number of children and dependent young people who lived in households in the lowest quintile of equivalent incomes, calculated as a proportion of all children and young people, was between 23% and 33% over the period from 1988 to 1998. This proportion rose from 24% in 1988 to 33% in 1994. It dropped back to 27% in 1996 and returned to 24% by the end of the period. In contrast, the top quintile of households contained between 9% and 11% of all children and young people over the period. In 1998, this proportion was 10%.

#### 5.4 What About Superannuitants?

The proportion of households comprising superannuitants (the household types 'One Adult with New Zealand Superannuation' and 'Two Adults with New Zealand Superannuation') rose to a high of 27% of all households in 1992. In the same year the proportion of households including a superannuitant<sup>18</sup> also peaked at 26%. In line with the change in the age of eligibility for superannuation, both proportions reduced, with some fluctuations, to around 20% by 1998 (see Table A2).

<sup>18</sup> To clarify the distinction that is being made here: the survey categories of standard household types 'One Adult with New Zealand Superannuation' and 'Two Adults with New Zealand Superannuation' mean households comprising one or two adults only, with at least one of the adults receiving some income from New Zealand Superannuation. The term 'Households including a Superannuitant' refers to all households, regardless of the number of residents, where one of the adults was defined as a 'superannuitant', i.e. received more than half his or her total income from superannuation.

Figure 14: Percentage Of Households With Superannuitants In Quintiles, 1988 - 1998



In the earlier part of the period, from 1988 to 1990, two out of every five households that included a superannuitant (over 100,000 households) were in the lowest quintile of equivalent incomes, with around 70% in the lowest two quintiles. This changed noticeably over the next few years, when the number of superannuitant households in the lowest quintile dropped substantially. By the 1994 year 49% were in the second and 25% in the third quintile. This could be partly an effect of introducing a living alone allowance for superannuitants from 1992, and partly an effect of reducing benefit rates, which led to beneficiaries displacing superannuitants in the bottom quintile. The trend has been reversed to some extent in more recent years as the number of households in the lowest quintile that include superannuitants has risen to 85,000 and the proportion to 32% in 1998 (see Figures 14 and A2).

The mean equivalent income of superannuitants as a percentage of the overall mean equivalent income was 75% in 1988 and 1992, dropping to between 70% and 73% in the intervening years, and after that dropping further, to 66% by 1998 (see Figure 11 and Table A9). For a comparison of the mean and median household incomes where the residents included a superannuitant, a beneficiary or neither see Figures 19 and A7.

### 5.5 Households Including Māori

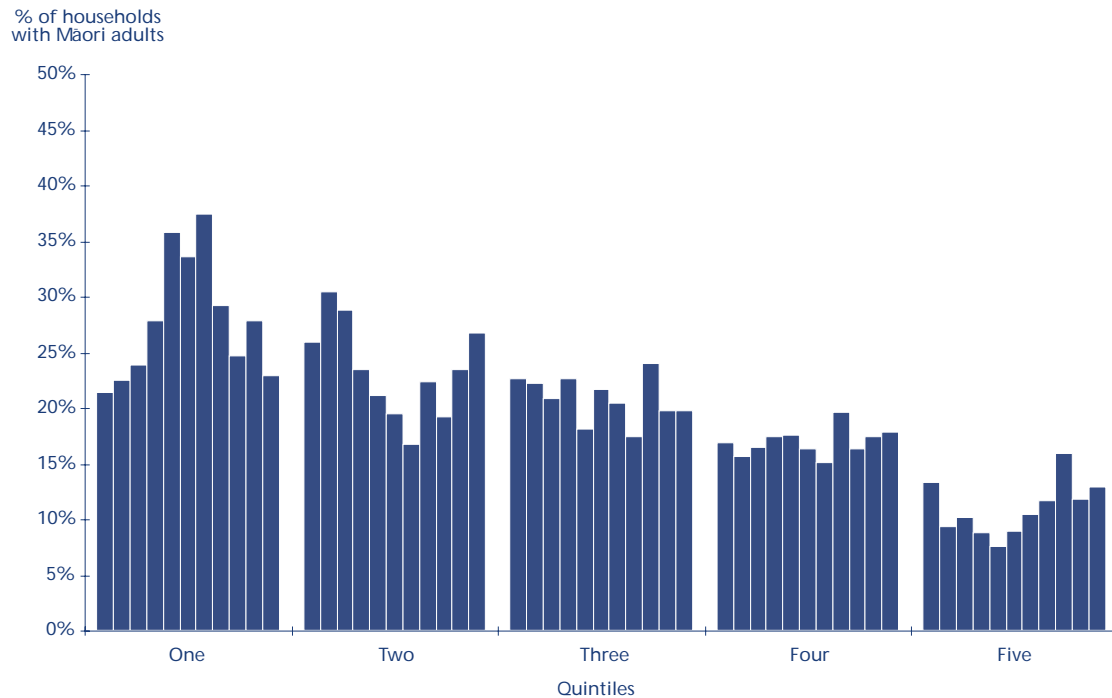
As a proportion of all households in the survey, households that included at least one Māori adult showed a rising trend up to 1994, reaching 14%. They then remained around 11% in the last few years (see Table A2). This is about the same as the proportion of Māori adults in the last three censuses, and the fluctuations do not exceed the sampling error. Māori respondents are younger than the total population on average, with 64% to 70% below 40 years compared to 48% to 54% overall. The high proportion in the younger age-groups is one reason why a very high proportion of households with a Māori adult contained children: 66% in 1988 decreasing somewhat to nearer 60% in the later years. The comparative proportion for other households was 40% reducing to 34% by 1998. Coupled with a slightly higher number of children per household, this has had the effect of raising the average number of residents in households that included a Māori adult. The average number of children in these households ranged from 1.8 in 1984 to between 1.2 and 1.4 in the 1990s,



compared with below 0.8 for other households (see Table A1). If the figures are calculated on only those households where there are children, then the mean number of children for all such households for most years was 2.0, compared to 2.3 for households with Māori adults.

The income position of households which included a Māori adult relative to other households was subject to considerable fluctuation over the period. In 1982, these households had a mean equivalent disposable income that was 89% of the overall mean. By the early 1990s, this had reduced to around 80%. The proportion grew back to 87% by 1996 but had slipped again to 83% by 1998 (see Figure 11 and Table A9).

Figure 15: Percentage Of Households With Māori Adults In Quintiles, 1988 - 1998



In the 1980s households with Māori adults were more evenly spread across income quintiles than in later years. From the late 1980s to 1994, the proportion of households with Māori adults in the lowest income quintile grew to 37% (58,500 households). As incomes increased after 1994, and more households with Māori adults moved into the second income quintile, this proportion decreased. At the other end of the distribution, the proportion of households with a Māori adult in the top income quintile dropped from 13% in 1988 to 8% in 1992, then rose to a high of 16% by 1996, only to fall back to around the 1988 level for the most recent two years (see Figures 15 and A3).

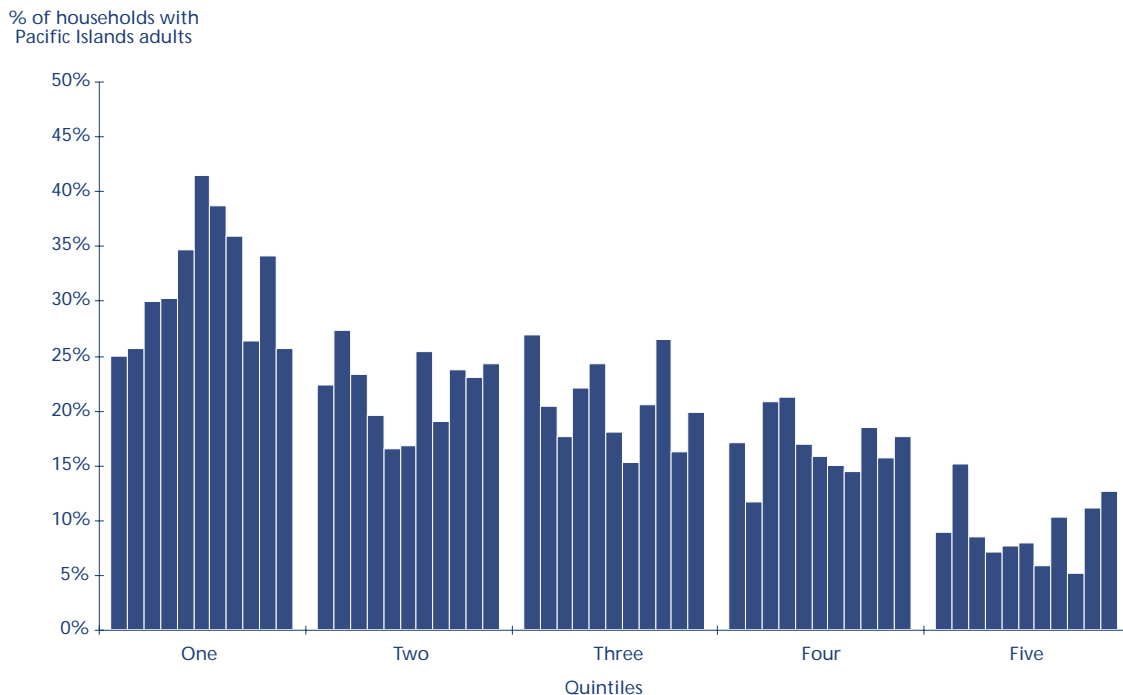
## 5.6 Pacific Islands Adults

The ethnic group most numerous after European and Māori is of people from the Pacific Islands. The number of households responding to the surveys that included a Pacific Islands adult is too small to give more than a broad indication of their relative position. They comprise only some 6% to 8% of households in the surveys, which means the general trends reported here should be regarded with some caution. (See Appendix 1 for discussion of sampling errors and the confidence intervals table in Appendix 2.)

In most years up to 1990, households that included a Pacific Islands adult had a higher average disposable income than other households. This is probably because of the higher average number of household members, with a consequently higher number of potential earners. Despite this, however, from 1991 to 1997 their average disposable income reduced to below that of other households, picking up again just slightly in the last year of the

period. When the size and composition of the households are taken into account by means of the equivalence adjustment, the mean incomes of households that included a Pacific Islands adult were consistently well below the mean of other households (see Table A12). The mean equivalent incomes of these households dropped from 89% of the overall mean in 1988 to 72% in 1994. It then rose to 76% by 1996 and over 80% in the last two years of the period (see Figure 11 and Table A9).

Figure 16: Percentage Of Households With Pacific Islands Adults In Quintiles, 1988 - 1998



The quintile graph for households that included a Pacific Islands adult shows a relatively even spread across the three middle-income quintiles, with a cluster in the lowest quintile and a small but increasing proportion of households in the highest quintile. The proportion of households in the lowest quintile rose to over 40% in 1993, then fell again to 26% by 1996 and 1998. The proportion in the top quintile rose in the final year to 13%, a similar level to households with a Māori adult (see Figures 16 and A4).

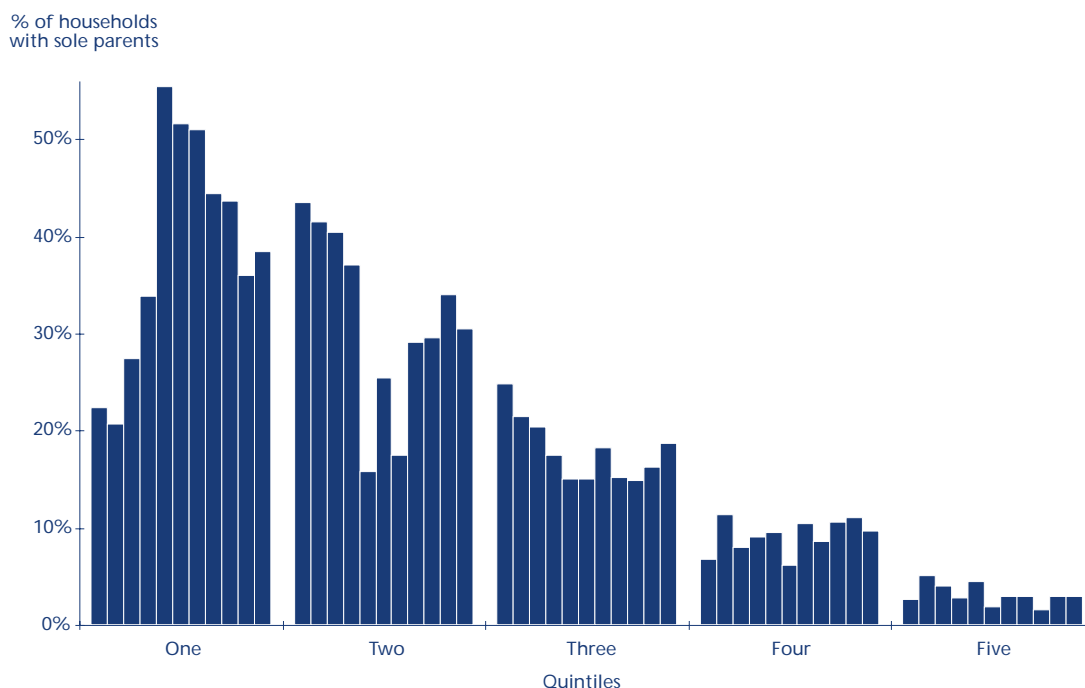
### 5.7 Sole Parents Within Households

The number of one-parent households increased in proportion to other households over the period. From 4% of all households in 1982, this household type rose to 7% by 1991, and remained steady at this level in the years to 1998 (see Table A2). Households that were classified as the 'one-adult plus children' household type comprised only those households in which the sole parent was the only adult. In households that include two or more adults, however, one of these adults could be a sole parent, the other adults being either independent offspring or related or unrelated adult persons. Adults with dependent children and no spouse in these households add up to about half the number of the one-parent household type. When these other households with sole parents are added to the one-parent household type, the total proportion of households with sole parents rises to 8% to 10% of households. Such households tended to have lower incomes on average than households that do not include sole parents, and much lower equivalent disposable incomes, at around 65% of the overall mean since 1991 (see Figure 11 and Table A9).

There was a considerable change in the situation of households that included a sole parent between 1988 and 1992. Just over 20% of these households (around 20,000 households) were in the lowest quintile in 1988 and 1989. In the same years about 40% of these

households were in the second quintile. The proportion of sole-parent households in the bottom quintile increased to 34% by 1991 and to over 50% by 1992. This is likely to be because of the reduction in benefit rates in 1990 and 1991, while the rates of superannuation continued to increase in line with inflation. The proportions stayed at around 50% until 1994, reducing to 44% in the next two years, then to 38% in 1998. The number of households in the bottom quintile that included a sole parent as one of the residents was 38,000 in 1991 and rose to 60,000 by 1992. It remained at between 48,000 and 53,000 from 1995 to 1998, despite the decrease in proportions, because the total number of households with a sole parent had increased in the population. Fewer than 5% of households with sole parents were in the top quintile, and fewer than 12% were in the second quintile at any time during the period (see Figures 17 and A5).

Figure 17: Percentage Of Households With Sole Parents In Quintiles, 1988 - 1998

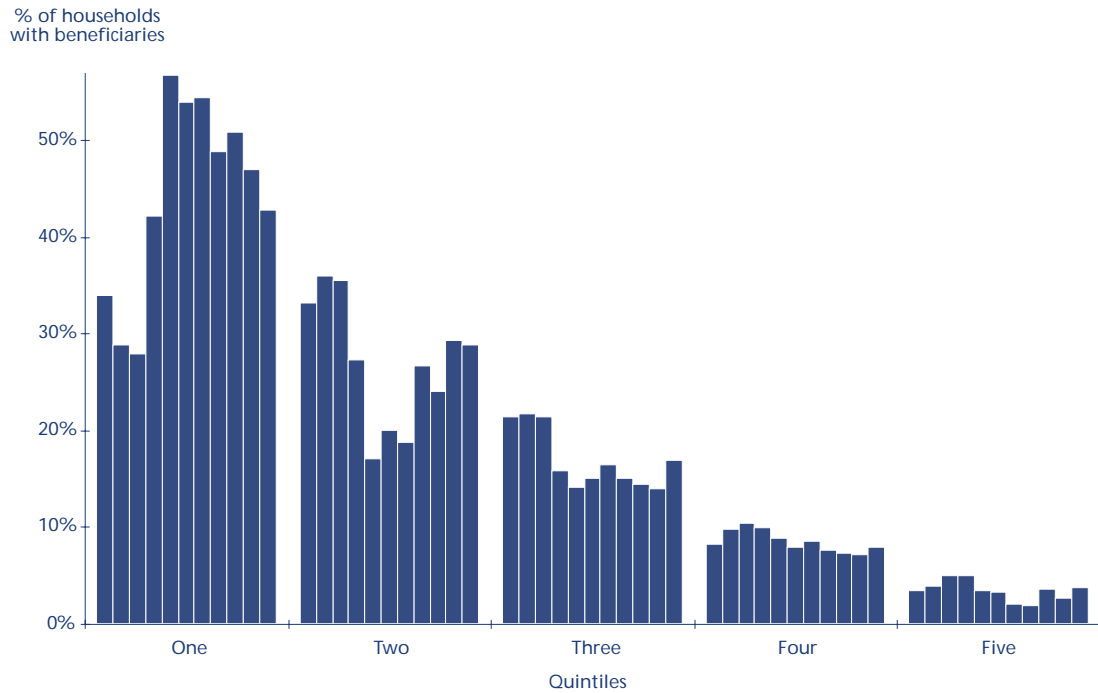


## 5.8 How Are Beneficiaries Getting On?

Beneficiaries<sup>19</sup> were less well off in each year than any of the other resident types. The mean equivalent disposable income of households that included a beneficiary was 74% of the average in 1982. After 1982 this proportion dropped somewhat and hovered between 65% and 72% until 1990. In that year, reductions were made to the benefit adjustment for one-child beneficiaries. In the following year, the overall benefit amounts were reduced. The mean equivalent disposable income of households that included a beneficiary dropped sharply in 1991 and 1992, compared to that of other households, and remained at around 57% to 59% of the overall mean (see Figure 11 and Table A9).

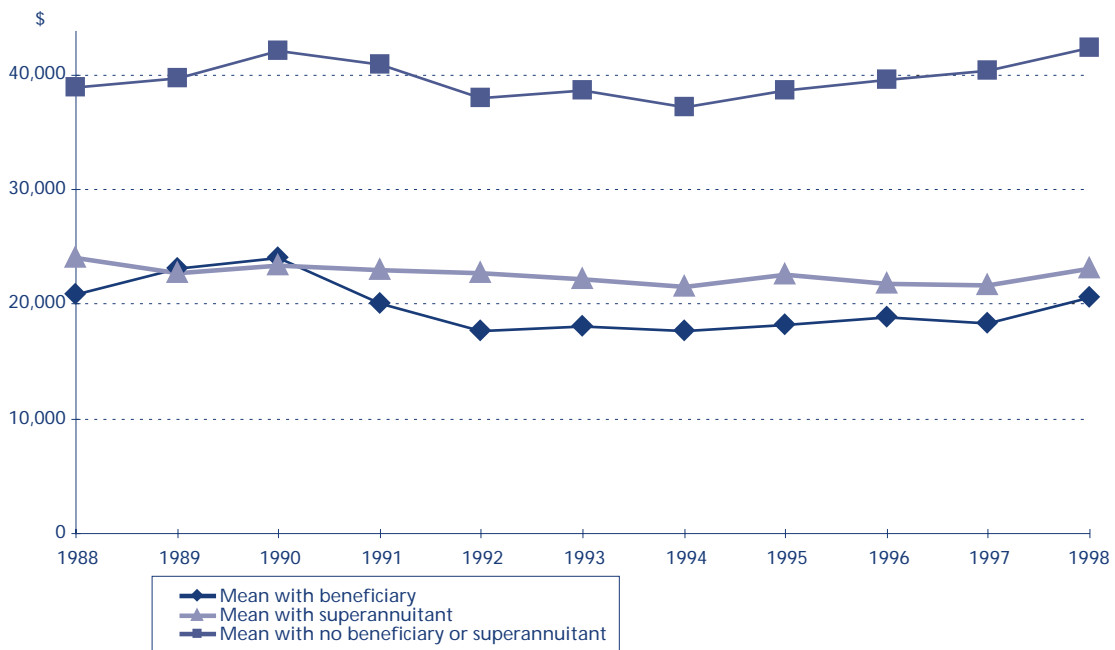
<sup>19</sup> A beneficiary was defined as a person who received more than half his or her annual income from a benefit (not including New Zealand Superannuation). See Appendix 1.

Figure 18: Percentage Of Households With Beneficiaries In Quintiles, 1988 – 1998



In consequence of the relative drop in the incomes of households that included a beneficiary, there was a noticeable rise in the proportion of such households in the lowest quintile from 28% in 1990 to 42% in 1991. There was a further increase to 57% in 1992. The proportion then remained at that high level, reaching a numerical peak of over 135,000 households (54%) in 1994. In the last few years there has been a reduction in the proportion of households that included a beneficiary in the lowest quintile, to 43% in 1998. At the same time, the proportion of households with a beneficiary in the second quintile rose from around 20% to 29%. The proportion of these households in the top two quintiles together remained below 12% (Figures 18 and A6).

Figure 19: Means Of Equivalent Disposable Incomes For Households With Beneficiaries, Superannuitants And Households With Neither, 1988 - 1998



The differences in mean incomes between households that included a beneficiary, a superannuitant, or neither, can be seen in Figure 19. The median incomes of these subgroups of households are shown in Figure A7. In each case the median line is somewhat below the mean. In 1989 and 1990 both the mean and the median incomes of households that included a beneficiary exceeded those of households that included a superannuitant. The situation reversed thereafter. Before 1990, households with a beneficiary had mean equivalent incomes 53% to 58% of the mean equivalent incomes of those with neither a superannuitant nor a beneficiary. Since that year the proportion has dropped to between 45% and 49%. The mean equivalent incomes of households with a superannuitant ranged from 62% to 54% of households containing neither a superannuitant nor a beneficiary.

## 6 THE EFFECT OF HOUSING

### 6.1 Housing Tenure

Most New Zealand households live in owner-occupied housing. About 75% of all households in every survey year lived in housing with this type of tenure, 35% of them with and 40% of them without a mortgage. Households that included a Māori adult were generally less likely to live in owner-occupied housing. This proportion increased from 51% in 1990 to 61% in 1996, but then fell to 47% in 1998. The falling trend in home ownership among households with a Māori adult is similar to that shown in the last two censuses. These showed 59% of households with a person of Māori ethnic group or ancestry owned their homes at the 1991 Census. In the 1996 Census, 52% of such households owned their own homes<sup>20</sup>. The differences between censuses and the surveys strongly suggest that the survey sample is too small to provide more than an indicative estimate.

Rental housing continued to be more common for households with a Māori adult than for other households. The proportion of households with a Māori adult that rented their accommodation declined from 44% to 37% between 1990 and 1996, but rose again to 49% in 1998. This pattern could be seen as the converse of the figures for the same group's home ownership. The proportion of households without a Māori adult that paid rent for their accommodation was 20% in 1990 then rose to 22% in 1992 and remained steady to 1998.

Table 9: Proportion Of Households By Tenure And Māori Adult, Selected Years

| Percentages of households* with |         | 1990 | 1992 | 1994 | 1996 | 1998 |
|---------------------------------|---------|------|------|------|------|------|
| A Māori adult                   | Owning  | 51   | 53   | 54   | 61   | 47   |
|                                 | Renting | 44   | 45   | 42   | 37   | 49   |
| No Māori adult                  | Owning  | 77   | 76   | 76   | 75   | 74   |
|                                 | Renting | 20   | 22   | 22   | 22   | 22   |

\* The owning percentage includes those who owned their house both with and without a mortgage. The renting percentage excludes 'rental-free' households, therefore the percentages do not add to 100.

### 6.2 Incomes And Accommodation Cost

The proportion of income paid for housing increased, on average, for all households over the period. Accommodation cost is recorded in the survey as a household variable. State accommodation assistance in the form of Accommodation Benefit or Accommodation Supplement, as part of individual respondents' benefit income, has been incorporated in the calculation of household disposable income. For the purpose of the analysis, housing costs were then expressed as a proportion of the after-tax household income<sup>21</sup>. In 1988, the large majority of households, 88%, paid 30% or less of their disposable income for housing, while 12% paid over 30%. In 1992, still over 80% of households paid 30% or less of their disposable income for housing. Only 17% paid more than 30%. By 1998, however, a quarter of households were paying over 30% of disposable income while three-quarters paid 30% or less in accommodation costs.

<sup>20</sup> Statistics New Zealand, *Census of Population and Dwellings 1991*; Lindsey Gillespie, 'Measuring Tenure by Ethnicity' (Census 1996), unpublished comment, 1998.

<sup>21</sup> Different proportions result if the calculation is done on net housing cost, that is housing cost after government accommodation assistance has been deducted. In this case the required proportion would be produced by expressing housing cost minus accommodation assistance as the proportion of total household disposable income minus accommodation assistance. Some may prefer this method of calculation but, because accommodation assistance is not separately recorded in most years, it cannot be done with the survey data.

For those with below-average incomes a high proportion of income paid out for accommodation causes financial strain. This is especially so for those renting, since for them the payment of a high proportion of income on rent does not have the compensation of capital formation for the future. Compared to the overall 1998 proportion of 25%, a third of one-earner households and 30% of households with no market earner had housing costs that exceeded 30% of their disposable income. The proportion of households paying over 30% of disposable income was 15% or less up to 1990, about the same for households that included a Māori adult and for those that did not. From 1991, however, this proportion was consistently higher for households that included a Māori adult, rising from 24% to 31% between 1992 and 1998, while the proportion rose from 16% to 23% for other households in the same period.

Table 10: Percentage Of Households By Proportion Of Income Paid For Housing, Selected Years

| Proportion of income paid for housing | 1988                      | 1990 | 1992 | 1994 | 1996 | 1998 |
|---------------------------------------|---------------------------|------|------|------|------|------|
|                                       | Percentages of households |      |      |      |      |      |
| 10% & under                           | 51                        | 48   | 48   | 44   | 44   | 44   |
| 10%-30%                               | 37                        | 37   | 35   | 34   | 32   | 32   |
| Over 30%                              | 12                        | 14   | 17   | 22   | 24   | 25   |

There was a marked difference in the proportions of income paid for housing by households with different types of tenure, as shown in Table 11. Owners without mortgages, who would include many superannuitants, almost all paid 10% or less of their disposable income. These payments are mostly for local body rates. The majority of those with a mortgage paid between 10% and 30% of disposable income, with around a third paying more than 30% in 1998 which had increased from 20% in 1990. The highest proportion of income is paid by those renting. Most spent more than 10% on housing, and the proportion paying over 30% of disposable income rose from 26% in 1990 to 52% in 1998.

Table 11: Tenure Type And Proportion Of Income Paid For Housing, Selected Years

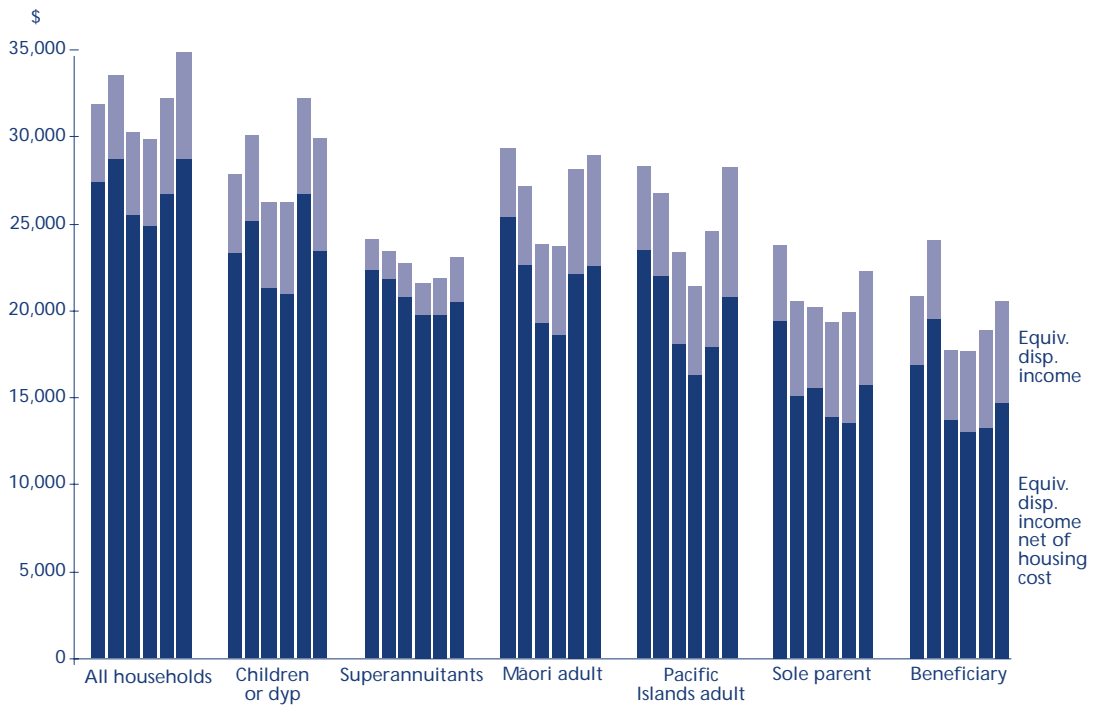
| Tenure type and proportion of income paid for housing | 1990                      | 1992 | 1994 | 1996 | 1998 |    |
|---|---------------------------|------|------|------|------|----|
|   | Percentages of households |      |      |      |      |    |
| No mortgage   | 10% & under               | 93   | 93   | 92   | 92   | 91 |
|   | 10% - 30%                 | 6    | 6    | 7    | 7    | 8  |
|   | over 30%                  | 1    | 1    | 1    | 1    | 1  |
| With mortgage   | 10% & under               | 20   | 17   | 12   | 9    | 10 |
|   | 10% - 30%                 | 58   | 54   | 57   | 57   | 55 |
|   | over 30%                  | 22   | 29   | 31   | 33   | 35 |
| Rented  | 10% & under               | 9    | 6    | 6    | 5    | 4  |
|   | 10% - 30%                 | 65   | 64   | 48   | 43   | 44 |
|   | over 30%                  | 26   | 30   | 47   | 51   | 53 |

All resident types examined faced increased housing costs over the period 1988 to 1998. Mean equivalent disposable incomes net of housing cost as a percentage of the same incomes before housing cost was deducted<sup>22</sup> decreased from 86% to 83% between 1988 and 1994 and remained at that level to 1998. Households including a superannuitant had an income net of housing that was 93% of their income in 1988, reducing to 89% in 1998. Households with other resident types used much more of their income for housing. This is unsurprising

<sup>22</sup> All incomes in this paragraph refer to mean equivalent disposable income. Income net of housing was calculated by deducting the accommodation cost of each household from the household's disposable income and the remainder equalised in the same way as equivalent disposable income.

because the majority of superannuitants lived in housing that they owned. Others, especially sole parents and beneficiaries, were more likely to live in rental housing. Households with children and those including a Māori adult had incomes net of housing that were 84% and 87% of their incomes in 1988, dropping to 78% in 1998. For households including a Pacific Islands adult, a sole parent or a beneficiary, the proportions were 81% to 83% in 1988, ranging down to 71% in 1998. All household types made gains in income over the period, but this increase in overall income was balanced by the proportionate rise in housing cost (see Figure 20).

Figure 20: Mean Equivalent Disposable Incomes Of Households With Different Resident Types, Including And Net Of Housing Cost, Alternate Years 1988 – 1998





## 7 LOW-INCOME HOUSEHOLDS

### 7.1 Changing Groupings In The Lowest Quintile

Over the past decade, the characteristics of the bottom fifth of the income distribution have changed. Contributory factors include New Zealand's economic performance and its effect on the demand for labour. Thus rising unemployment in the late 1980s and early 1990s combined with the 1991 benefit cuts to bring hardship to families. This was particularly so in comparison to superannuitants, whose relative disadvantage was reduced by that of beneficiaries. This situation changed somewhat with improving economic conditions and more financial support for families with children.

This section presents an analysis of the bottom quintile. The representation in the lowest quintile of households with different characteristics is shown in Table 12. Comments on the table follow, comparing some of those proportions to the overall percentages of those types of households in the total population. Then combinations of a smaller number of those characteristics are discussed and illustrated by Figure 21 and Table 13.

In 1988, almost half (47%) of all households in the bottom quintile were the household types comprising one or two adults receiving New Zealand Superannuation. By 1994, their representation among the bottom income group had fallen to 12%. This was not because the circumstances of superannuitants had changed dramatically; rather, it was because they were replaced amongst the bottom income group by other groups whose circumstances had deteriorated. In particular, the proportion of one-parent households in the lowest-income quintile had increased significantly, from 8% in 1988 to 22% in 1994. The proportion of single, non-superannuitant adult households doubled from 7% in 1988 to 14% in 1994. The declining income position of these groups was due to a combination of rising unemployment and the benefit cuts of 1991. As superannuitants were not subject to rate cuts, they fared relatively better than other groups.

By 1998, these changes had been partially reversed. The proportion of one-parent households in the lowest quintile has dropped back slightly to 17% - although this was still a high rate in view of the fact that they made up only 7% of all households. The proportion of superannuitant households in the lowest quintile had risen again to 32% (see Tables 12 and A2). These changes are likely to reflect both the improving economy, which offered more employment opportunities for sole parents, and increases in Family Support and other tax credit programmes for families with children.

Over the period, there were significant movements in the proportion of the bottom quintile that was accounted for by households including children and dependent young people. In 1988, households with dependent children made up 39% of households in the lowest quintile and made up 41% of all households. By 1994, these proportions had diverged substantially, so that households with children and dependent young people made up 61% of households in the lowest quintile, but continued to make up 41% of all households. By 1998, these proportions had fallen back to 43% of the lowest income quintile and 40% of all households.

Households with any dependent children in the bottom quintile tended to be at an earlier stage of the family cycle than other households. The percentage of them with a youngest child under five years was 56% in 1988; 52% in 1994; and 47% in 1998. The percentage of all households including dependent children with a youngest child under five years was 46% in 1988; 47% in 1994; and 42% in 1998. Those with the youngest child aged five to 13 years and 14 years and over were mostly not over-represented in the bottom quintile: for example, in 1998 there were 41% and 12% in the bottom quintile compared to 43% and 14% overall.

Table 12: Changing Characteristics Of The Bottom Fifth Of The Income Distribution, 1988-1998

| Percentage of households in the lowest quintile of equivalent disposable household income |      |      |      |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|------|------|------|
| Household characteristics   | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
| <i>Household type</i>   |      |      |      |      |      |      |      |      |      |      |      |
| One adult with superannuation   | 29   | 29   | 32   | 27   | 16   | 13   | 9    | 15   | 19   | 15   | 19   |
| Two adults with superannuation  | 18   | 17   | 14   | 4    | 3    | 6    | 3    | 11   | 12   | 8    | 13   |
| One other adult   | 7    | 5    | 5    | 13   | 13   | 10   | 14   | 13   | 10   | 13   | 11   |
| Two other adults  | 6    | 7    | 8    | 7    | 9    | 9    | 11   | 10   | 7    | 14   | 12   |
| Two adults and one child  | 5    | 6    | 6    | 6    | 6    | 7    | 8    | 7    | 6    | 8    | 6    |
| Two adults and two children   | 9    | 11   | 10   | 10   | 10   | 11   | 12   | 8    | 9    | 11   | 9    |
| Two adults and three or more children   | 14   | 14   | 9    | 11   | 13   | 14   | 14   | 13   | 9    | 8    | 7    |
| Three or more adults  | 2    | 2    | 2    | 2    | 3    | 4    | 3    | 3    | 3    | 4    | 3    |
| Three adults and child/children   | 2    | 2    | 3    | 4    | 6    | 5    | 5    | 5    | 5    | 4    | 3    |
| One adult and child/children  | 8    | 9    | 10   | 15   | 22   | 19   | 22   | 17   | 19   | 16   | 17   |
| <i>Presence of dependent children</i>   |      |      |      |      |      |      |      |      |      |      |      |
| No children   | 61   | 60   | 62   | 53   | 44   | 43   | 39   | 50   | 52   | 53   | 57   |
| One or more dependent children  | 39   | 40   | 38   | 47   | 56   | 57   | 61   | 50   | 48   | 47   | 43   |
| <i>Age of youngest child</i>  |      |      |      |      |      |      |      |      |      |      |      |
| 0-4 years   | 56   | 49   | 48   | 53   | 45   | 50   | 52   | 51   | 46   | 43   | 47   |
| 5-13 years  | 36   | 41   | 40   | 39   | 47   | 44   | 37   | 40   | 44   | 43   | 41   |
| 14 plus years   | 8    | 10   | 11   | 8    | 8    | 7    | 11   | 10   | 10   | 13   | 12   |
| <i>Household ethnicity</i>  |      |      |      |      |      |      |      |      |      |      |      |
| Households with Māori adult   | 9    | 9    | 13   | 13   | 20   | 19   | 24   | 16   | 13   | 18   | 13   |
| Households with Pacific Islands adult   | 4    | 3    | 6    | 6    | 8    | 9    | 8    | 7    | 5    | 7    | 4    |
| Households with European adult  | 89   | 90   | 85   | 80   | 75   | 74   | 69   | 76   | 80   | 73   | 78   |
| Households with other ethnic group  | 4    | 3    | 3    | 6    | 5    | 5    | 5    | 8    | 6    | 10   | 9    |
| <i>Main source of income</i>  |      |      |      |      |      |      |      |      |      |      |      |
| Wages or salary   | 28   | 27   | 26   | 24   | 22   | 26   | 26   | 22   | 21   | 23   | 22   |
| Self-employment   | 6    | 8    | 4    | 4    | 5    | 6    | 5    | 4    | 4    | 6    | 7    |
| Benefits  | 16   | 14   | 18   | 36   | 47   | 42   | 49   | 37   | 36   | 37   | 31   |
| Superannuation  | 48   | 47   | 49   | 32   | 19   | 20   | 14   | 27   | 32   | 24   | 32   |
| Other income  | 3    | 3    | 4    | 5    | 7    | 6    | 7    | 10   | 7    | 10   | 8    |
| <i>Paid work hours</i>  |      |      |      |      |      |      |      |      |      |      |      |
| Nil hours   | 61   | 58   | 64   | 63   | 64   | 59   | 56   | 60   | 62   | 57   | 62   |
| Part-time hours (1-29 hours)  | 5    | 4    | 5    | 6    | 7    | 7    | 13   | 8    | 11   | 11   | 10   |
| Full-time hours (30 or more hours)  | 34   | 38   | 31   | 31   | 29   | 33   | 31   | 32   | 27   | 32   | 28   |
| <i>Presence of income losses</i>  |      |      |      |      |      |      |      |      |      |      |      |
| Minus income  | 6    | 2    | 1    | 3    | 5    | 3    | 2    | 3    | 4    | 4    | 3    |
| Zero income   | 0    | 0    | 1    | 0    | 2    | 1    | 2    | 2    | 1    | 4    | 1    |
| Positive income   | 94   | 98   | 98   | 96   | 94   | 96   | 96   | 96   | 95   | 93   | 96   |
| <i>Occupation</i>   |      |      |      |      |      |      |      |      |      |      |      |
| Professional technical and related  | 12   | 8    | 15   | 14   | 15   | 13   | 12   | 14   | 11   | 14   | 15   |
| Administrative and managerial   | 3    | 4    | 1    | 3    | 3    | 2    | 1    | 1    | 1    | 1    | 1    |
| Clerical  | 9    | 9    | 18   | 12   | 8    | 9    | 8    | 5    | 5    | 7    | 8    |
| Sales   | 13   | 14   | 12   | 14   | 8    | 10   | 13   | 10   | 11   | 7    | 9    |
| Service   | 11   | 13   | 9    | 14   | 17   | 20   | 20   | 19   | 23   | 20   | 24   |
| Agriculture forestry and fisheries  | 27   | 27   | 17   | 21   | 18   | 23   | 16   | 28   | 20   | 28   | 21   |
| Production transport and labouring  | 25   | 25   | 28   | 22   | 33   | 24   | 29   | 23   | 28   | 24   | 21   |
| <i>Housing type</i>   |      |      |      |      |      |      |      |      |      |      |      |
| Owned with mortgage   | 51   | 19   | 18   | 24   | 24   | 29   | 30   | 23   | 22   | 19   | 18   |
| Owned without mortgage  |      | 50   | 46   | 34   | 31   | 29   | 24   | 34   | 37   | 41   | 40   |
| Renting (Housing NZ landlord)   | 49   | 32   | 36   | 42   | 19   | 18   | 17   | 12   | 12   | 8    | 10   |
| Renting (other landlord)  |      |      |      |      | 26   | 24   | 29   | 31   | 29   | 32   | 32   |
| <i>Housing cost</i>   |      |      |      |      |      |      |      |      |      |      |      |
| 30% of disposable income or less  | 83   | 79   | 80   | 72   | 67   | 61   | 48   | 55   | 57   | 56   | 56   |
| Over 30% of disposable income   | 17   | 21   | 20   | 28   | 33   | 39   | 52   | 45   | 43   | 44   | 44   |
| <i>Availability of amenities</i>  |      |      |      |      |      |      |      |      |      |      |      |
| No motor vehicle  | ..   | 25   | 29   | 31   | 27   | 26   | 22   | 25   | 23   | 20   | 20   |
| No phone  | ..   | 7    | 10   | 12   | 18   | 18   | 16   | 12   | 10   | 10   | 7    |
| No washing machine  | ..   | 7    | 6    | 6    | 7    | 6    | 6    | 5    | 3    | 3    | 2    |

There continue to be ethnic differences in the composition of households in the bottom quintile, although these differences are not as pronounced as they were a few years ago. In 1988, households including Māori made up 9% of the bottom quintile while households with Pacific Islands adults made up 4%. By 1994, however, Māori representation had increased almost three-fold to 24%, compared to only 13% of all households in the survey. In the same time, the Pacific Islands proportion in the lowest quintile had doubled to 8%, while only 4% of the total sample were households with Pacific Islands adults. These figures reflect the disadvantage that these groups experienced in the labour market. Since that time Māori and Pacific Islands representation in the low-income quintile fell to 13% and 4% respectively in 1998. This was only a little more than their overall representation in the survey population (Māori 11% and Pacific Islands 3%). In the last few years there has been a noticeable increase in the representation in the bottom quintile of households with residents identifying with ethnic groups other than European, Māori or Pacific Islands. The proportion rose from 3% in the late 1980s to around 5% between 1991 and 1994, and to over 9% in the latest two years. This probably reflects both increased immigration of these other ethnic groups, and higher unemployment amongst the immigrants.

Households whose main source of income was wages and salaries declined as a proportion of the bottom income quintile from 28% to 22% between 1988 and 1998. Those whose main source of income was superannuation made up 48% of this quintile in 1988, and 14% in 1994. Since then, their representation has increased again, to 32% in 1998. In contrast, households that relied on benefit income as their main source of income had more than tripled their representation in the bottom quintile from 16% in 1988 to 49% in 1994. By 1998, however, with increased employment, this had fallen back to 31%.

Since 1988, around 60% of all households in the bottom quintile have had no hours of paid work. This compares with the overall proportions of 29% to 33%. Households reliant on part-time work (that is, a total of 29 hours or less for all household members) increased from about 5% of the bottom income group of households in 1988 to 10% in 1998. In contrast, those households with a total of 30 hours or over per week reduced as a proportion of the bottom income quintile from 34% in 1988 to 28% in 1998. Amongst all households the proportions of households with part-time hours were 4% and 6%, while the proportions with 30 hours or more paid work were 68% and 65% in 1988 and 1998 respectively.

Changes in the distribution of earnings for those in paid work are illustrated by the changing representation of different occupations of the household reference persons within the bottom income quintile<sup>23</sup>. In 1998, 24% of the bottom income group was made up by those in the 'Service Workers' category used by Statistics New Zealand. The growth in service occupations, as well as the low-income nature of these occupations is demonstrated by the increasing representation of this group in the bottom quintile of the income distribution. The figure was just 12% in 1988. The next most prominent occupations in 1998 were 'Production, Transport and Labouring', and 'Agriculture, Forestry and Fisheries', each accounting for 21% of the bottom quintile. The representation of these groups in the lowest quintile had reduced from their 1988 proportions of 25% and 27% respectively.

In 1998, 42% of those in the bottom income group were renters. This proportion increased from 27% in 1989 and compares with an overall 1998 representation of renters amongst all households of 25%.

The proportion of those in the bottom quintile renting from Housing New Zealand (traditionally a provider of subsidised housing for those on low incomes) reduced from 19%

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<sup>23</sup> The discussion is not extensive since occupation codings in the HES are not considered very reliable.

in 1992 to only 10% in 1998. Between 5% and 6% of all households rented from Housing New Zealand over the period from 1992 to 1998. Before 1992, a Housing New Zealand tenancy was the main means by which low-income households could gain access to subsidised housing. The introduction of the Accommodation Supplement in 1992 and Housing New Zealand's subsequent move to market rents led to fewer low-income households among Housing New Zealand's clientele. Assistance with housing costs became available to low-income families in private sector tenancies, while Housing New Zealand's competition in the market led to more households from outside the lowest income groups renting from Housing New Zealand. The proportion of households in the bottom quintile renting from private landlords increased from 26% in 1992 to 32% in 1998. The proportion of all households renting from other landlords stayed at 18% through to 1996, then rose to 20% in the last two years.

An increasing proportion of the bottom income quintile (17% in 1988, 32% in 1992, rising to 52% in 1994) paid more than 30% of their disposable income on housing. By 1998, this proportion had fallen slightly to 44%. This was, however, still an over-representation among low-quintile households, since amongst all households the proportion was 25% in 1998.

Households in the bottom income quintile were twice as likely as the national average to have no motor vehicle or no phone. In 1998, 20% had no motor vehicle and 7% had no phone. This compares with 10% of all households having no motor vehicle and 4% having no phone. More than 2% had no washing machine while amongst all households this proportion was under 2%. There has been a considerable improvement in access to amenities in the later years since 1992, when 27% of households had no access to a car, 18% no phone and nearly 7% had no washing machine. This both reflects the increased availability of these amenities across society and perhaps points to a reduction in the extent of hardship in the lowest quintile in recent years.

## 7.2 Who Is In The Lowest Quintile?

Section 7.1 has reported on the proportions that households with particular characteristics form of the lowest income quintile. It might be expected that a number of these individual characteristics would occur together in households forming a high proportion of the lowest income quintile. In this section, key household characteristics have been grouped as a means of providing a better summary description of the make-up of the quintile. The grouping attempts to reflect dimensions of household composition that are of particular policy interest. When shifts in proportion of the lowest quintile over time are graphed in Figure 21 below, it is evident that combinations that either include or exclude children show the greatest differences in trend over time.

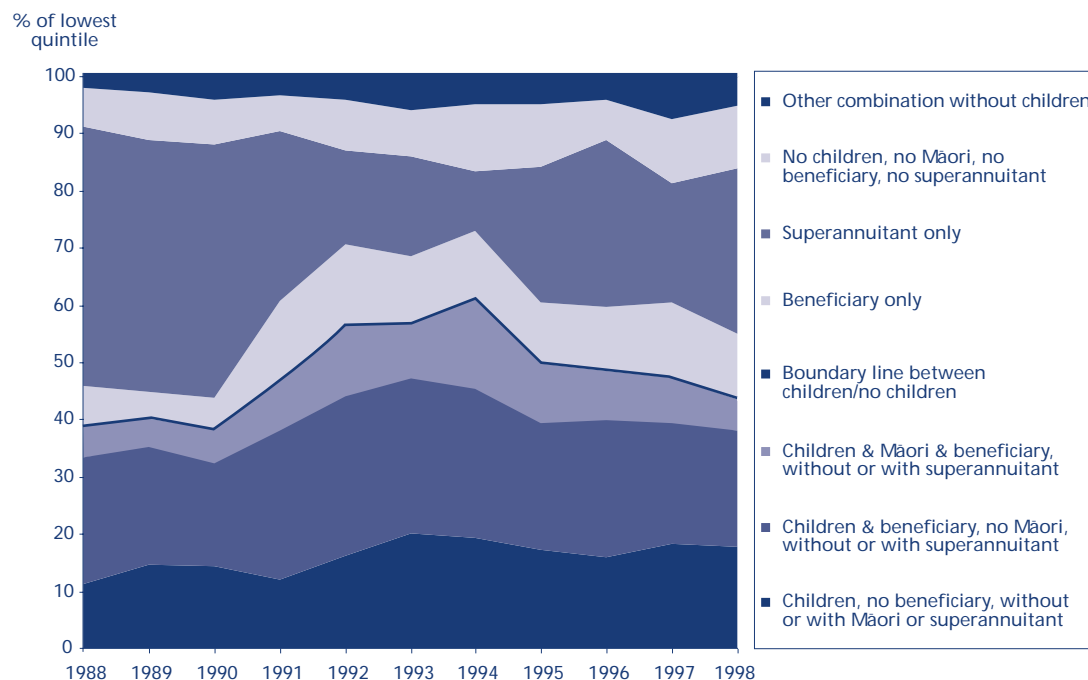
The three bands above the bottom axis in the figure represent households with children and different combinations of other characteristics, while the top four bands above the dark dividing line represent combinations that do not include children. The bands showing the proportion of the lowest quintile accounted for by households with children, taken together, widened from 39% in 1988 to 60% in 1994, narrowing again to 43% by 1998. Within the households that included children, the group of households with beneficiaries but no Māori residents showed the largest change in size, peaking at 28% of all households in the lowest income quintile in 1992.

The band nearest the base of Figure 21 represents the proportion of households in the lowest income quintile accounted for by non-beneficiary households with children. This proportion shows a drop from 1988 to 1991, but an increasing trend since then. The second band up from the base represents households with children and a beneficiary, but no Māori adult.

These households increased as a proportion of the lowest income quintile in the middle of the period and decreased gently from 1995 to 1998. The third band, representing households that included at least one child, one beneficiary and one Māori adult, shows sharper growth to 1992 and through to 1994, which then reversed to show a sustained decrease in the last three years of the period.

Changes in the shape of the middle band of the graph (immediately above the heavy line) show how households that included a beneficiary, but none of the other selected resident types, varied as a proportion of households in the bottom income quintile. Their representation in the quintile grew from 1991 to 1994, dropped over the period to 1996, and has increased again since then. The band above this one shows the dramatic shifts in the proportion of households that include a superannuitant in the bottom income quintile. These swings from a high proportion over the period 1988 to 1990, a dramatic drop to a lower proportion over the period to 1994, then an increase again through to 1998 have been commented on elsewhere in the report.

Figure 21: Combination Of Resident Types In The Lowest Quintile, 1988 - 1998



Another dimension on which households in the lowest income quintile can be grouped is that of whether a household has at least one earner or not. A refinement of this grouping is to further disaggregate households without an earner into those that receive most of their income from superannuation and those that receive it from some other source. The proportions that each of these groups have made up of the lowest income quintile over time are reported in Table 13.

Households which included at least one earner comprised between a third and two-fifths (34% to 41%) of the households in the bottom quintile throughout the period (see Table 13). The greater proportion of these households are in housing that they owned, although there was an increase in the proportion with rental tenure over the period, from 20% in 1988 to 34% in 1998. Throughout the period the great majority of this group of households (about 85%) had access to both a car and a telephone in their household.

Table 13: Composition Of The Lowest Quintile Of Equivalent Disposable Income, 1988 - 1998

| Percentage of households with | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| At least one earner           | 38   | 41   | 38   | 36   | 34   | 39   | 40   | 37   | 34   | 40   | 36   |
| No earner, main source Super  | 47   | 45   | 47   | 31   | 18   | 20   | 13   | 26   | 31   | 23   | 32   |
| No earner, main source other  | 15   | 13   | 15   | 33   | 48   | 41   | 47   | 37   | 34   | 37   | 37   |

Households with no earner and with superannuation as their main income source declined as a proportion of the lowest quintile from 47% in 1988 to 13% in 1994. They rose again to 32% by 1998. These households were less likely than those with an earner to rent accommodation (17% compared with 34% in 1998). Access to a phone varied among these households, but access to a car was consistently lower. In most years over one-third of these households, and over half in 1991 and 1992, had no access to a car. In some cases this would be because older residents were no longer driving. In most cases, however, it would have been because the better-off superannuitants had been displaced in the bottom quintile by other groups (for example, by beneficiaries), so that those remaining were less likely to have a car. As the representation of superannuitants in the bottom quintile increased again, the group would have included people with a slightly higher standard of living. Thus they were less likely to lack a vehicle, so that in 1998 there were only 28% of these households without access to a car.

Households in the lowest quintile with no earner and whose main income was from sources other than superannuation (principally those reliant on benefits) underwent a movement that was the reverse of the experience of superannuitant households. As a proportion of the lowest income quintile they increased dramatically between 1988 and 1992, from 16% to 48%, with this percentage falling back to 37% in the final year (see Table 13). These households were much more likely to live in rental accommodation, over half doing so throughout the period and rising to 59% in 1998. Between 30% and 39% lacked access to a car and between 20% and 30% lacked access to a telephone until the final year, when these proportions dropped to 22% and 12%. The proportions of these households that were without both a car and a phone ranged from 4% in 1989 to 17% in 1993, dropping back to 5% in 1998. Among no-earner households with superannuation as their main income, the highest proportion to have neither car nor telephone was 9% in 1993. For households with an earner, the highest figure was 4% in 1991. These proportions declined in all cases in the final year, to 5%, 4% and 2% in the non-superannuitant, superannuitant and earner households respectively.

## 8 HAS OVERALL INEQUALITY IN INCOMES INCREASED?

### 8.1 Shifts In Income Distribution – For Richer Or Poorer?

Public interest in income trends often focuses on deceptively simple questions such as whether the rich have become richer and the poor, poorer. Closer examination soon makes clear that any useful answer involves answering a number of different underlying questions. For example, there are two ways in which the proportion of a particular group with a certain level of income can change over time. It is possible for the income position of the group to change so that its members at one time have more (or less) disposable income in real terms than those in that category had at another time. It is also possible for this group to have become relatively better (or worse) off than another, because incomes in the two groups have not changed at the same rate between two time points. Similarly, somewhat different pictures can emerge according to whether one compares the distance between the very highest incomes in the distribution and those right at the bottom, or whether one compares different summary measures of income distribution. Consequently a range of measures is required to address these different situations.

This section looks at the story that emerges when some different ways of measuring distributional changes are examined. Each approach has strengths and weaknesses. Some are better for establishing the gains and losses of one income group in relation to others, while others provide better information about changes in income for a particular group between one time point and the next. Some measures are more influenced by what is happening for those with very high or very low incomes. Others give a better insight into what has happened at other points in the distribution. Together they give a richer picture of the nature and consequences of changes in the income distribution than any single measure can provide.

When looking at this picture it is useful to keep in mind that currently available statistical information on household incomes in New Zealand is not dynamic. At any time point it is usually possible to describe the nature and composition of households that have different levels of income, as we have seen in preceding sections. What these statistics do not show is how many individual households that were in, say, the bottom quintile of the income distribution in one year, still had incomes that placed them in the bottom quintile the next year or the year after. It is also possible for households that have no change in their disposable income or household composition from one year to the next to be located in different quintiles of the distribution in each year as the result of movements in the incomes of other groups of households.

### 8.2 Spread Of Incomes

Different measures of the gap between the incomes of those at the top end of the income distribution and those at the bottom end all indicate that the overall spread of incomes was greater in 1998 than in 1982. Rather than pick the highest and the lowest income for each year and compare the difference, comparisons have been made using more stable measures than comparison of the extreme ends of the distribution. For example, the ratio of the pre-tax incomes of those at the 75th percentile (the border above which the top 25% of incomes lie) to the pre-tax incomes of those at the 25th percentile (the border below which the lowest 25% lie) was 2.7 in 1982. This went down to 2.4 in 1986 then rose to exceed 3.0 by 1998. For after-tax incomes the ratios were 2.3 and 2.1 in 1982 and 1986 respectively, increasing to around 2.6 for the years 1991 – 1998 (calculated from Tables A3 and A4).

Similarly, when the mean equivalent disposable incomes of those in the top and the bottom income quintiles are expressed as a ratio, the ratio has increased over the period to reach 5.5 to one in 1998, compared with earlier values of less than five to one (calculated from Table A10).

The increasing spread during the '90s is also shown in the ratio of the lower boundary of the top quintile to the top boundary of the lowest quintile of the equivalent disposable income distribution. This was 2.7 in 1998 compared with 2.3 in 1988. Thus in 1998 the equivalent disposable incomes of the highest fifth of households started at almost two and three-quarters times the highest income received by the households in the lowest fifth of households, compared with two and a quarter times in 1988. This represents a widening of the gap by 17%.

The next two sections go on to look at different approaches that can be used to track movements in the proportion of households that have relatively low incomes. The first examines proportions with incomes below a fixed percentage of mean or median income, while the second looks at proportions with incomes that place them below different benchmark values that are external to the distribution itself. A limitation of both approaches is that such measures do not provide information on how many households have incomes that place them just below the cut-off, or at a significant distance below it. Where many households have incomes that place them close to a particular cut-off value, a relatively small change in either their incomes or the value of the cut-off can lead to significant numbers of households switching from one side of the cut-off to the other. This results in significant changes in estimates of the incidence of poverty.

### 8.3 Relativities Within Income Distributions

Changes at the top and bottom of the income distribution tend to affect a minority of households. Some studies<sup>24</sup> monitor the proportions of households with incomes that place them below various percentages of either the mean or the median income for all households. This is used as a way of gauging whether distributional changes are bunching more households toward the lower end of the income distribution. These proportional cut-offs are sometimes referred to and used as 'poverty lines', 'poverty thresholds', or 'low-income cut-offs'. Their basis is that households with incomes below a fixed percentage of the mean or median for all households are experiencing relative poverty. Thresholds that are commonly used range from 40% to 60% of the mean or the median.

Some caution is required in interpreting this type of measure. Values for the mean or median do not remain constant from year to year. Because such measures rely on comparison with the median or mean, a rise or a fall against a mean or a median does not necessarily mean that the actual income coming into households below such a threshold has changed for the better or the worse. For example, suppose that the incomes of the great majority of households remained unchanged from one year to the next, but that the incomes of households in the top few percentiles of the distribution soared over the same time period. The net effect would be an increase in the value of the mean and a corresponding increase in the proportion of households with incomes below 60% of the mean, even though the incomes of most had not changed at all. Conversely, if the value of the median fell as a result of sagging incomes in the middle of the distribution, this might perversely result in a reduction in the measured incidence of poverty, even though the real incomes of those at the

<sup>24</sup> For example A.B. Atkinson, *Income Distribution in OECD Countries: Evidence from the Luxembourg Income Study (LIS)*, OECD, 1995 and R. Stephens, C. Waldegrave & P. Frater, 'Measuring Poverty in New Zealand' in *Social Policy Journal of New Zealand* No. 5, December 1995. The statistics on relativities presented in this report will differ from those presented by Stephens et al because negative incomes are included in the present calculations and no observations have been suppressed.



lower end of the distribution might also be decreasing. Consequently, year to year variation in mean or median values can make it difficult to determine whether households under the proportional cut-off really are better or worse off in any year than they have been in previous years.

Table 14 sets out proportions of households with equivalent disposable incomes that fell below different mean- and median-based thresholds for selected years. These measures are useful for a picture of the situation in a particular year, but year-to-year comparisons need to be treated cautiously.

Table 14: Proportion Of Households Below Distributional Poverty Thresholds, Selected Years

| Year | Poverty threshold | % of households | Poverty threshold   | % of households |
|------|-------------------|-----------------|---------------------|-----------------|
| 1988 | Below 40% of mean | 4.1             | Below 40% of median | 3.5             |
|      | Below 50% of mean | 7.8             | Below 50% of median | 4.9             |
|      | Below 60% of mean | 20.7            | Below 60% of median | 13.4            |
| 1993 | Below 40% of mean | 6.1             | Below 40% of median | 3.2             |
|      | Below 50% of mean | 13.9            | Below 50% of median | 6.5             |
|      | Below 60% of mean | 31.9            | Below 60% of median | 12.7            |
| 1998 | Below 40% of mean | 6.2             | Below 40% of median | 4.7             |
|      | Below 50% of mean | 19.1            | Below 50% of median | 6.5             |
|      | Below 60% of mean | 33.3            | Below 60% of median | 16.0            |

The figures are as one might expect, given the movements in mean and median incomes reported earlier in this report. The median-based measures are all somewhat lower than the mean-based ones, being more affected by what is going on for a larger number of households than what is going on with the incomes of households at the extremes of the distribution. Each measure reflects the movements in mean and median income values that have been reported in earlier sections, and the skewing of the income distribution that has occurred as higher incomes have moved ahead at a faster rate than lower ones since incomes started to recover in 1993. As the value of the mean fell between 1988 and 1993, the proportion of households with equivalent disposable incomes under mean-based thresholds increased as beneficiary numbers shot up and incomes reduced across the distribution. In contrast, the proportion under median-based thresholds changed only a little between 1988 and 1993, with proportions under the 40% and 60% thresholds reducing and the proportion under the 50% threshold rising somewhat. Between 1993 and 1998, proportions under the 40% and 60% thresholds rose, while the proportion under the 50% threshold remained the same. Note that the median equivalent disposable income value also rose between 1993 and 1998, from \$24,937 to \$28,361. It is likely that this right shift in the median would have been affected more by changes affecting some large groups of households than by the growth in higher incomes. In particular, both the adjustments in rates of New Zealand Superannuation at the end of the period (which were higher than the rate of inflation) and the rising incidence of couple-based households with two earners would have contributed to this increase in the median income.

#### 8.4 Relativities To Fixed Benchmarks

Another way of illustrating movements in household incomes over time is to compare the proportions of households with equivalent disposable incomes that fall below different benchmarks that are not linked to the mean or the median, and that do not vary from year to year in the same way. Four benchmarks have been selected which equate to different levels of government assistance provided to low-income families. These have been converted to

represent constant-dollar disposable equivalent income values that can be directly compared with the year-to-year income figures. All have the advantage that they can be thought of as thresholds at which people in different circumstances might be expected by government to require income assistance. The benchmarks are:

1. the 1998 Unemployment Benefit rate (\$12,664), representing the short-term income level provided for people who are expected to return to work;
2. the 1998 Invalids Benefit (\$15,830), a somewhat higher basic benefit representing the level of longer-term support provided for those prevented from working by a disability;
3. the 1972 Benefit rate adjusted to 1998, usually referred to as the 1972 Benefit Datum Line or BDL (\$16,674), which was used as a benchmark by the 1972 Royal Commission on Social Security; and
4. the 1998 top abatement step for Family Support (\$17,814 net of tax)<sup>25</sup>, which can be thought of as a threshold beyond which families are currently expected to require no financial assistance from the state to meet their needs.

The following table (Table 15) illustrates the relationship between these benchmarks and the mean-based and median-based thresholds used above.

Table 15: Benchmarks As Percentages Of Mean And Median Equivalent Income, Selected Years

| Benchmark          | % of mean equivalent disposable income |      |      | % of median equivalent disposable income |      |      |
|--------------------|--|------|------|--|------|------|
|                    | 1988                                   | 1993 | 1998 | 1988                                     | 1993 | 1998 |
| 1998 UB benchmark  | 39.8                                   | 41.0 | 36.4 | 43.9                                     | 50.8 | 44.7 |
| 1998 IB benchmark  | 49.7                                   | 51.2 | 45.5 | 54.9                                     | 63.5 | 55.8 |
| 1972 BDL benchmark | 52.4                                   | 54.0 | 47.9 | 57.8                                     | 66.9 | 58.8 |
| 1998 FS benchmark  | 56.0                                   | 57.6 | 51.2 | 61.8                                     | 71.4 | 62.8 |

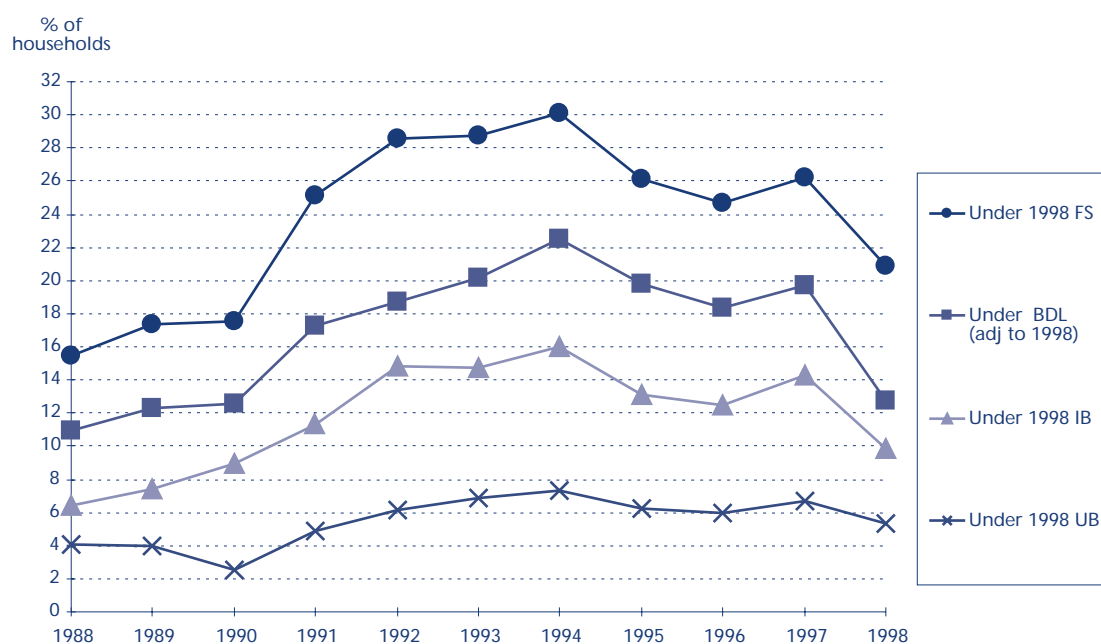
Because their value does not move up and down over time in the same way that mean and median values do (once inflation is allowed for), the benchmarks permit easier comparisons between incomes in one period and incomes in another. Like mean and median-based cut-off measures, however, these measures share the problems described above when many households of the same type cluster close to the benchmark value.

Figure 22 clearly shows that the lowest proportion of households under all the benchmarks was in the period 1988 to 1990, and that the highest proportion was in 1994. Subsequently, the proportion dropped back almost to 1988 levels by 1998<sup>26</sup>.

<sup>25</sup> The gross threshold amount of \$27,000 was first adjusted from a two-adult one-child household to the two-adult standard using the revised Jensen equivalence scale, then tax was deducted. If these two steps are performed in the reverse order, a different amount results.

<sup>26</sup> This pattern differs slightly from those produced by studies that exclude negative reported incomes from the analysis (e.g. V. Krishnan, 'Modest but Adequate: An Appraisal of Changing Household Income Circumstances in New Zealand' in *Social Policy Journal* No. 4, July 1995)

Figure 22: Proportion Of Households Under Four Benchmarks, 1988 - 1998



When the proportions of all households with equivalent disposable incomes lower than the various benchmarks are examined, a similar pattern can be seen: a steep rise between 1988 and 1993, followed by a smaller fall in proportions between 1993 and 1998. Because these measures provide a reasonably robust indication of how incomes have moved from one year to the next, it is instructive to break out figures for different types of households that have a composition of particular interest for social security policymakers.

Table 16: Proportion Of Different Households With Equivalent Disposable Income Under Four Benchmarks, Selected Years

|                                    |                      | 1988 | 1993 | 1998 |
|------------------------------------|----------------------|------|------|------|
| Proportion (%) under the benchmark |                      |      |      |      |
| 1998 UB                            | All households       | 4.0  | 6.8  | 5.3  |
| 1998 UB                            | With superannuitants | ..   | ..   | ..   |
| 1998 UB                            | With children/dyp    | 5.8  | 10.3 | 7.0  |
| 1998 UB                            | With beneficiaries   | 12.7 | 20.5 | 14.0 |
| 1998 IB                            | All households       | 6.4  | 14.8 | 9.9  |
| 1998 IB                            | With superannuitants | 2.9  | 3.9  | 4.1  |
| 1998 IB                            | With children/dyp    | 9.6  | 24.6 | 13.9 |
| 1998 IB                            | With beneficiaries   | 18.8 | 47.4 | 28.2 |
| 1972 BDL (adj.)                    | All households       | 10.9 | 20.1 | 12.7 |
| 1972 BDL (adj.)                    | With superannuitants | 17.6 | 17.6 | 6.3  |
| 1972 BDL (adj.)                    | With children/dyp    | 12.2 | 29.1 | 17.9 |
| 1972 BDL (adj.)                    | With beneficiaries   | 22.3 | 54.0 | 36.4 |
| 1998 FS                            | All households       | 15.4 | 28.7 | 20.8 |
| 1998 FS                            | With superannuitants | 31.2 | 42.2 | 35.7 |
| 1998 FS                            | With children/dyp    | 15.3 | 34.2 | 22.3 |
| 1998 FS                            | With beneficiaries   | 27.0 | 62.2 | 43.7 |

Very few households that included a superannuitant had incomes below the two lowest benchmarks over the whole of the period. In the late 1980s, however, a higher proportion of such households had incomes below the 1972 BDL level than households overall. Since the early 1990s the proportion of superannuitant households with incomes below this benchmark has fluctuated widely - from 11% in 1992 to 26% in 1996, then down to a very low 6% in 1998. This is largely because the incomes of superannuitants tend to cluster around this benchmark. The very low figure in 1998 can be largely explained by the fact that superannuation was adjusted by 2.8% between 1997 and 1998 while the CPI, and therefore the adjustment factor for the BDL, rose by only 1.1%. This caused the incomes of households with superannuitants to cluster just above the adjusted BDL, significantly reducing the proportion below it. The proportion of households including a superannuitant with incomes below the Family Support benchmark has been consistently 12 to 15 percentage points above the proportion for all households (at 31% to 46%).

Households that included children and dependent young people showed a very different pattern. The proportion with equivalent disposable incomes below the lowest of the four benchmarks (the 1998 UB level) was consistently higher than the proportion for all households, and in some years was more than half as high again. This difference naturally increases as higher benchmarks are adopted. For example, if the next highest benchmark is used, the proportion of households with children that had incomes below the benchmark rises to nearly a quarter in the period 1992 to 1994, compared with levels of 14% to 15% for all households. Clearly all of these results are in agreement that households with children are at higher risk of financial hardship than households generally.

As might be expected, over the whole period a substantially higher proportion of households that included a beneficiary had household incomes below each of the benchmarks than other households. In 1988, 13% of beneficiary households were below the Unemployment Benefit benchmark. This proportion reduced to 6% in 1990, more than tripled to 21% in 1993, then fell back to 14% in 1998. A similar pattern prevailed for these households with respect to the other benchmarks, but in each case the proportion below the benchmark diverged further from that for all households.

Regardless of the benchmark used, nearly all the household types examined had higher proportions below every benchmark in 1998 than in 1988, but these proportions had dropped substantially from a 1993 high. Households with a superannuitant provide the only exception to this pattern, as discussed earlier in this section.

## 8.5 The Broad Picture

The broad picture that emerges from this section is that there was a wider income gap between low-income households and high-income households in 1998 than in 1988, despite the recovery in incomes since 1993. This is consistent with the findings of other recent studies. It is also apparent that by the end of the period there was a greater spread of household incomes around the middle of the distribution. The upper income tail of the distribution had also thickened, so that, overall, the shape of the distribution had become a little less acutely peaked.

Trends between 1993 and 1998 indicate that the income of low-income households has improved in real terms over the last five years of the period covered by this report, but their incomes have yet to climb back to 1988 levels. Superannuitants experienced less fluctuation in income than other low-income households, and thus were not much worse off at the end of the period. Meanwhile, households with higher incomes have been gaining ground at a faster rate. Their incomes at the end of the period were higher in real terms than they were 10 years ago.

## 9 SUMMARY AND CONCLUDING REMARKS

During the 1980s and early 1990s, household incomes decreased in real terms. Since the mid-1990s they have recovered, but not to their earlier levels. Income inequality has increased overall. The gap between the incomes of households at the top of the income distribution and those at the bottom has widened as the incomes of the highest 10% of households have increased, and those of households in the bottom 25% of the distribution have dropped.

Looking at households as a whole, the pattern from 1982 to 1998 was for mean disposable household income to reduce substantially through to the middle of the 1990s in real terms, then to recover strongly to reach a level that was only 1% below the 1982 level by 1998. Not all household types experienced such a strong recovery in their incomes, however. Those comprising two adults with superannuation and those comprising three or more adults with children had mean disposable incomes in 1998 that were, on average, still 9% and 8% respectively below their 1982 levels. Two-adult households with children, on the other hand, had mean disposable incomes in 1998 that were between 10% and 15% higher in real terms than was the case in 1982.

The same unevenness is apparent for equivalent disposable incomes. When the equivalent disposable incomes of all households that included children are considered, the income gains are much lower than for households that had two adults and children. This reflects the declining relative income position of sole-parent households. The relative position of households that include a Māori adult has improved, while the position of those that include a superannuitant started to slip in relation to the national average. The changes to New Zealand Superannuation payment rates announced by Government in January 2000 will no doubt reverse this latter trend.

Households with wages or salary as their main income source had equivalent disposable incomes between 10% and 20% above the mean through 1982-98. This group of households declined as a proportion of the total population of households in the middle of the period, reflecting the difficulties the economy was facing. In 1982, 64% of all households had wages and salaries as their main income source. This fell to 53% in 1992. By 1998, the proportion had climbed back to 58%, as the economy recovered.

Households which derived their income primarily from self-employment, or other sources such as dividends and investments, had incomes which were well over the mean throughout the period. The incomes of households that had superannuation as their main income source, however, were generally between 60% and 66% of the mean for all households over this period, while the incomes of those with a benefit as their main source varied between 47% and 63% of the overall mean.

Households that included children and dependent young people, and those in which one of the residents was a Māori or Pacific Islands adult, a superannuitant or a beneficiary, had equivalent incomes that were consistently below the mean. Their incomes ranged between 90% and 60% of the overall mean over the period. From 1988 to 1998 households in which all the adults were female had lower incomes than households in which all the adults were male or of mixed genders.

Over that time, greater concentrations of households that include children or dependent young people have been apparent in the lower quintiles of the income distribution. At the same time, superannuitant households have moved from clustering in the lowest income quintile to the second-lowest quintile, being displaced by an increasing concentration of

beneficiary households in the lowest quintile. In the most recent years there were signs that this movement had begun to reverse again, particularly as the relative income position of superannuitants living alone began to slip. The recently announced increase in New Zealand Superannuation rates from 1 April 2000 is now likely to prevent the development of such a reversal.

Households that included a Māori or Pacific Islands adult lost ground in the early '90s as their incomes (and their employment levels) declined relative to other households, but their position has started to improve again over the last few years. The relative income position of sole-parent and beneficiary households has shown a similar pattern, but despite the improvement of the past few years, their incomes remain substantially below those of other household types.

The turnaround in incomes from 1993 onward that is apparent in the report emphasises the importance of a growing economy and higher employment levels for many household incomes. The steep drop in incomes for households that included a Māori adult in the late '80s and early '90s accompanied high levels of Māori unemployment and a steep drop in hours worked by those households. As unemployment levels started to rise again after 1996, the recovery in incomes for households including a Māori adult that had been evident between 1992 and 1996 stalled.

It is important to note that the movements in mean incomes over the 16 years that are covered in this report cannot be attributed to the effect of changes in very high or very low incomes on the calculation of means. This can be seen from the fact that pre-tax median incomes declined by 16% over the period, and post-tax median incomes fell by 10%. These reductions in median income, and reductions at least as great in all the lower deciles, reflect the ground lost by at least half the households in the population. It is sobering to reflect that the movements in disposable income that are described in this volume do not take account of the additional impact that changes in user charges for a range of public services over the period would have had on household budgets and expenditure patterns.

Overall, three-quarters of households were living in housing that they owned either with or without a mortgage. Rental tenure is still more common for households that include a Māori adult than for other households, despite an increase through the '90s in the proportion of households in this group that owned their homes. In 1998, a quarter of all households and more than half of those renting paid more than 30% of their disposable income for housing, a considerable increase from below and around a fifth in 1988-90. This, too, has placed pressure on household budgets. Consequently, while the recovery in the disposable incomes of most households in recent years is encouraging, in many households more of that disposable income is spoken for than was the case at the beginning of the period covered in this report. This suggests that the financial position of households at the bottom of the income distribution may be in a worse position, relative to their income position at the beginning of the period, than the statistics on income alone would suggest.

## APPENDIX 1

### Definitions And Notes

|                              |  |
|------------------------------|--|
| Adult respondent             | A person aged 15 years or more in the surveyed households.   |
| Beneficiary                  | A person receiving more than half his or her total income from a benefit (not superannuation – see Superannuitant).  |
| Children                     | Persons aged under 15 years. Not interviewed in the survey.  |
| Consumers Price Index (CPI)  | An index produced by Statistics New Zealand measuring changes in the purchasing power of the dollar, using a selected basket of goods and updated every three years. The CPI is used in this report to bring household incomes of different years to a common purchasing power value, the average of the year to March 1998.   |
| Decile                       | One-tenth of households when ranked in order of their incomes.   |
| Dependent young person       | A person in a surveyed household aged 15 years, or between 16 and 19 years and in full-time schooling. Children and dependent young persons together make up the group whose caregivers were, up to 1991, eligible for Family Benefit. The definition of dependency has changed since 1991 for parental benefit eligibility, to under 16, or under 18 and not in employment.   |
| Disposable (post-tax) income | Total annual income from all sources with the deduction of tax and addition of tax credits, as these would be calculated at the end of the tax year.   |
| Earners                      | A person receiving more than half of his or her total income from market sources (see Market income).  |
| Equivalence scale            | A set of ratios calculated to allow for economies of scale and differential consumption by adults and children, assumed to be required for households of different size and composition to attain a similar material standard of well-being. The Revised Jensen Scale (RJS) used in this report adjusts household incomes to a two-adult standard, allowing for the number of adults and the number and ages of children. The parameter values incorporated into the RJS are such as to maximise its correspondence with the Whiteford geometric mean scale, whose values are the means of many different scales, based on a variety of methods. Like the Whiteford scale, the RJS makes a smaller allowance for children than some other scales. For references see Perry, <i>Social Policy Journal</i> No.5, December 1995, p.142ff and Easton, <i>Social Policy Journal</i> No.9, November 1997, p.171ff. |

|                              |  |
|------------------------------|--|
| Equivalent disposable income | Disposable (after-tax) income of households adjusted by the RJS to a standard two-adult household.   |
| Error                        | Estimates of population values that are derived from surveys are usually subject to some uncertainty as the result of sampling and other (non-sampling) errors.  |
| Error: Sampling              | Sampling error can be calculated from the proportion of the sample number to the population. The overall sampling error on income in the survey series in this report (at the 95% confidence level) ranges from 3% to 6%. For instance, the 1998 survey has a sampling error of 5% on incomes. Then the absolute sampling error on the mean household equivalent disposable income (\$34,789) is 5% of \$34,789, which is \$1,739. This means that the interval (\$34,789 - \$1,739, \$34,789 + \$1,739) = (\$33,050, \$36,528) has a 95% chance that it contains the real income for the whole population. For smaller groups within the population (e.g. the self-employed, sole-parent households, and households including Māori or Pacific Islands adults) the sampling error is considerably higher (see Confidence Intervals Table after this section). The simple form of the formula to calculate this error rate is to take the square root of the fraction formed by the total sample number over the sub-group and multiply it by the error rate for the survey year. For a sub-group of 300 in a survey of 3,000 households, and an overall error of 3.5%, the error for the sub-group's income is 11% (3.5 times square root of 10) and if the sub-group is 30, the error would be 35% (3.5 times square root of 100). The size of sub-groups can be calculated from the percentages given in Table A2 and the total sample for each year in Table A1. |
| Error: Non-sampling          | Non-sampling error can have many causes, from inability to contact some potential respondent households, through refusal by some or all household members to answer some or all questions, to interviewer errors and deliberate false responses. While every effort is made to avoid these errors, some will inevitably occur in any survey.   |
| Household                    | A private household, the unit on which the survey is based, comprises a single person, or more than one person in a dwelling who make common provision for the essentials of living.   |
| Household income             | Respondents were asked to report in detail their gross incomes from all sources. Tax was imputed to obtain disposable incomes. These incomes (in total and separately from different sources) were added together to form the household incomes.   |
| Income                       | Monies received on a regular or recurring basis. Note that this is cash income, and does not include contributions 'in kind'.  |



|                         |   |
|-------------------------|---|
| Main income source      | The income type within the total income of all household members that is greater than any other type reported for the year.   |
| Market income           | Income from market sources, that is, total income excluding bursaries, benefits and superannuation.   |
| Other income            | In the tables of main income source (e.g. Table A2), this refers to any type of income other than wages and salaries, self-employment, superannuation and benefits, for example investments.  |
| Quintile                | One-fifth of households when ranked in order of their incomes.  |
| Self-employment income  | Income reported from self-employment has a number of problems. Unlike all other income types which are incomes for the full year prior to the interview, the instructions allow for self-employment income to be reported for the last year for which audited accounts exist. This means that the income may be reported for a period a year or more earlier than other incomes. There is also the possibility of confusion about what is pre-tax income, and whether some deductions legitimately made in the accounts are included or not in the reporting. Losses from self-employment may be reported as negative income. Negative incomes are included in the calculation of all incomes in this report, effectively reducing the mean incomes slightly. (Table 12 shows the proportion of negative incomes in the lowest quintile.) |
| Sole Parent             | A person without a partner and with a child or dependent young person living in the same household.   |
| Standard household type | One of the 10 mutually exclusive household types used by Statistics New Zealand to classify households in the survey (see Tables A6, A7 and A8).  |
| Superannuitant          | A person receiving over half his or her total income from superannuation.   |
| Total (pre-tax) income  | The sum of incomes from all sources for each respondent, as reported, before tax. These pre-tax incomes added together form total household income.   |
| Wage and salary income  | Includes income from wages, salaries, earnings-related accident compensation payments, redundancy, and income from hobbies and other employment.  |
| Weighting               | The survey sample numbers and all income statistics derived from them are weighted by factors provided by Statistics New Zealand, to adjust them to estimates of the population of permanent private households.  |

## APPENDIX 2

### Confidence Intervals Table

Total And Sub-group Errors And Confidence Levels Based On Household Equivalent Disposable Income

Resident Types, Main Income Source and Household Types, HES 1998 and 1993 with incomes adjusted to Year to March 1998 dollars

Simple Formula:

Sub-group Error = Error for whole Sample \* [sqrt(sample size for whole sample/sample size for sub-group)]

|                                  |       |       |
|----------------------------------|-------|-------|
|                                  | 1998  | 1993  |
| Percentage Error on Total Income | 5     | 3     |
| Sample Numbers                   | 2,876 | 4,683 |

|  | Sample numbers |       | Mean equivalent disposable income |        | Total and sub-group errors % |      | Confidence levels 1998 |        | Confidence levels 1993 |        |
|--|----------------|-------|-----------------------------------|--------|------------------------------|------|------------------------|--------|------------------------|--------|
|  | 1998           | 1993  | 1998                              | 1993   | 1998                         | 1993 | Lower                  | Upper  | Lower                  | Upper  |
| <b>Total</b>                           | 2,876          | 4,683 | 34,789                            | 30,905 | 5.0                          | 3.0  | 33,050                 | 36,528 | 29,977                 | 31,832 |
| Households with:                       |                |       |                                   |        |                              |      |                        |        |                        |        |
| Children or dyp                        | 1,150          | 1,827 | 29,833                            | 26,669 | 7.9                          | 4.8  | 27,474                 | 32,192 | 25,388                 | 27,950 |
| Māori adult                            | 333            | 572   | 28,891                            | 24,299 | 14.7                         | 8.6  | 24,646                 | 33,136 | 22,213                 | 26,385 |
| Pacific Islands adult                  | 102            | 257   | 28,160                            | 23,162 | 26.5                         | 12.8 | 20,684                 | 35,636 | 20,196                 | 26,128 |
| Sole parent                            | 320            | 451   | 22,552                            | 19,018 | 15.0                         | 9.7  | 19,172                 | 25,932 | 17,179                 | 20,856 |
| Beneficiary                            | 515            | 975   | 20,554                            | 18,095 | 11.8                         | 6.6  | 18,125                 | 22,983 | 16,905                 | 19,284 |
| Superannuitant                         | 592            | 1,164 | 23,064                            | 22,142 | 11.0                         | 6.0  | 20,522                 | 25,606 | 20,809                 | 23,474 |
| Main income source                     |                |       |                                   |        |                              |      |                        |        |                        |        |
| Wages/salary                           | 1,685          | 2,558 | 40,474                            | 36,091 | 6.5                          | 4.1  | 37,830                 | 43,118 | 34,626                 | 37,556 |
| Self-employment                        | 222            | 311   | 44,413                            | 43,378 | 18.0                         | 11.6 | 36,420                 | 52,406 | 38,328                 | 48,428 |
| SW benefits                            | 309            | 594   | 16,914                            | 15,035 | 15.3                         | 8.4  | 14,334                 | 19,494 | 13,768                 | 16,301 |
| NZ Superannuation                      | 507            | 986   | 20,379                            | 19,654 | 11.9                         | 6.5  | 17,952                 | 22,806 | 18,369                 | 20,939 |
| Other                                  | 153            | 234   | 38,284                            | 37,662 | 21.7                         | 13.4 | 29,985                 | 46,583 | 32,607                 | 42,716 |
| Household type                         |                |       |                                   |        |                              |      |                        |        |                        |        |
| One adult with superannuation          | 301            | 575   | 22,022                            | 22,573 | 15.5                         | 8.6  | 18,618                 | 25,426 | 20,640                 | 24,505 |
| One other adult                        | 311            | 420   | 42,233                            | 34,130 | 15.2                         | 10.0 | 35,812                 | 48,654 | 30,711                 | 37,549 |
| Two adults with superannuation         | 300            | 604   | 28,257                            | 27,349 | 15.5                         | 8.4  | 23,882                 | 32,632 | 25,064                 | 29,633 |
| Two other adults                       | 583            | 814   | 46,961                            | 42,171 | 11.1                         | 7.2  | 41,746                 | 52,176 | 39,136                 | 45,205 |
| Two adults plus one child              | 236            | 320   | 34,321                            | 30,436 | 17.5                         | 11.5 | 28,330                 | 40,312 | 26,943                 | 33,929 |
| Two adults plus two children           | 307            | 497   | 32,114                            | 28,561 | 15.3                         | 9.2  | 27,199                 | 37,029 | 25,931                 | 31,192 |
| Two adults plus three or more children | 232            | 391   | 27,746                            | 25,155 | 17.6                         | 10.4 | 22,861                 | 32,631 | 22,544                 | 27,767 |
| Three or more adults                   | 265            | 443   | 41,195                            | 39,019 | 16.5                         | 9.8  | 34,409                 | 47,981 | 35,213                 | 42,825 |
| Three or more adults plus children     | 148            | 304   | 33,174                            | 29,983 | 22.0                         | 11.8 | 25,862                 | 40,486 | 26,453                 | 33,514 |
| One adult plus children                | 193            | 315   | 19,641                            | 17,803 | 19.3                         | 11.6 | 15,850                 | 23,432 | 15,744                 | 19,863 |
| <b>Total</b>                           | 2,876          | 4,683 | 34,789                            | 30,905 | 5.0                          | 3.0  | 33,050                 | 36,528 | 29,977                 | 31,832 |

## APPENDIX 3

## Tables A1 – A12 and Figures A1 – A7

(From Table A3 onwards all income figures are in Year to March 1998 dollars)

Table A1: Basic Data From Surveys

| Numbers of -                           | 1982      | 1984      | 1986      | 1988      | 1989      | 1990      | 1991      | 1992      | 1993      | 1994      | 1995      | 1996      | 1997      | 1998      |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Households in sample                   | 3,487     | 3,572     | 3,439     | 4,401     | 3,435     | 3,348     | 2,933     | 3,016     | 4,683     | 3,102     | 2,953     | 2,884     | 2,935     | 2,876     |
| Households in population (estimate)    | 1,101,101 | 1,036,998 | 1,078,004 | 1,104,279 | 1,119,975 | 1,136,354 | 1,154,625 | 1,181,483 | 1,196,497 | 1,207,128 | 1,227,882 | 1,245,775 | 1,272,025 | 1,303,285 |
| Persons per household                  | 3.00      | 2.93      | 2.88      | 2.78      | 2.81      | 2.74      | 2.70      | 2.72      | 2.75      | 2.78      | 2.71      | 2.72      | 2.73      | 2.71      |
| Adults per household                   | 2.14      | 2.12      | 2.09      | 2.06      | 2.04      | 2.06      | 2.02      | 2.03      | 2.05      | 2.06      | 2.02      | 2.02      | 2.02      | 2.00      |
| Children < 15 yrs per household        | 0.88      | 0.81      | 0.78      | 0.73      | 0.77      | 0.67      | 0.68      | 0.69      | 0.70      | 0.72      | 0.69      | 0.69      | 0.71      | 0.71      |
| Chn <15 in households with Māori adult | 1.74      | 1.76      | 1.55      | 1.53      | 1.41      | 1.37      | 1.34      | 1.30      | 1.28      | 1.35      | 1.30      | 1.23      | 1.28      | 1.39      |
| Chn <15 in hhtds with no Māori adult   | 0.89      | 0.84      | 0.72      | 0.77      | 0.82      | 0.72      | 0.73      | 0.71      | 0.75      | 0.76      | 0.75      | 0.79      | 0.77      | 0.74      |
| Dyp (age 15, 16<19 in f-tsch)          | 0.07      | 0.11      | 0.11      | 0.10      | 0.11      | 0.11      | 0.10      | 0.10      | 0.12      | 0.12      | 0.11      | 0.1       | 0.13      | 0.11      |
| Total children & dyp                   | 0.95      | 0.92      | 0.89      | 0.83      | 0.87      | 0.79      | 0.78      | 0.78      | 0.81      | 0.83      | 0.81      | 0.8       | 0.83      | 0.82      |
| Weekly hhtd income (actual average)    | \$376     | \$441     | \$523     | \$663     | \$708     | \$765     | \$768     | \$759     | \$785     | \$766     | \$816     | \$888     | \$883     | \$944     |
| in year to March 1998 dollars          | \$985     | \$951     | \$902     | \$880     | \$894     | \$907     | \$864     | \$849     | \$870     | \$836     | \$870     | \$917     | \$893     | \$944     |

Table A2: Selected Household Characteristics

|                                 | 1982 | 1984 | 1986 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Proportion of households with - | %    | %    | %    | %    | %    | %    | %    | %    | %    | %    | %    | %    | %    | %    |
| Male householder                | 77.1 | 76.6 | 74.1 | 67.6 | 62.9 | 61.0 | 56.5 | 54.9 | 53.1 | 51.3 | 51.5 | 50.2 | 46.2 | 50.3 |
| Female householder              | 22.9 | 23.4 | 25.9 | 32.4 | 37.1 | 39.0 | 43.5 | 45.1 | 46.9 | 48.7 | 48.5 | 49.8 | 53.8 | 49.7 |
| Any children or dyp             | 46.5 | 43.0 | 42.8 | 41.0 | 42.2 | 39.9 | 40.8 | 43.1 | 39.0 | 41.2 | 37.6 | 40.2 | 40.8 | 39.8 |
| Māori adult                     | 8.1  | 9.0  | 7.2  | 10.3 | 9.4  | 11.6 | 11.0 | 12.0 | 12.2 | 13.9 | 10.9 | 11.2 | 12.8 | 11.3 |
| Pacific Islands adult           | 0.8  | 0.8  | 2.4  | 4.1  | 3.3  | 4.2  | 4.7  | 5.5  | 5.5  | 5.3  | 3.8  | 3.8  | 4.0  | 3.4  |
| Solo parent                     | 4.0  | 6.0  | ..   | 7.8  | 8.9  | 8.2  | 9.8  | 9.2  | 8.5  | 9.6  | 8.8  | 9.8  | 10.8 | 10.2 |
| Beneficiary                     | 9.5  | 10.2 | 17.5 | 12.7 | 15.1 | 17.1 | 18.6 | 21.8 | 20.8 | 23.5 | 18.4 | 17.9 | 19.7 | 17.9 |
| Superannuitant                  | 21.7 | 21.5 | 23.9 | 23.6 | 25.1 | 24.9 | 25.5 | 26.0 | 24.9 | 22.3 | 21.1 | 22.3 | 21.4 | 20.1 |
| Household type                  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| One adult plus children         | 4.0  | 4.4  | 4.3  | 6.4  | 6.6  | 6.2  | 7.4  | 6.7  | 6.7  | 7.5  | 6.5  | 7.0  | 7.3  | 6.7  |
| One or two superannuitants      | 22.0 | 23.1 | 23.3 | 25.5 | 25.3 | 25.8 | 26.8 | 27.1 | 25.2 | 21.7 | 22.6 | 23.8 | 22.3 | 20.5 |
| Main income source              |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Wages or salary                 | 63.5 | 62.6 | 61.5 | 60.0 | 57.8 | 56.7 | 56.1 | 53.2 | 54.6 | 54.9 | 57.2 | 57.1 | 56.1 | 58.1 |
| Self-employment                 | 9.3  | 9.5  | 8.8  | 6.6  | 7.0  | 5.6  | 5.1  | 5.7  | 6.6  | 5.7  | 6.2  | 6.3  | 7.2  | 8.8  |
| Other                           | 3.9  | 4.5  | 5.6  | 4.7  | 4.1  | 4.5  | 5.2  | 5.3  | 5.0  | 4.9  | 5.4  | 6.0  | 5.5  | 5.5  |
| Superannuation                  | 17.7 | 17.2 | 17.6 | 19.0 | 20.4 | 21.0 | 20.8 | 21.9 | 21.1 | 19.2 | 18.9 | 19.5 | 18.0 | 17.0 |
| Benefit                         | 5.7  | 6.2  | 6.4  | 9.6  | 10.7 | 12.2 | 12.7 | 14.0 | 12.7 | 15.3 | 12.3 | 11.0 | 13.2 | 10.6 |

Table A3: Income Percentiles - Pre-tax Income

| Percentiles | 1982   | 1984   | 1986   | 1988   | 1989   | 1990   | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 90          | 96,068 | 90,430 | 88,466 | 87,183 | 87,944 | 92,568 | 86,475 | 84,231 | 86,228 | 83,973 | 87,618 | 89,477 | 89,528 | 93,347 |
| 75          | 70,897 | 66,231 | 64,072 | 62,594 | 63,277 | 63,951 | 60,469 | 58,135 | 60,863 | 58,317 | 59,743 | 60,970 | 61,672 | 64,156 |
| Median 50   | 46,676 | 44,148 | 43,732 | 41,170 | 40,199 | 39,764 | 36,690 | 35,415 | 35,297 | 34,877 | 35,637 | 37,308 | 34,405 | 38,888 |
| 25          | 26,279 | 26,656 | 26,323 | 24,344 | 23,746 | 23,484 | 20,517 | 19,435 | 19,750 | 19,571 | 19,845 | 20,433 | 19,495 | 20,893 |
| 10          | 15,885 | 16,448 | 15,260 | 14,363 | 14,440 | 14,840 | 13,176 | 13,253 | 13,294 | 13,166 | 13,237 | 13,609 | 13,131 | 13,857 |

Table A4: Income Percentiles - Post-tax Income

| Percentiles | 1982   | 1984   | 1986   | 1988   | 1989   | 1990   | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 90          | 66,553 | 65,425 | 61,126 | 63,976 | 64,609 | 68,641 | 64,610 | 62,933 | 63,687 | 61,993 | 64,313 | 65,906 | 66,678 | 70,549 |
| 75          | 50,930 | 49,907 | 46,440 | 47,439 | 47,573 | 48,452 | 46,079 | 44,432 | 42,383 | 44,170 | 45,260 | 45,823 | 47,390 | 49,133 |
| Median 50   | 35,326 | 34,325 | 32,828 | 32,594 | 31,599 | 31,409 | 29,175 | 28,430 | 27,911 | 27,522 | 28,315 | 29,053 | 28,391 | 31,470 |
| 25          | 22,138 | 21,749 | 21,290 | 21,062 | 20,237 | 20,195 | 18,026 | 16,901 | 17,279 | 17,070 | 17,761 | 18,033 | 17,447 | 19,021 |
| 10          | 13,974 | 13,887 | 12,481 | 12,502 | 12,711 | 12,580 | 11,030 | 11,026 | 11,286 | 11,011 | 11,128 | 11,635 | 11,045 | 11,778 |

Table A5: Pre-tax, Market And Disposable Median &amp; Mean Income

|                   | 1982   | 1984   | 1986   | 1988   | 1989   | 1990   | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   |
|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Pre-tax mean      | 53,067 | 50,212 | 48,369 | 47,125 | 47,963 | 49,274 | 45,794 | 43,330 | 45,140 | 43,237 | 45,186 | 46,938 | 46,184 | 49,048 |
| Pre-tax median    | 46,676 | 44,148 | 43,732 | 41,170 | 40,199 | 39,764 | 36,690 | 35,415 | 35,294 | 34,877 | 35,637 | 37,308 | 34,405 | 38,888 |
| Market mean       | 46,687 | 43,477 | 41,408 | 40,042 | 40,458 | 41,021 | 38,089 | 35,888 | 38,019 | 36,323 | 38,479 | 40,434 | 39,368 | 42,576 |
| Market median     | 42,690 | 39,701 | 39,008 | 36,338 | 34,717 | 33,710 | 31,265 | 29,800 | 29,991 | 29,246 | 31,354 | 33,107 | 30,635 | 34,767 |
| Disposable mean   | 38,718 | 37,769 | 35,468 | 35,860 | 36,576 | 37,889 | 35,349 | 33,701 | 34,705 | 33,396 | 34,764 | 35,897 | 36,027 | 38,276 |
| Disposable median | 35,326 | 34,325 | 32,828 | 32,594 | 31,599 | 31,409 | 29,175 | 28,430 | 27,911 | 27,522 | 28,315 | 29,054 | 28,391 | 31,470 |

Table A6: Mean Total Pre-tax Household Income By Household Type

|                                    | 1982          | 1984          | 1986          | 1988          | 1989          | 1990          | 1991          | 1992          | 1993          | 1994          | 1995          | 1996          | 1997          | 1998          |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| One adult with superannuation      | 18,678        | 20,711        | 18,826        | 18,211        | 18,115        | 16,841        | 18,516        | 17,518        | 18,828        | 18,946        | 19,395        | 19,741        | 19,492        | 17,292        |
| One other adult                    | 34,209        | 30,658        | 28,482        | 31,479        | 33,217        | 32,825        | 29,187        | 28,277        | 29,441        | 28,422        | 28,159        | 31,445        | 29,668        | 36,438        |
| Two adults with superannuation     | 40,095        | 40,599        | 36,446        | 37,420        | 35,259        | 38,117        | 38,134        | 35,468        | 35,073        | 33,171        | 34,678        | 32,854        | 32,232        | 35,555        |
| Two other adults                   | 63,596        | 59,350        | 53,662        | 56,932        | 58,486        | 60,387        | 56,630        | 54,897        | 56,407        | 51,665        | 59,527        | 60,201        | 57,549        | 62,101        |
| Two adults plus one child          | 50,659        | 50,278        | 46,217        | 47,503        | 49,977        | 52,106        | 51,883        | 46,682        | 47,552        | 46,870        | 49,050        | 50,319        | 49,260        | 53,213        |
| Two adults plus two children       | 58,842        | 53,489        | 50,103        | 56,357        | 57,504        | 54,787        | 54,860        | 52,335        | 52,110        | 51,609        | 55,189        | 57,225        | 54,632        | 58,004        |
| Two adults three or more children  | 56,220        | 51,310        | 52,170        | 48,839        | 51,202        | 58,530        | 53,968        | 47,823        | 52,720        | 48,451        | 48,863        | 55,373        | 60,153        | 56,493        |
| Three or more adults               | 81,142        | 81,727        | 76,702        | 78,867        | 78,916        | 83,490        | 78,294        | 70,754        | 70,974        | 68,899        | 64,971        | 74,894        | 70,569        | 72,918        |
| Three or more adults plus children | 81,378        | 76,324        | 71,249        | 71,015        | 74,812        | 77,487        | 66,902        | 62,505        | 63,201        | 64,661        | 62,862        | 61,492        | 70,631        | 68,575        |
| One adult plus children            | 23,645        | 24,685        | 20,708        | 26,048        | 27,900        | 24,941        | 20,222        | 19,025        | 20,583        | 18,937        | 19,447        | 21,269        | 20,462        | 22,006        |
| <b>All households</b>              | <b>53,099</b> | <b>50,238</b> | <b>48,369</b> | <b>47,125</b> | <b>47,963</b> | <b>49,273</b> | <b>45,794</b> | <b>43,330</b> | <b>45,140</b> | <b>43,236</b> | <b>45,186</b> | <b>46,938</b> | <b>46,184</b> | <b>49,048</b> |

Table A7: Mean Disposable Household Income By Household Type

|  | 1982          | 1984          | 1986          | 1988          | 1989          | 1990          | 1991          | 1992          | 1993          | 1994          | 1995          | 1996          | 1997          | 1998          |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| One adult with superannuation          | 14,969        | 15,994        | 13,661        | 14,311        | 14,252        | 13,275        | 14,713        | 13,833        | 14,671        | 14,719        | 15,077        | 15,291        | 15,097        | 14,315        |
| One other adult                        | 24,945        | 23,402        | 20,974        | 23,538        | 24,700        | 24,814        | 22,100        | 21,424        | 22,183        | 21,343        | 21,130        | 23,704        | 22,603        | 27,452        |
| Two adults with superannuation         | 30,747        | 30,830        | 26,232        | 28,587        | 27,082        | 28,895        | 29,747        | 27,995        | 27,347        | 26,226        | 27,196        | 25,935        | 25,655        | 28,257        |
| Two other adults                       | 45,487        | 43,651        | 38,546        | 42,354        | 43,613        | 45,640        | 42,516        | 41,429        | 42,163        | 38,752        | 44,241        | 44,617        | 43,500        | 46,959        |
| Two adults plus one child              | 36,287        | 37,775        | 34,217        | 36,589        | 37,772        | 40,092        | 39,940        | 36,088        | 36,396        | 35,754        | 37,303        | 38,333        | 38,274        | 41,216        |
| Two adults plus two children           | 41,028        | 39,115        | 36,290        | 41,474        | 42,854        | 42,119        | 41,686        | 40,166        | 39,545        | 39,224        | 41,798        | 42,944        | 42,339        | 44,807        |
| Two adults plus three or more children | 39,796        | 38,497        | 37,140        | 38,060        | 39,877        | 45,103        | 41,662        | 37,733        | 40,934        | 38,021        | 38,466        | 42,435        | 47,121        | 44,685        |
| Two adults plus children               | 39,506        | 38,587        | 35,989        | 39,050        | 41,405        | 42,287        | 41,935        | 38,169        | 39,161        | 37,799        | 39,380        | 41,392        | 42,476        | 43,710        |
| Three or more adults                   | 59,746        | 61,689        | 56,322        | 59,565        | 60,095        | 63,609        | 59,644        | 54,354        | 54,032        | 52,691        | 49,953        | 56,492        | 54,485        | 56,420        |
| Three or more adults plus children     | 60,515        | 58,026        | 53,742        | 54,879        | 58,214        | 60,910        | 52,827        | 49,570        | 49,475        | 50,973        | 49,975        | 48,349        | 56,144        | 55,008        |
| One adult plus children                | 20,934        | 22,224        | 19,033        | 23,057        | 23,594        | 22,129        | 18,493        | 18,100        | 19,213        | 18,078        | 18,652        | 20,079        | 19,904        | 21,370        |
| <b>All households</b>                  | <b>38,740</b> | <b>37,789</b> | <b>35,468</b> | <b>35,860</b> | <b>36,576</b> | <b>37,889</b> | <b>35,350</b> | <b>33,701</b> | <b>34,704</b> | <b>33,396</b> | <b>34,764</b> | <b>35,897</b> | <b>36,027</b> | <b>38,276</b> |

Table A8: Mean Equivalent Disposable Household Income By Household Type

|  | 1982   | 1984   | 1986   | 1988   | 1989   | 1990   | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| One adult with superannuation          | 23,031 | 24,605 | 21,016 | 22,017 | 21,926 | 20,424 | 22,635 | 21,281 | 22,571 | 22,644 | 23,196 | 23,525 | 23,227 | 22,022 |
| One other adult                        | 38,378 | 36,003 | 32,267 | 36,212 | 37,998 | 38,175 | 34,000 | 32,960 | 34,128 | 32,837 | 32,508 | 36,467 | 34,774 | 42,233 |
| Two adults with superannuation         | 30,747 | 30,830 | 26,232 | 28,589 | 27,082 | 28,897 | 29,747 | 27,995 | 27,347 | 26,226 | 27,196 | 25,936 | 25,655 | 28,257 |
| Two other adults                       | 45,499 | 43,727 | 38,616 | 42,367 | 43,627 | 45,658 | 42,524 | 41,433 | 42,168 | 38,756 | 44,250 | 44,619 | 43,509 | 46,961 |
| Two adults plus one child              | 29,909 | 30,989 | 27,977 | 30,585 | 31,439 | 33,464 | 33,273 | 30,171 | 30,434 | 30,065 | 31,334 | 32,073 | 32,051 | 34,321 |
| Two adults plus two children           | 29,241 | 27,694 | 25,627 | 29,846 | 30,825 | 30,278 | 29,958 | 28,765 | 28,560 | 28,137 | 30,183 | 30,896 | 30,416 | 32,114 |
| Two adults plus three or more children | 24,099 | 23,289 | 22,564 | 23,514 | 24,687 | 27,829 | 25,800 | 23,573 | 25,154 | 23,516 | 24,015 | 26,188 | 29,025 | 27,746 |
| Two adults plus children               | 27,760 | 27,103 | n/a    | 28,112 | 29,156 | 30,632 | 29,963 | 27,533 | 27,929 | 27,322 | 28,642 | 29,880 | 30,514 | 31,476 |
| Three or more adults                   | 44,037 | 44,969 | 41,272 | 43,915 | 43,779 | 45,685 | 43,365 | 39,849 | 39,017 | 38,069 | 36,557 | 41,182 | 39,685 | 41,195 |
| Three or more adults plus children     | 36,385 | 33,864 | 31,884 | 32,148 | 35,205 | 35,787 | 31,532 | 29,311 | 29,982 | 30,175 | 29,439 | 29,191 | 33,392 | 33,174 |
| One adult plus children                | 19,797 | 20,206 | 17,919 | 21,664 | 22,727 | 20,516 | 17,739 | 17,226 | 17,802 | 17,162 | 17,488 | 18,336 | 18,694 | 19,641 |
| All households                         | 33,139 | 32,692 | 30,323 | 31,829 | 32,232 | 33,549 | 31,670 | 30,158 | 30,903 | 29,850 | 31,438 | 32,220 | 32,236 | 34,789 |

Table A9: Mean Equivalent Disposable Income By Type Of Residents

|                                      | 1982   | 1984   | 1986   | 1988   | 1989   | 1990   | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   |
|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Households with                      | 28,853 | 27,559 | 25,786 | 27,835 | 29,126 | 30,000 | 28,175 | 26,227 | 26,668 | 26,165 | 27,060 | 27,965 | 28,828 | 29,833 |
| Any child or dyp                     | 24,738 | 25,053 | n/a    | 24,055 | 22,647 | 23,389 | 22,977 | 22,700 | 22,141 | 21,552 | 22,504 | 21,804 | 21,668 | 23,064 |
| Superannuitant                       | 29,378 | 27,694 | 27,313 | 29,106 | 26,506 | 27,188 | 25,786 | 23,848 | 24,298 | 23,671 | 26,258 | 28,104 | 27,038 | 28,891 |
| Māori adult                          | 31,385 | 26,444 | 28,403 | 28,179 | 27,492 | 26,744 | 25,575 | 23,320 | 23,161 | 21,392 | 24,072 | 24,502 | 27,962 | 28,160 |
| Pacific Islands adult                | 19,788 | 22,451 | n/a    | 23,747 | 25,033 | 23,641 | 20,607 | 20,122 | 18,941 | 19,320 | 19,571 | 19,940 | 20,812 | 22,552 |
| Sole parent                          | 24,412 | 22,447 | 21,917 | 20,807 | 23,121 | 23,986 | 20,094 | 17,702 | 18,094 | 17,596 | 18,251 | 18,814 | 18,296 | 20,554 |
| Beneficiary                          | 33,139 | 32,692 | 30,323 | 31,829 | 32,232 | 33,549 | 31,670 | 30,158 | 30,903 | 29,850 | 31,438 | 32,220 | 32,236 | 34,789 |
| All households                       | 33,139 | 32,692 | 30,323 | 31,829 | 32,232 | 33,549 | 31,670 | 30,158 | 30,903 | 29,850 | 31,438 | 32,220 | 32,236 | 34,789 |
| Proportion of income to overall mean |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Households with at least one         | %      | %      | %      | %      | %      | %      | %      | %      | %      | %      | %      | %      | %      | %      |
| Child or dyp                         | 87     | 84     | 85     | 87     | 90     | 89     | 89     | 87     | 86     | 88     | 86     | 87     | 89     | 86     |
| Superannuitant                       | 75     | 77     | n/a    | 76     | 70     | 70     | 73     | 75     | 72     | 72     | 72     | 68     | 67     | 66     |
| Māori Adult                          | 89     | 85     | 90     | 91     | 82     | 81     | 81     | 79     | 79     | 79     | 84     | 87     | 84     | 83     |
| Pacific Islands adult                | 95     | 81     | 94     | 89     | 85     | 80     | 81     | 77     | 75     | 72     | 77     | 76     | 87     | 81     |
| Sole parent                          | 60     | 69     | n/a    | 75     | 78     | 70     | 65     | 67     | 61     | 65     | 62     | 62     | 65     | 64     |
| Beneficiary                          | 74     | 69     | 72     | 65     | 72     | 71     | 63     | 59     | 59     | 59     | 58     | 58     | 57     | 59     |

Table A10: Means Of Equivalent Disposable Income In Deciles And Quintiles

| Deciles<br>- one (low) to ten (high) | 1982          | 1984          | 1986          | 1988          | 1989          | 1990          | 1991          | 1992          | 1993          | 1994          | 1995          | 1996          | 1997          | 1998          |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| One                                  | 11,522        | 10,451        | 11,696        | 7,924         | 11,716        | 12,796        | 7,748         | 8,388         | 9,308         | 8,141         | 9,156         | 9,540         | 8,495         | 9,557         |
| Two                                  | 17,875        | 17,649        | 17,146        | 17,673        | 17,330        | 17,203        | 16,405        | 15,798        | 15,720        | 15,378        | 16,024        | 16,213        | 15,926        | 16,793        |
| Three                                | 20,535        | 20,181        | 19,601        | 20,262        | 19,808        | 19,642        | 17,911        | 17,246        | 17,250        | 17,014        | 17,571        | 17,974        | 17,568        | 18,728        |
| Four                                 | 23,891        | 23,456        | 22,388        | 23,220        | 22,641        | 22,462        | 20,583        | 19,470        | 19,480        | 19,148        | 19,881        | 20,344        | 19,844        | 21,539        |
| Five                                 | 27,710        | 27,282        | 25,866        | 26,729        | 25,925        | 25,904        | 24,494        | 23,094        | 22,954        | 22,430        | 22,995        | 23,977        | 23,176        | 25,785        |
| Six                                  | 32,071        | 31,395        | 29,354        | 31,031        | 29,701        | 30,184        | 28,902        | 27,316        | 27,184        | 26,971        | 27,688        | 28,477        | 27,872        | 30,654        |
| Seven                                | 37,025        | 36,341        | 33,238        | 35,834        | 34,414        | 35,046        | 33,714        | 32,436        | 32,672        | 32,152        | 33,253        | 33,389        | 33,652        | 36,295        |
| Eight                                | 43,157        | 42,401        | 38,188        | 41,182        | 40,355        | 41,438        | 39,955        | 38,606        | 38,979        | 38,585        | 39,631        | 40,176        | 40,567        | 43,730        |
| Nine                                 | 50,483        | 50,211        | 45,643        | 48,297        | 48,477        | 50,924        | 48,600        | 47,267        | 47,975        | 46,736        | 48,874        | 49,013        | 49,615        | 53,419        |
| Ten                                  | 67,057        | 67,515        | 61,615        | 66,077        | 71,858        | 79,749        | 78,141        | 71,847        | 77,458        | 71,841        | 79,197        | 82,961        | 85,526        | 91,291        |
| <b>All households</b>                | <b>33,139</b> | <b>32,692</b> | <b>30,323</b> | <b>31,829</b> | <b>32,232</b> | <b>33,549</b> | <b>31,670</b> | <b>30,158</b> | <b>30,903</b> | <b>29,850</b> | <b>31,438</b> | <b>32,220</b> | <b>32,236</b> | <b>34,789</b> |

## Quintiles

| - one (low) to five (high) | 1988   | 1989   | 1990   | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| One                        | 12,798 | 14,524 | 15,001 | 12,088 | 12,092 | 12,513 | 11,763 | 12,589 | 12,895 | 12,212 | 13,181 |
| Two                        | 21,740 | 21,222 | 21,054 | 19,246 | 18,359 | 18,367 | 18,081 | 18,724 | 19,164 | 18,710 | 20,129 |
| Three                      | 28,880 | 27,812 | 28,044 | 26,695 | 25,202 | 25,071 | 24,707 | 25,345 | 26,227 | 25,525 | 28,215 |
| Four                       | 38,515 | 37,377 | 38,254 | 36,825 | 35,522 | 35,825 | 35,367 | 36,442 | 36,784 | 37,102 | 40,007 |
| Five                       | 57,196 | 60,180 | 65,378 | 63,371 | 59,574 | 62,713 | 59,299 | 64,044 | 65,962 | 67,568 | 72,355 |

Table A11: Means Of Equivalent Disposable Income By Main Income Source

| Main income source    | 1982          | 1984          | 1986          | 1988          | 1989          | 1990          | 1991          | 1992          | 1993          | 1994          | 1995          | 1996          | 1997          | 1998          |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Wages or salary       | 36,818        | 36,262        | 33,674        | 35,961        | 37,091        | 38,453        | 37,082        | 35,652        | 36,089        | 35,545        | 36,833        | 36,859        | 38,158        | 40,474        |
| Self-employment       | 38,644        | 37,907        | 35,227        | 39,441        | 40,397        | 56,408        | 47,047        | 44,541        | 43,376        | 37,356        | 43,584        | 46,866        | 45,864        | 44,413        |
| Benefits              | 15,597        | 16,711        | 17,802        | 19,882        | 20,435        | 20,071        | 15,491        | 14,835        | 15,034        | 14,869        | 15,870        | 16,019        | 16,179        | 16,914        |
| Superannuation        | 21,213        | 21,138        | 20,101        | 20,132        | 20,302        | 20,038        | 20,198        | 19,916        | 19,653        | 19,597        | 19,699        | 19,833        | 19,553        | 20,379        |
| Other                 | 39,594        | 38,068        | 36,198        | 34,412        | 32,801        | 34,717        | 37,982        | 33,126        | 37,660        | 34,989        | 32,944        | 38,882        | 34,277        | 38,284        |
| <b>All households</b> | <b>33,139</b> | <b>32,692</b> | <b>30,323</b> | <b>31,829</b> | <b>32,232</b> | <b>33,549</b> | <b>31,670</b> | <b>30,158</b> | <b>30,903</b> | <b>29,850</b> | <b>31,438</b> | <b>32,220</b> | <b>32,236</b> | <b>34,789</b> |

Table A12: Mean Household Disposable And Equivalent Disposable Income, With And Without Maori And Pacific Islands Adult In Household

| Household disposable income  | 1982          | 1984          | 1986          | 1988          | 1989          | 1990          | 1991          | 1992          | 1993          | 1994          | 1995          | 1996          | 1997          | 1998          |
|------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Households with              |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Māori adult                  | 40,970        | 36,451        | 37,799        | 36,460        | 33,587        | 34,500        | 32,250        | 29,808        | 30,024        | 29,323        | 32,633        | 34,332        | 32,917        | 36,572        |
| No Māori adult               | 38,545        | 37,922        | 35,279        | 35,800        | 36,847        | 38,289        | 35,672        | 34,182        | 35,294        | 34,003        | 35,035        | 36,088        | 36,483        | 38,493        |
| Pacific Islands adult        | 44,948        | 36,511        | 44,186        | 42,111        | 41,265        | 39,247        | 35,248        | 33,431        | 31,468        | 30,249        | 34,258        | 32,525        | 35,076        | 39,225        |
| No Pacific Islands adult     | 38,691        | 37,799        | 35,249        | 35,641        | 36,448        | 37,836        | 35,354        | 33,714        | 34,854        | 33,531        | 34,785        | 36,029        | 36,067        | 38,243        |
| <b>All households</b>        | <b>38,740</b> | <b>37,789</b> | <b>35,468</b> | <b>35,860</b> | <b>36,576</b> | <b>37,889</b> | <b>35,350</b> | <b>33,701</b> | <b>34,704</b> | <b>33,396</b> | <b>34,764</b> | <b>35,897</b> | <b>36,027</b> | <b>38,276</b> |
| Equivalent disposable income |               |               |               |               |               |               |               |               |               |               |               |               |               |               |
| Māori adult                  | 29,378        | 27,694        | 27,313        | 29,106        | 26,506        | 27,188        | 25,786        | 23,848        | 24,298        | 23,671        | 26,258        | 28,104        | 27,038        | 28,891        |
| No Māori adult               | 33,471        | 33,182        | 30,566        | 32,103        | 32,751        | 34,298        | 32,282        | 30,937        | 31,734        | 30,770        | 32,095        | 32,720        | 32,998        | 35,541        |
| Pacific Islands adult        | 31,385        | 26,444        | 28,403        | 28,179        | 27,492        | 26,744        | 25,575        | 23,320        | 23,161        | 21,392        | 24,072        | 24,502        | 27,962        | 28,160        |
| No Pacific Islands adult     | 33,154        | 32,738        | 30,370        | 31,957        | 32,361        | 33,810        | 31,916        | 30,472        | 31,259        | 30,212        | 31,728        | 32,521        | 32,414        | 35,019        |
| <b>All households</b>        | <b>33,139</b> | <b>32,692</b> | <b>30,323</b> | <b>31,829</b> | <b>32,232</b> | <b>33,549</b> | <b>31,670</b> | <b>30,158</b> | <b>30,903</b> | <b>29,850</b> | <b>31,438</b> | <b>32,220</b> | <b>32,236</b> | <b>34,789</b> |



Figure A1: Numbers Of Households With Children And Dependent Young People In Quintiles, 1988-1998

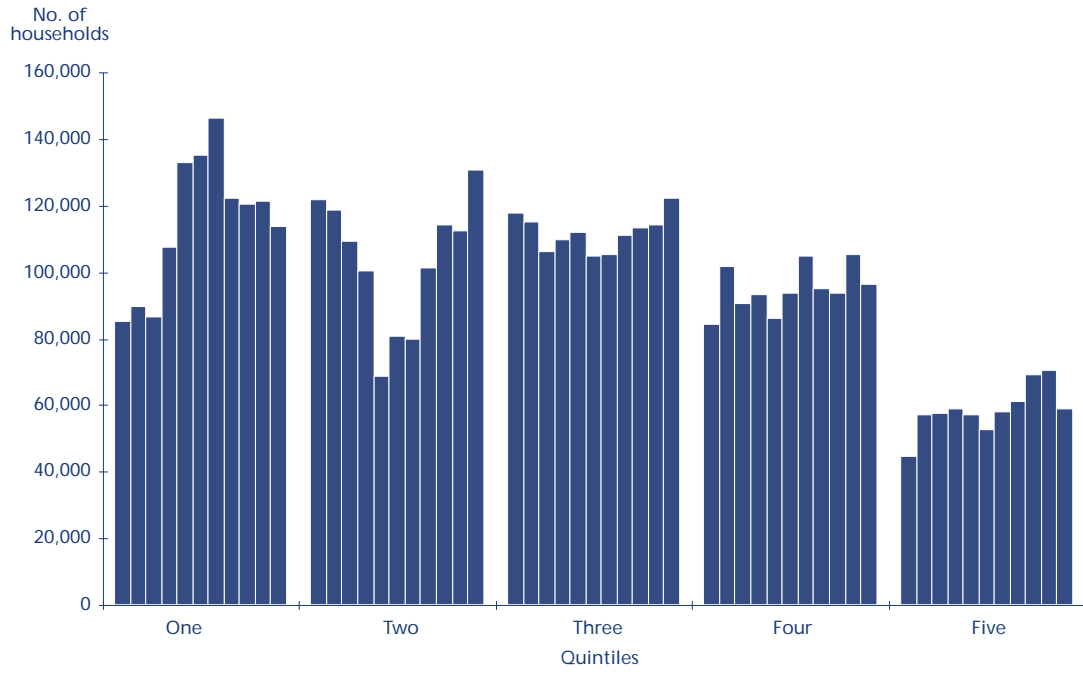


Figure A2: Numbers Of Households With Superannuitants In Quintiles, 1988-1998

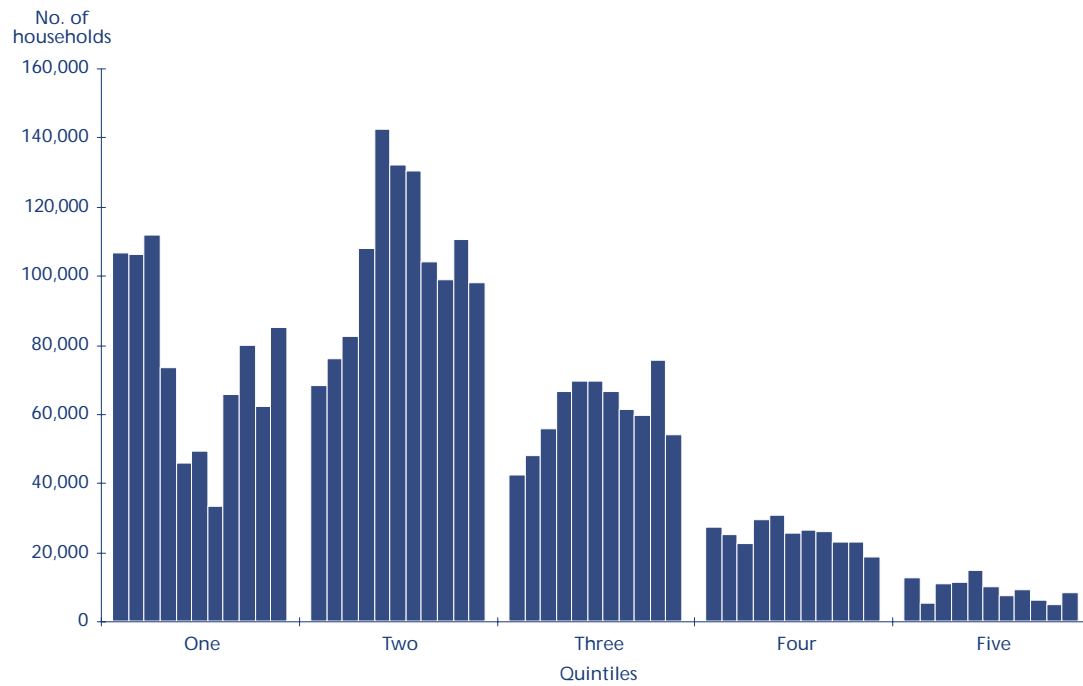


Figure A3: Numbers Of Households With Māori Adults In Quintiles, 1988-1998

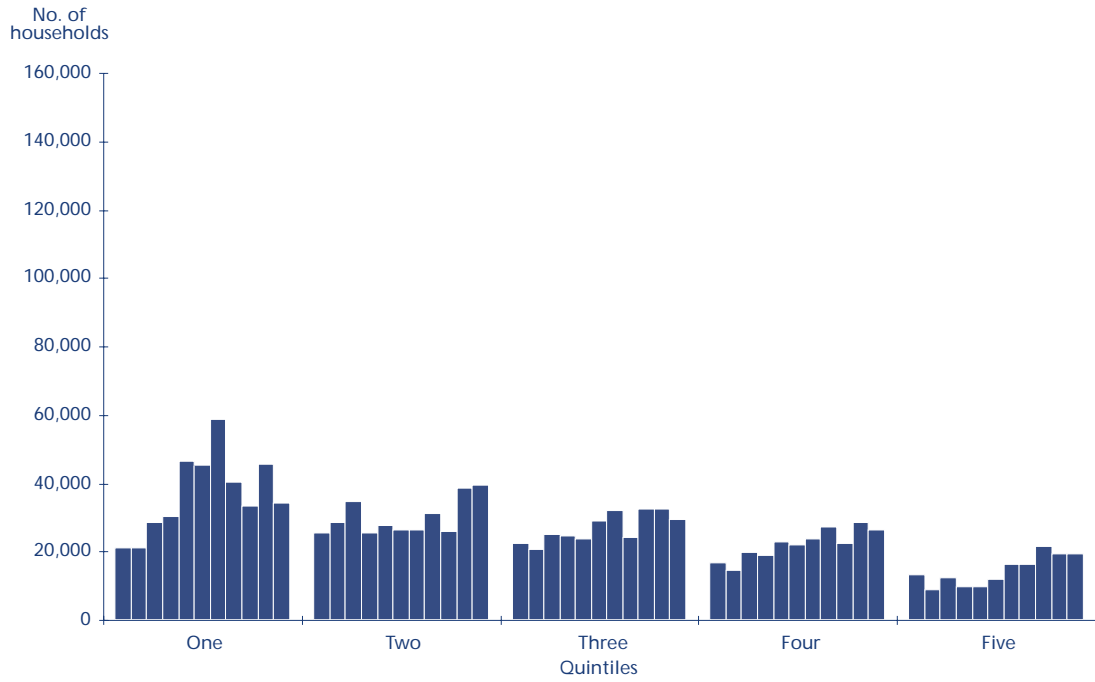


Figure A4: Numbers Of Households With Pacific Islands Adults In Quintiles, 1988-1998

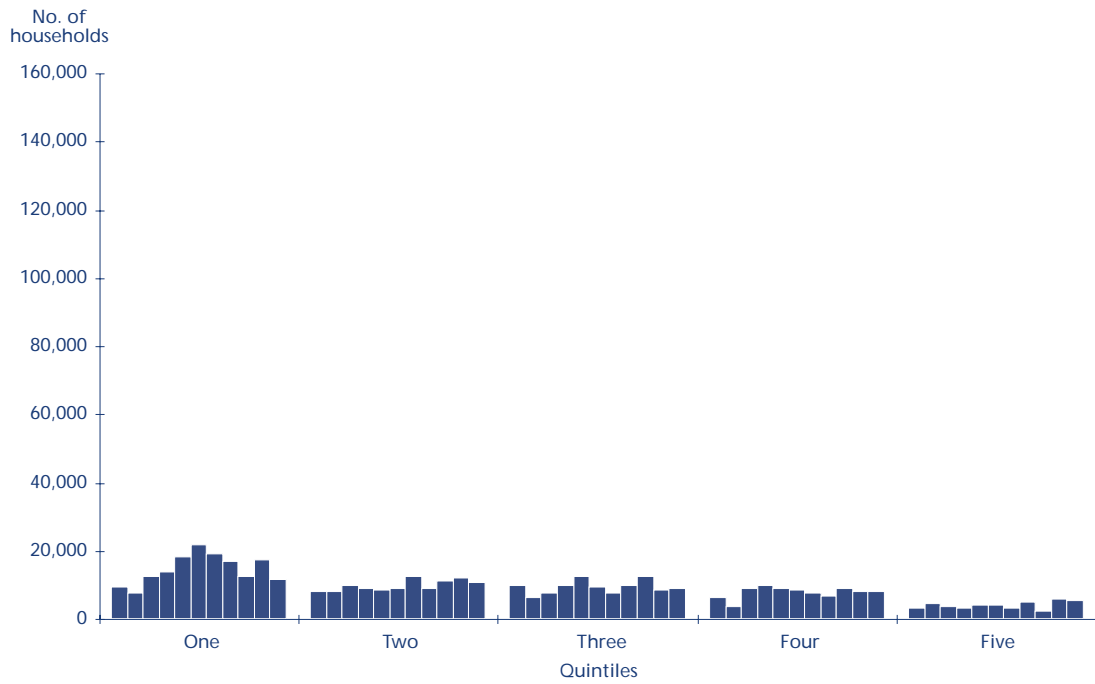


Figure A5: Numbers Of Households With Sole Parents In Quintiles, 1988-1998

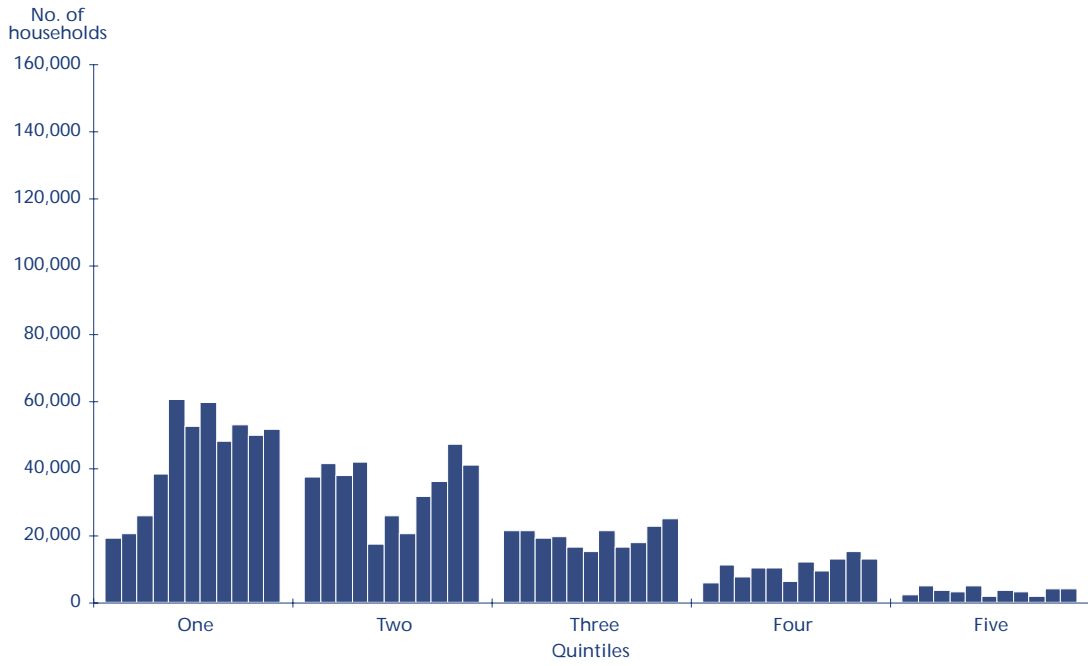


Figure A6: Numbers Of Households With Beneficiaries In Quintiles, 1988-1998

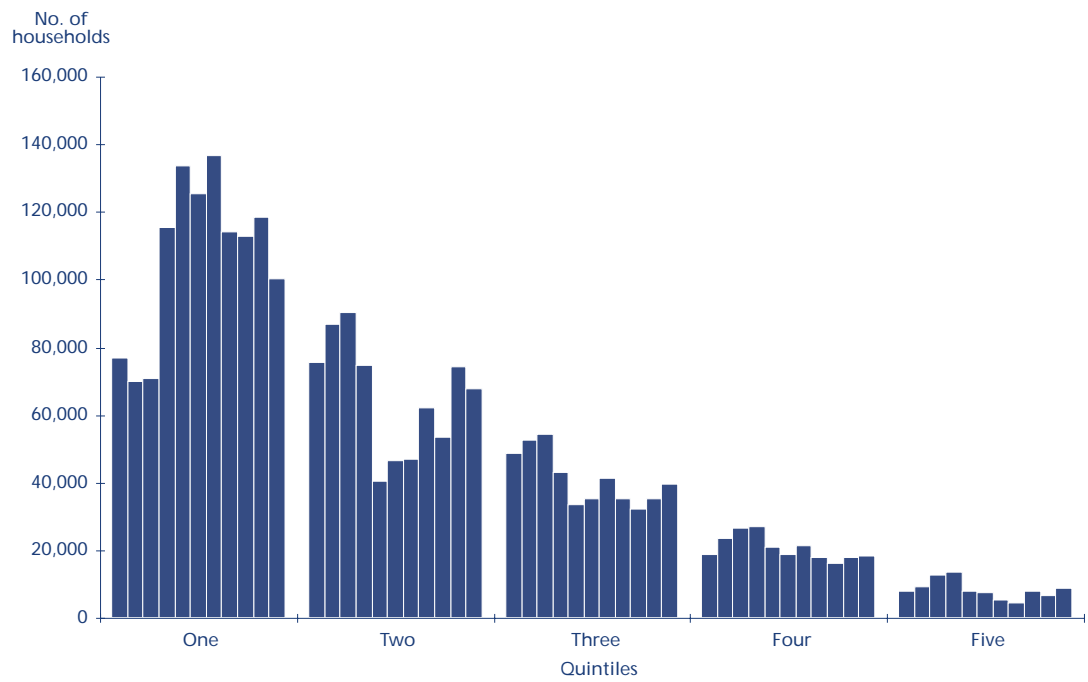


Figure A7: Medians Of Equivalent Disposable Income For Households With Beneficiaries, Superannuitants And Households With Neither, 1988 - 1998

